THE UNIVERSITY OF TEXAS AT AUSTIN
Cockrell School of Engineering
Resume

FULL NAME: **Clint Dawson** **TITLE:** **Professor**

ENDOWED POSITION: **John J. McKetta Centennial Energy Chair in Engineering**

DEPARTMENT: **Aerospace Engineering and Engineering Mechanics**

EDUCATION:

Texas Tech University	Mathematics	B.A.	1982
Texas Tech University	Mathematics	M.S.	1984
Rice University	Mathematical Sciences	Ph.D.	1988

PROFESSIONAL REGISTRATION: **Not Registered**

CURRENT AND PREVIOUS ACADEMIC POSITIONS:
Research Assistant and Teaching Assistant, Texas Tech University, 1982-84.
Graduate Assistant, Rice University, 1984-88.
Research Associate, Rice University, 5/88 - 7/88.
Research Associate, University of Houston, 7/88 - 9/88.
Dickson Instructor, University of Chicago, 10/88 - 8/90.
Assistant Professor, Rice University, Computational and Applied Mathematics, 1990-94.
Associate Professor, Rice University, Computational and Applied Mathematics, 1994-95.
Associate Professor, University of Texas at Austin, Aerospace Engineering and Engineering Mechanics, 1995-2000.
Professor, University of Texas at Austin, Aerospace Engineering and Engineering Mechanics, 2000-present.
Edward S. Hyman Endowed Chair in Engineering, University of Texas at Austin, 2011—2014.
John J McKetta Centennial Energy Chair in Engineering, University of Texas at Austin, 2014—present.

OTHER PROFESSIONAL EXPERIENCE:
Research Engineer (part-time), Exxon Production Research, Houston, TX, 1984-86.

CONSULTING:
Shell Development Co., August 1990-December 1997.
Coral Technologies, April 2000-2001.
Geomatrix, August, 2006.
Exponent, Inc., 2009-2010.
McDowell, Rice, Smith and Buchanan, P.C., 2012.
Hutchison and Associates, 2014.
GZA GeoEnvironmental, Inc., 2014.
Arcadis, Inc., 2015.
Scheibe Consulting, 2017.
Lockwood, Andrews & Newman, Inc., 2017.

MEMBERSHIPS IN PROFESSIONAL AND HONORARY SOCIETIES:
Member, Society for Industrial and Applied Mathematics (SIAM)
Member, U.S. Association for Computational Mechanics

Member, American Geophysical Union
Member, American Mathematical Society

PROFESSIONAL SOCIETY AND MAJOR GOVERNMENTAL COMMITTEES, EDITORIAL BOARDS, AND CONFERENCES ORGANIZED/CHAIRED:

Professional Society/Major Governmental Committees:
Program Chair, SIAM Activity Group on Geosciences, 1995-2001.
Member, Technical Steering Committee, National Science Foundation Center for Research on Parallel Computation, 1997-2001.
Member, Review Committee, CAM Graduate Program, Louisiana Tech University, January 1999-2000.
Member, National Science Foundation GEO 2000 Workshop (Invited Participant), January 1999.
Chair, SIAM Activity Group on Geosciences, 2001-2004.
James H. Wilkinson Prize Committee, Society for Industrial and Applied Mathematics, 2004-05
Member, Remediation Decisions and Tools Panel, DOE Pacific Northwest National Laboratory, August 2006
Panel Discussion Leader, Computational Subsurface Sciences Workshop, Department of Energy, Bethesda, Maryland, January 2007.
Von Karman Prize Committee, Society for Industrial and Applied Mathematics, 2009.
Management Team, Natural Hazards Engineering Research Initiative-DesignSafe.ci
Simulation Requirements Team leader, Natural Hazards Engineering Research Initiative-DesignSafe.ci
Chair, Prize Committee, SIAM Activity Group on Geosciences, 2015.

Editorial Boards:
Editorial Board, *Communications in Numerical Methods in Engineering*, 2005
Editorial Board, *Computational Geosciences*, 1997-2006.
Editorial Board, *SIAM Journal on Scientific Computing*, 2000-2006
Editorial Board, SIAM Book Series, *Computational Science and Engineering*, 2005-08.
Editorial Board, *Advances in Water Resources*, 1998-present
Editor-in-Chief, *Computational Geosciences*, 2006-present.
Editorial Board, *Water,* 2018-present.

Conferences Organized/Chaired:
Program Committee, Society for Computer Simulation, Mission Earth '97 Conference, Phoenix, Arizona, January 13-15, 1997.
Co-Organizer, Mini-symposium on Domain Decomposition and Multigrid, SIAM Geosciences Conference, Houston, 1993.
Co-Organizer, Workshop on Parallel Computing, SIAM Geosciences Conference, Houston, 1993.
Co-Organizer, Session on Flow Through Porous Media, Society for Engineering Science Conference, Texas A&M University, 1994.
Organizer, Mini-symposium on Reactive Transport, SIAM Geosciences Conference, San Antonio, TX, 1995.
Chair, 4th SIAM Conference on Geosciences, Albuquerque, NM, June 16-19, 1997.
Program Committee, Society for Computer Simulation, Conference on Mission Earth: Modeling and Simulation of the Earth System, San Diego, California, January 11-14, 1998.
Chair, 5th SIAM Conference on Geosciences, San Antonio, TX, March 24-27, 1999.
Local Organizing Committee, Finite Elements in Fluids, Austin, Texas, April 30-May 4, 2000
Co-organizer, Mini-Symposium on Computational Methods in Geosciences, Society for Engineering Science, Austin, Texas, October 25-27, 1999.
Co-organizer, Finite Element Circus, Austin, Texas, February 25-26, 2000.
Co-organizer, Workshop on Reactive Transport, Engineering Research and Development Center, Vicksburg, MS, Sept. 25, 2000.
Co-organizer, Workshop on Multiphysics Applications, Engineering Research and Development Center, Vicksburg, MS, March 20, 2001.
Program Committee, 6th SIAM Conference on Geosciences, Boulder, CO, June 11-14, 2001.

Co-organizer, Mini-Symposium on Discontinuous Galerkin Methods, Fifth World Congress on Computational Mechanics, Vienna, July 7-12, 2002.
Co-organizer, Mini-Symposium on Mathematical and Computational Issues in the Geosciences, SIAM 50th Anniversary Meeting, Philadelphia, July 8-12, 2002.
Program Committee, International Congress on Computational Science, Amsterdam, April 21-24, 2002.
Program Committee, International Conference on Computational and Mathematical Methods in Science and Engineering, Alicante, Spain, September 2002.
Co-chair, 7th SIAM Conference on Geosciences, Austin, TX, March 17-20, 2003.
Co-organizer, Mini-symposium on Discontinuous Galerkin Methods, U.S. National Congress on Computational Mechanics, Albuquerque, NM, July 28-31, 2003.
Member, Organizing Committee, Computational Methods in Water Resources, XV, Chapel Hill, NC, June 14-17, 2004.
Member, Organizing Committee, SIAM Annual Meeting, Portland, OR, July 12-16, 2004.
Organizer, Minisymposium on Reservoir Simulation in the 21st Century, SIAM Annual Meeting, Portland, OR, July 12-16, 2004.
Co-chair, 8th U.S. National Congress on Computational Mechanics, Austin, TX, July 25-27, 2005.
Co-organizer, Minisymposium on Finite Element Methods in Environmental Fluid Mechanics, 8th U.S. National Congress on Computational Mechanics, Austin, TX, July 25-27, 2005.
Conference Organizing Committee, "50 Years of ADI Methods," Rice University, Nov. 2006.
Organizer, Minisymposium on Multiphysics Processes, SIAM Conference on Mathematical and Computational Issues in the Geosciences, March 2007
Co-organizer, Minisymposium on Computational Mechanics in the Geosciences, 9th U.S. Congress on Computational Mechanics, July 2007.
Scientific Program Committee, 9th U.S. Congress on Computational Mechanics, July 2007.
Co-organizer, Minisymposium on Discontinuous Galerkin Methods, World Congress on Computational Mechanics, Venice, Italy, June 2008.
Co-organizer, Minisymposium on Petascale Computing for Hurricane Storm Surge Modeling, SIAM Conference on Computational Science and Engineering, Miami, March, 2009.
Co-organizer, Minisymposium on Finite Element Methods in Environmental Fluid Mechanics, U.S. Congress on Computational Mechanics, Columbus, Ohio, July, 2009.
Co-chair, Special Year on "Simulating our Complex World: Modeling, Computation and Analysis", Institute for Mathematics and Its Applications, 2010-2011.
Co-organizer, Minisymposium on Issues in Coastal Ocean Modeling, SIAM Conference on Mathematical and Computational Issues in the Geosciences, March, 2011.
Co-organizer, Workshop on "Societally Relevant Computing," Institute for Mathematics and Its Applications, The University of Minnesota, April, 2011.
Co-organizer, Workshop on "Large Scale Inverse Problems and Uncertainty Quantification," Institute for Mathematics and Its Applications, The University of Minnesota, June, 2011.
Co-organizer, Minisymposium on Finite Element Methods for Environmental Fluid Mechanics, U.S. National Congress on Computational Mechanics, Minneapolis, July, 2011.
Co-organizer, Minisymposium on Numerical Methods for Waves, Circulation and Transport in the Coastal Ocean, Computational Methods in Water Resources 2012, University of Illinois, Urbana-Champaign, June 2012
Program Committee, Society for Industrial and Applied Mathematics Conference on Mathematical and Computational Issues in the Geosciences, Padova, Italy, June, 2013.
Co-organizer, Minisymposium on Unstructured Mesh Numerical Models for Coastal and Global Ocean Circulation, Society for Industrial and Applied Mathematics Conference on Mathematical and Computational Issues in the Geosciences, Padova, Italy, June, 2013.
Host and Co-Organizer, 12th International Conference on Multi-scale Unstructured Mesh Numerical Modeling for Coastal, Shelf and Global Ocean Dynamics (IMUM 2013), Austin, TX, September, 2013
Co-organizer, Minisymposium on Computational Methods for Water Environmental Problems and Coastal/Flood Disaster Mitigation, 1st International Conference on Computational Engineering and Science for Safety and Environmental Problems (COMPSAFE), Sendai, Japan, April, 2014.

Organizer, Minisymposium on Numerical Methods for Waves, Circulation and Transport in the Coastal Ocean, Computational Methods in Water Resources (CMWR 2014), University of Stuttgart, Stuttgart, Germany, June 2014.
Organizing Committee, Gordon Conference on Flow & Transport Through Permeable Media, Bates College, Maine, July 2014.
Co-organizer, Dynamic Physical Processes in the Gulf of Mexico: What have we learned, what does it mean and how can it be used?, Gulf of Mexico Oil Spill Conference, Houston, TX, January 2015.
Co-organizer of Minisymposium on "Finite Element Methods and High Performance Computing in Environmental Fluid Mechanics,": US. National Congress on Computational Mechanics 13, San Diego, CA, July 2015
Scientific Committee, ALGORITMY 2016.
Organizing Committee, Computational Methods in Water Resources 2016.
Co-Chair, Society for Industrial and Applied Mathematics 2017 Conference on Computational Science and Engineering, Atlanta, GA, Feb 27-March 3, 2017.
Organizing Committee, 16th International Workshop on Multi-scale Unstructured Mesh Modeling for Coastal, Shelf and Global Ocean Dynamics (IMUM), Stanford University, August, 2017.
Co-organizer and Co-PI, National Science Foundation Workshop on the Future of Coastal and Estuarine Modeling, North Carolina State University, June 2018.
Member of the Community Advisory Committee for Water Prediction (CAC-WP), National Oceanographic and Atmospheric Administration National Water Center, January 2018—present.
Organizing Committee, SIAM Conference on Mathematical and Computational Issues in the Geosciences 2019.

OTHER PROFESSIONAL HIGHLIGHTS

Reviewer: *SIAM Journal on Applied Mathematics; Journal of Computational Physics; Numerical Methods for Partial Differential Equations; Water Resources Research; Mathematics of Computation*; *Computers and Fluids*; *Computational Geosciences*; *Computer Methods in Applied Mechanics and Engineering*; *In Situ; International Journal on Numerical Methods in Fluids; International Journal on Numerical Methods in Engineering; Journal of Scientific Computation; Journal of Computational and Applied Mathematics; Mathematical Modeling and Numerical Analysis, Advances in Water Resources, SIAM Journal on Numerical Analysis, SIAM Journal of Scientific Computing, Computer Methods in Applied Mechanics and Engineering, Journal of Computational Physics, Numerical Methods in PDES, Monthly Weather Review*
Reviewer, National Science Foundation, Division of Mathematical Sciences, Division of Advanced Computational National Science Foundation Review Panel, Postdoctoral Fellowships in Computational Mathematics, 1994.
Department of Energy Review Panel, Microbial Transport, Subsurface Science Program, 1994.
Louisiana Board of Regents; Review panel on creating a Computational Mathematics Doctoral Degree at Louisiana Tech University, 1994.
National Science Foundation Review Panel, Computational Fluids, 1996, 1997, 1999.
National Science Foundation GEO 2000 Workshop (invited participant), Albuquerque, NM, January 1999.
Review Committee, Computational and Applied Math Graduate Program, Louisiana Tech, January 1999.
National Science Foundation Review Panel on Small Business Innovative Research Grants, September 1999.
National Science Foundation Review Panel on Information Technology Research, May 2000.
National Science Foundation Review Panel on Information Technology Research, April 2001.
Visiting professor, University of Padova, Padova, Italy, March 12-16 and July 16-20, 2001.
National Sciences Foundation Review Panel on Computational Fluids, February 2003.
National Sciences Foundation Review Panel on Information Technology Research, May 2003.
National Science Foundation Review Panel on Computational Fluids, February 2005.
National Science Foundation Review Panel on Numerical Methods in PDEs, March 2006
Department of Energy Review Panel for SCIDAC Groundwater Proposals, April 2006

"Unstructured Mesh Finite Element Ocean Modelling Workshop," Office of Naval Research, Arlington, VA, May 2006
National Science Foundation Review Panel on Focused Research Groups in Mathematics, November 2006.
National Science Foundation Review Panel on Computational Discovery and Innovation, February 2008
National Science Foundation Review Panel on Numerical PDEs, March 2008.
Mentored two Research Experience for Undergraduate Students (REU), spring 2008 and summer 2008.
Interviewed by KHOU-TV news on Hurricane Storm Surge Models on Petascale Computers, December, 2007.
King Abdullah University of Science and Technology (KAUST) Academic Excellence Alliance Curriculum Committee on Computational Earth Sciences, 2008.
Department of Energy Review of SCIDAC Ground Water Projects, April, 2009.
National Science Foundation Review Panel on Earth Systems Modeling, August, 2010.
Department of Energy Office of Science Applied Mathematics Review Panel, March 2011.
Testified before Senate Commerce Committee on "Natural Disasters Preparedness: Are Federal Investments Paying Off?", Washington, D.C., May 2011.
Department of Energy Early Career Research Program Review Panel, February 2012.
American Mathematical Society Simons Travel Awards Review Panel, May 2012.
National Science Foundation Workshop on Computational Mathematics in the Geosciences, September 2011.
Workshop on Mathematics in the Geosciences, Northwestern University, October 2011.
Leadership Team, Rice Empowering Leadership Alliance, 2007—2012.
National Science Foundation Review Panel on Computational and Data-Enabled Science and Engineering, March, 2014.
National Science Foundation Review Panel on Hazard SEES proposals, 2015.
Department of Energy Review Panel, Advanced Scientific Computing Research, April 3-4, 2017.
Department of Energy Review Panel, SCIDAC Program, April 18-21, 2017.

PROFESSIONAL COMMUNITY SERVICE

Faculty Associate, Hanzen College, Rice University, 1994-95
Faculty Mentor, Department of Aerospace Engineering, 2001.
Faculty Mentor, Empowering Leadership Alliance, The University of Texas at Austin, 2009-2013.
Faculty Mentor, McNair Scholars Program, 2010-2011.
Faculty Sponsor, SIAM Student Chapter, The University of Texas at Austin, 2009—present.

UNIVERSITY COMMITTEES

University Committees

Member, Digital Facilities and Infrastructure Subcommittee, 1995-97.
Member, Faculty Research Assignment and Summer Research Assignment Proposal Evaluation Committee, 2000-2001.
Member, Faculty Advisory Committee on Budgets, 2002-2004.
Vigre Graduate Management Team, Dept. of Mathematics, 2004-05
Chair, Computational and Applied Math Graduate Program Admissions & Fellowships Committee, 2003-04.
ICES Postdoctoral Fellowship Committee, 2004-06.
Member, CAM Computational Science and Engineering Curriculum Committee, Fall 2007.
Member, CAM Area A Curriculum Committee, Spring 2009.
Graduate Studies Subcommittee, Computational and Applied Mathematics Program, 1997-present.
Member, Computational and Applied Math Graduate Program Admissions and Fellowship Committee, 1995-2013
Institute for Computational Engineering and Sciences Internal Advisory Board, 2009—present.
Moncrief Grand Challenge Hiring Committee, ICES, 2012-2016.
Research Policy Committee, 2014-present.

Vice President for Research Search Committee, 2015.

College Committees
Member, Undergraduate Advising and Retention Committee, 1995-96.
Member, Scholastic Appeals Committee, 1997-98.
Member, Math/Physics Committee, 1999-2000.
Chair, Math-Science Committee, 2002-2003.
Member, ICES Postdoctoral Fellowship Committee, 2004-05
Member, Admissions & Fellowship Committee, Computational and Applied Mathematics Program, 2004-06
Member, Academic Support Committee, 2005-07
Member, Promotions and Tenure Committee, 2007-08
Cockrell School of Engineering Promotions and Tenure Committee, 2011-12.
Chair, Cockrell School of Engineering Promotions and Tenure Committee, 2012-13.
Cockrell School of Engineering Creditation and Assessments Committee, 2013-2014.
ABET Accreditation Committee, 2014-2016.

Departmental Committees
Member, Computer Committee, 1995-96.
Member, Curriculum Committee, 1996-97.
Member, Awards Committee, 1999-2000.
Chair, Math Qualifying Exam Committee, 1999, 2000, 2001.
Member, Departmental Teaching Award Committee, 2001, 2002.
Member, Budget Council Annual Review Committee, 2001-2002.
Member, Faculty Review Committee for Glenn Lightsey, 2002.
Member, Program Evaluation and Improvement Committee, 2002-2003.
Chair, Post-Tenure Review Committee, 2003-04
Member, Math Qualifying Exam Committee, 2003-04
Member, Rui Huang 3rd Year Review Committee
Member, Budget Council Faculty Evaluation Committee, 2004-05
Member, Curriculum Committee, 2004-05
Chair, Math Qualifying Exam Committee, 2004-05
Member, Several Qualifying Exam Committees, 2004-05
Chair, Budget Council Faculty Evaluation Committee, 2005-06
Member, Post-tenure Review Committee, 2006-2007
Member, Fluids Faculty Search Committee, 2008
ASE/EM Undergraduate Service Courses Committee
Chair, ASE/EM Math Qualifying Exam Committee, 2005-present
Member, ASE/EM Undergraduate Service Courses Committee, 2005-present
Member, L. Raja 3rd Year Review Committee, 2008
Member, ASE/EM Strategic Planning Committee, 2008-09
Member, Annual Faculty Review Committee, 2009
Chair, ABET Review Committee, 2010
ASE/EM IT Committee, 2010-2011.
Post-tenure review committee, 2010-2011.
Faculty Workload Policy Committee, 2010-2011.
IT Committee, 2011-12.
IT Committee, 2012-13.
Chair, Dr. Rui Huang Promotion Evaluation Committee, 2013.
Departmental Strategic Planning Committee, 2012-15.
Chair, Math Qualifying Exam Committee, 2012-14.
ASE/EM Undergraduate Service Courses Committee, 2012-14.
IT Committee, 2013-2014.
Chair, Computational Engineering Degree Program Committee, 2014-15.

Chair, Dr. Ryan Russell Promotion Evaluation Committee, 2014.
Hiring Committee for Center for Space Research Director, 2014.
Faculty Search Committee, 2014-15.
Mathematics Written Qualifying Exam Committee, 2014-15.
Chair, Post-tenure Review Committee for Prof. Greg Rodin, ASE/EM, 2014.
Simulation Based Engineering and Sciences Faculty Search Committee
CSEM Graduate Studies Subcommittee
Computational Engineering Curriculum Committee, Chair
ASE Curriculum Committee
Faculty Search Committee in Geotechnical Engineering, Department of Civil Engineering, 2017-2018.
Faculty Search Committee for Chaired Professor Position in Space Engineering, 2017-2018.
ABET Review for Computational Engineering, 2018.

Administrative Assignments
Faculty Mentor, Department of Aerospace Engineering, 2001.
Graduate Advisor, Computational and Applied Mathematics Program, 1997-present.
Associate Chair for Computational Engineering Program
Area Coordinator, Computational Mechanics, 2011—present.

HONORS AND AWARDS:
National Science Foundation Postdoctoral Fellowship, 1988-90.
Department of Aerospace Engineering and Engineering Mechanics Teaching Award, 1999.
Halliburton Faculty Excellence Award, Cockrell School of Engineering, 2001.
Temple Foundation Faculty Fellowship #7, 1998—2010.
Plenary Speaker, Computational Methods in Water Resources XV, 2004.
Plenary Speaker, 7th SIAM Conference on Geosciences, Avignon, France, June 2005.
Engineering Students with Disabilities Certificate of Appreciation, 2005.
Invited to give Congressional Lunch Briefing by the American Mathematical Society, Washington, D.C., Nov.2006.
Joint TACC/ICES Distinguished Lecturer, June 2006.
Semi-Plenary Speaker, U.S. National Congress on Computational Mechanics X, Columbus, OH, July 2009
Semi-Plenary Speaker, 2nd International Conference on High Performance Computing and Applications, Shanghai, China, August, 2009.
Research featured on KVUE-TV, KXAN-TV, KEYE-TV, Science Magazine, Computerworld, SIAM News, UT Daily Texan, Austin American-Statesman, IEEE Podcast, Fox Channel 7, UT Home Page, Bloomberg News.
Keynote speaker, Workshop on Shallow Water Modeling, Center for Scientific Computation and Mathematical Modeling, The University of Maryland, October, 2010.
Plenary speaker, FEMTEC 2011, Reno, Nevada, May 2011.
Keynote speaker, Humboldt Conference on "Rare Events with Catastrophic Consequences in Complex Systems," Austin, TX, January, 2011.
Institute for Computational Engineering and Sciences Distinguished Research Excellence Award, 2011.
Edward S. Hyman Endowed Chair in Engineering, 2011-2014.
Barrett Lecture: Recent Developments in Discontinuous Galerkin Methods for Partial Differential Equations, University of Tennessee, Knoxville, May 2012.
Plenary speaker, ALGORITMY Conference, Podbanske, Slovakia, September 2012.
Society for Industrial and Applied Mathematics Geosciences Career Prize, 2013.
Zienkiewicz Lecture, The Mathematics of Finite Elements and Applications (MAFELAP) 2013, Brunel University, UK, June 2013.
Invited Speaker, Texas Academy of Medicine, Engineering and Science, January, 2014.
Invited Speaker, Workshop on Opportunities and Challenges in 21st Century Experimental Mathematics, Institute for Computational and Experimental Research in Mathematics (ICERM), July 2014.
Invited Speaker, Shell Lecture Series, Rice University, November, 2013.

Deleted: 1—present

Keynote Speaker, NSF Cyberbridges Workshop, Arlington, VA, August, 2015.
Frontiers in Computational Science Lecture, Louisiana State University, April 2015.
SIAM Fellow, Class of 2016
Frontiers in Geosciences Lecture, Los Alamos National Laboratory, August 2016.
Van Tuyl Lecture, Colorado School of Mines, April 2018.
Keynote Presentation at SIAM South East Atlantic Section Annual Meeting, March 2018.

PUBLICATIONS:

Refereed Journal Publications

1. Bell, J. B., Dawson, C. and Shubin, G. R., "An unsplit, higher order Godunov method for scalar conservation laws in multiple dimensions," *Journal of Computational Physics,* 74 (1): 1-24, January 1988.
2. Dawson, C., Russell, T. F. and Wheeler, M. F., "Some Improved Error Estimates for the Modified Method of Characteristics," *SIAM Journal on Numerical Analysis*, 26 (6): 1487-1512, 1989.
3. Dawson, C., "Godunov-mixed methods for immiscible displacement," *International Journal for Numerical Methods in Fluids*, 11: 835-847, 1990.
4. Dawson, C., Du , Q., and Dupont, T. F., "A finite difference domain decomposition method for numerical solution of the heat equation," *Math. Comp.,* 57: 63-71, 1991.
5. Dawson, C., "Godunov-mixed methods for advective flow problems in one space dimension," *SIAM Journal on Numerical Analysis*, 28 (5): 1282-1309, 1991.
6. Chiang, C. Y., Dawson, C., and Wheeler, M. F., "Modeling of *in-situ* biorestoration of organic compounds in groundwater," *Transport in Porous Media*, 6 (5) 667-702, October 1991.
7. Dawson, C., Dupont, T. F., "Explicit/implicit, conservative Galerkin domain decomposition procedures for parabolic equations," *Math. Comp.*, 58: 21-34, 1992.
8. Chellum, S, Wiesner, M., and Dawson, C., "Slip at a uniformly porous boundary: Effect on fluid flow and mass transfer," *J. Eng. Math.,* 26: 481-492, 1992.
9. Dawson, C., "Godunov-mixed methods for advection-diffusion equations in multidimensions," *SIAM Journal on Numerical Analysis*, 30 (5): 1315-1332, 1993.
10. Grundy, R. E., van Duijn, C. J., and Dawson, C., "Asymptotic profiles with finite mass in one-dimensional contaminant transport through porous media: the fast reaction case," *Quarterly Journal of Mechanics and Applied Math,* 47 (1): 69-106, 1994.
11. Wood, B., Dawson, C., Streile, G., and Szecsody, J., "Modeling contaminant transport and biodegradation in a layered porous media system," *Water Resources Research*, 30: 1833-1845, 1994.
12. Dawson, C. and Dupont, T. F., "Explicit/implicit, conservative domain decomposition procedures for parabolic problems based on block-centered finite differences," *SIAM Journal on Numerical Analysis,* 31 (4): 1045-1061, 1994.
13. Dawson, C., van Duijn, C. J. and Wheeler, M. F., "Characteristic-Galerkin methods for contaminant transport with nonequilibrium adsorption kinetics," *SIAM Journal on Numerical Analysis,* 31 (4): 982-999, 1994.
14. Shaw, S., Warby, M. K., Whiteman, J. R., Dawson, C., and Wheeler, M. F., "Numerical techniques for the treatment of quasistatic viscoelastic stress problems in linear isotropic solids," *Computer Methods in Applied Mechanics and Engineering*, 118 (3-4): 211-237, October 1994.
15. Dawson, C., "High-resolution upwind-mixed finite element methods for advection-diffusion equations with variable time stepping," *Numerical Methods for Partial Differential Equations*, 11: 525-538, 1995.
16. Chellam, S., Wiesner, M. R., and Dawson, C., "Laminar flow in porous ducts," *Reviews in Chemical Engineering*, 11: 52-99, 1995.
17. Wood, B., Ginn, T., and Dawson, C., "Effects of microbial metabolic lag in contaminant transport and biodegradation modeling," *Water Resources Research*, 31: 553-563, 1995.
18. Chiang, C. Y., Raven, G., and Dawson, C., "The relationship between monitoring well and aquifer solute concentrations,*" Ground Water*, 33: 718-726, 1995.
19. Dawson, C., van Duijn, C. J., and Grundy, R. E., "Large time asymptotics in contaminant transport in porous media," *SIAM Journal on Applied Mathematics,* 56 (4): 965-993, 1996.

20. Hamed, M., Bedient, P. B. and Dawson, C., "Probabilistic modeling of aquifer heterogeneity using reliability methods," *Advances in Water Resources*, 19 (5): 277-295, October 1996.
21. Arbogast, T., Bryant, S., Dawson, C., Saaf, F., Wang, C. and Wheeler, M. F., "Computational methods for multiphase flow and reactive transport problems arising in subsurface contaminant remediation," *Journal of Computational and Applied Mathematics*, 74 (1-2): 19-32, November 1996.
22. van Duijn C. J., Grundy, R. E., and Dawson, C., "Large time profiles in reactive solute transport," *Transport in Porous Media,* 27: 57-84, 1997.
23. Dawson, C. N., Klie, H., Wheeler, M. F., and Woodward, C. S., "A parallel, implicit, cell-centered method for two-phase flow with a preconditioned Newton-Krylov solver," *Computational Geosciences*, Vol. 1, pp. 215-249, 1997.
24. Arbogast, T., Dawson, C. N., Keenan, P. T., Wheeler, M. F. and Yotov, I., "Enhanced cell-centered finite differences for elliptic equations on general geometry," *SIAM Journal on Scientific Computing*, 19 (2): 404-425, 1998.
25. Dawson, C. N., Wheeler, M. F. and Woodward, C. S., "A two-grid finite difference scheme for nonlinear parabolic equations," *SIAM Journal on Numerical Analysis*, 35 (2): 435-452, 1998.
26. Chippada, S., Dawson, C. N., Martinez, M. L., and Wheeler, M. F., "Finite element approximations to the system of shallow water equations I: Continuous-time a priori error estimates," *SIAM Journal on Numerical Analysis*, 35 (2): 692-711, 1998.
27. Dawson, C. N., "Analysis of an upwind-mixed finite element method for nonlinear contaminant transport equations," *SIAM Journal on Numerical Analysis*, 35 (5): 1709-1724, 1998.
28. Chippada, S., Dawson, C. N., Martinez-Canales, M. L. and Wheeler, M. F., "Finite element approximations to the system of shallow water equations II: Discrete-time a priori error estimates," *SIAM Journal on Numerical Analysis*, 36 (1): 226-250, 1998.
29. Abate, J., Wang, P., Sepehrnoori, K., and Dawson, C., "Application of an automatic differentiation tool in the development of a compositional reservoir simulator," *Commun. Numer. Meth. Engrg.*, 15: 423-434, 1999.
30. Dawson, C. and Kirby, R., "Solution of parabolic equations by backward Euler-mixed finite element methods on a dynamically changing mesh," *SIAM Journal on Numerical Analysis*, 37 (2): 423-442, 1999.
31. Dawson, C. and Aizinger, V., "Upwind-mixed methods for transport equations," *Computational Geosciences*, Vol. 3, pp. 93-110, 1999.
32. Dawson, C., "Conservative, shock-capturing transport methods with nonconservative velocity approximations," *Computational Geosciences*, Vol. 3, pp. 205-227, 2000.
33. Holder, A.W., Bedient, P.B. and Dawson, C.N., "FLOTRAN, a three-dimensional ground water model, with comparisons to analytical solutions and other models," *Advances in Water Resources*, 23 (5): 517-530, February 2000.
34. Woodward, C.S. and Dawson, C.N., "Analysis of expanded mixed finite element methods for a nonlinear parabolic equation modeling flow into variably saturated porous media," *SIAM Journal on Numerical Analysis,* 37 (3): 701-724, 2000.
35. Dawson, C. and Martinez-Canales, M., "A characteristic-Galerkin approximation to a system of shallow water equations," *Numerische Mathematik*, Vol. 86, pp. 239-256, 2000.
36. Aizinger, V., Dawson, C., Cockburn, B. and Castillo, P., "Local discontinuous Galerkin methods for contaminant transport," *Advances in Water Resources,* 24 (1): 73-87, October 2000.
37. Bryant, S., Dawson, C. and van Duijn, C. J., "Dispersion-induced chromatographic waves," *Ind. Eng. Chem. Res.*, Vol. 39, pp. 2682-2691, 2000.
38. Dawson, C. and Martinez-Canales, M., "Finite element approximations to the system of shallow water equations, Part III: On the treatment of boundary conditions," *SIAM Journal on Numerical Analysis*, 38 (1): 149-159, 2000.
39. Dawson, C. and Kirby, R., "High resolution schemes for conservation laws with locally varying time steps," *SIAM Journal on Scientific Computing*, 22, (6): 2256-2281, 2001.
40. Dawson, C. and Proft, J., "A priori error estimates for interior penalty versions of the local discontinuous Galerkin method applied to transport equations," *Numerical Methods for Partial Differential Equations,* 17: 545-561, 2001.

41. Aizinger, V. and Dawson, C., "A discontinuous Galerkin method for two-dimensional flow and transport in shallow water," *Advances in Water Resources*, 25 (1): 67-84, January 2002.
42. Cockburn, B. and Dawson, C., "Approximation of the velocity by coupling discontinuous Galerkin and mixed finite element methods for flow problems," *Computational Geosciences*, 6: 505-522, 2002.
43. Mazzia, A., Bergamaschi, L., Dawson, C. and Putti, M., "Godunov mixed methods on triangular grids for advection dispersion equations," *Computational Geosciences*, 6: 123-139, 2002.
44. Dawson, C. and Proft, J., "Coupling of continuous and discontinuous Galerkin methods for transport problems," *Computer Methods in Applied Mechanics and Engineering*, 191 (29-30): 3213-3231, May 2002.
45. Dawson, C. and Proft, J., "Discontinuous and coupled continuous/discontinuous Galerkin methods for the shallow water equations," *Computer Methods in Applied Mechanics and Engineering*, 191 (41-42): 4721-4746, September 2002.
46. Dawson, C. and Proft J., "Discontinuous/continuous Galerkin methods for coupling the primitive and wave continuity equations of shallow water," *Computer Methods in Applied Mechanics and Engineering*, 192 (47-48): 5123-5145, November 2003.
47. Dawson, C., "The $p^{k+1} - s^k$ Discontinuous Galerkin Method for Elliptic Equations," *SIAM Journal on Numerical Analysis*, 40 (6): 2151 – 2170, 2002.
48. Dawson, C. and Proft, J., "Coupled discontinuous and continuous Galerkin finite element methods for the depth-integrated shallow water equations," *Computer Methods in Applied Mechanics and Engineering,*193 (3-5): 289-318, January 2004.
49. Dawson, C., Sun, S. and Wheeler, M. F., "Compatible Algorithms for Coupled Flow and Transport," *Computer Methods in Applied Mechanics and Engineering*, 193 (23-26): 2565-2580, June 2004.
50. Dawson, C. and Aizinger, V., "A Discontinuous Galerkin Method for Three-dimensional Shallow Water Equations," *Journal of Scientific Computing*, 22 (1): 245-267, June 2005.
51. Dawson, C., "Coupling Local Discontinuous and Continuous Galerkin Methods for Flow Problems," *Advances in Water Resources*, 28 (7): 729-744, July 2005.
52. Kubatko, E., Westerink, J.J. and Dawson, C., "An Unstructured Grid Morphodynamic Model with a Discontinuous Galerkin Method for Bed Evolution," *Ocean Modelling*, 15 (1-2): 71-89, 2006.
53. Dawson, C. and Baird, J., "The Representer Method for Data Assimilation in Single-phase Darcy Flow in Porous Media," *Computational Geosciences*, 9: 247-271, 2005.
54. Dawson, C.N., Editor, *Special Issue on Discontinuous Galerkin Methods, Computer Methods in Applied Mechanics and Engineering*, 195 (25-28), May 2006.
55. Dawson, C., Westerink J.J., Feyen, J. and Pothina, D., "Continuous, Discontinuous and Coupled Discontinuous-Continuous Galerkin Finite Element Methods for the Shallow Water Equations," *International Journal for Numerical Methods in Fluids*, 52 (1): 63-88, September 2006.
56. Dawson, C., "Analysis of discontinuous finite element methods for ground water/surface water coupling," *SIAM Journal on Numerical Analysis*, 44 (4): 1375-1404, 2006.
57. Li, H., Farthing, M., Dawson, C. and Miller, C.T., "Local discontinuous Galerkin approximations to Richards' equation," *Advances in Water Resources*, 30 (3): 555-575, March 2007.
58. Kubatko, E.J., Westerink, J.J., and Dawson, C., "*hp* Discontinuous Galerkin methods for advection dominated problems in shallow water," *Computer Methods in Applied Mechanics and Engineering*, 196 (1-3): 437-451, December 2006.
59. Baird, J. and Dawson, C., "A *Posteriori* Error Estimation of the Representer Method for Single-Phase Darcy Flow," *Computer Methods in Applied Mechanics and Engineering,* 196 (9-12): 1623-1632, February 2007.
60. Aizinger, V. and Dawson, C., "The Local Discontinuous Galerkin Method for Three Dimensional Shallow Water Flow," *Computer Methods in Applied Mechanics and Engineering,* 196 (4-6): 734-746, January 2007.
61. Kubatko, E. J., Westerink, J. J., and Dawson, C., "Semi discrete discontinuous Galerkin methods and stage-exceeding-order, strong-stability-preserving Runge-Kutta time discretizations," *Journal of Computational Physics,* 222 (2): 832-848, March 2007.
62. Westerink, J. J., Luettich, R. A., Feyen, J. C., Atkinson, J. H., Dawson, C. N., Roberts, H. J., Powell, M. D., Dunion, J. P., Kubatko, E. J., and Pourtaheri, H., "A Basin to Channel Scale Unstructured Grid

Hurricane Storm Surge Model applied to Southern Louisiana," *Monthly Weather Review*, 136: 833-864, 2008.
63. Baird, J. and Dawson, C., "The representer method for two-phase flow in porous media," *Computational Geosciences*, 11 (3): 235-248, September 2007.
64. Iglesias, M. and Dawson, C., "The representer method for state and parameter estimation in single-phase Darcy flow," *Computer Methods in Applied Mechanics and Engineering*, 196 (45-48): 4577-4596, September 2007.
65. Dawson, C., "A continuous/discontinuous Galerkin framework for modeling coupled subsurface and surface water flow," *Computational Geosciences*, 12 (4): 451-472, December 2008.
66. Alonso, R. J., Santillana, M. and Dawson, C., "Analysis of the diffusive wave approximation of the Shallow Water equations," *European Journal of Applied Mathematics,* 19: 575-606, 2008.
67. Kees, C.E., Farthing, M.W. and Dawson, C.N., "Locally conservative, stabilized finite element methods for variably saturated flow," *Computer Methods in Applied Mechanics and Engineering*, 197 (51-52): 4610-4625, October 2008.
68. Kubatko, E.J., Dawson, C. and Westerink, J.J., "Time step restrictions for Runge-Kutta discontinuous Galerkin methods on triangular grids," *Journal of Computational Physics,* 227 (23): 9697-9710, December 2008.
69. Kubatko, E.J., Bunya, S., Dawson, C. and Westerink J.J., "Dynamic p-adaptive Runge-Kutta discontinuous Galerkin methods for the shallow water equations, " *Computer Methods in Applied Mechanics and Engineering*, 198: 1766-1774, 2009.
70. Kubatko, E.J., Bunya, S., Dawson, C., Westerink, J.J. and Mirabito, C., "A performance comparison of continuous and discontinuous finite element shallow water models," *Journal of Scientific Computing,* 40: 315-339, 2009.
71. Bunya, S., Kubatko, E.J., Westerink, J.J. and Dawson, C., "A wetting and drying treatment for the Runge-Kutta discontinuous Galerkin solution to the shallow water equations," *Computer Methods in Applied Mechanics and Engineering,* 198: 1548-1562, 2009.
72. Liu, R., Wheeler, M.F., Dawson, C.N. and Dean, R.H., " Modeling of convection-dominated thermoporomechanics problems using incomplete interior penalty Galerkin method," *Computer Methods in Applied Mechanics and Engineering,* 198: 919-919, 2009.
73. Liu, R., Wheeler, M.F., and Dawson, C.N., "A three-dimensional nodal-based implementation of a family of discontinuous Galerkin methods for elasticity problems," *Computers and Structures,* 87: 141-150, 2009.
74. Iglesias, M. and Dawson, C., "An iterative representer-based scheme for data inversion in reservoir modeling," *Inverse Problems,* 25 (3): 1-34, January 2009.
75. Liu, R., Wheeler, M.F., Dawson, C.N. and Dean, R.H., "On a coupled discontinuous/continuous Galerkin framework and an adaptive penalty scheme for poroelasticity problems," *Computer Methods in Applied Mechanics and Engineering,* 198: 3499-3510, 2009.
76. Santillana, M. and Dawson, C., "A numerical approach to study the properties of solutions of the diffusive wave approximation of the shallow water equations," *Computational Geosciences*, 14 (1): 31-53, January 2010.
77. Bunya, S., Dietrich, J.C., Westerink, J.J., Ebersole, B.A., Smith, J.M., Atkinson, J.H., Jensen, R., Resio, D.T., Luettich, R.A., Dawson, C., Cardone, V.J., Cox, A.T., Powell, M.D., Westerink, H.J., Roberts, H.J., "A high resolution coupled riverine flow, tide, wind, wind wave and storm surge model for Southern Louisiana and Mississippi: Part I-model development and validation," *Monthly Weather Review,* 138 (2): 345-377, 2010.
78. Dietrich, J.C., Bunya, S., Westerink, J.J., Ebersole, B.A., Smith, J.M., Atkinson, J.H., Jensen, R., Resio, D.T., Luettich, R.A., Dawson, C., Cardone, V.J., Cox, A.T., Powell, M.D., Westerink, H.J. and Roberts, H.J., "A high-resolution coupled riverine flow, tide, wind, wind wave and storm surge model for Southern Louisiana and Mississippi: Part II-synoptic description and analysis of Hurricanes Katrina and Rita," *Monthly Weather Review,* 138 (2): 378-404, 2010.
79. Santillana, M. and Dawson, C., "A local discontinuous Galerkin method for a doubly nonlinear diffusion equation arising in shallow water modeling," *Computer Methods in Applied Mechanics and Engineering*, 199 (23-24): 1424-1436, April 2010.

80. Wirasaet, D., Tanaka, S., Kubatko, E.J., Westerink, J.J. and Dawson, C., "A performance comparison of nodal discontinuous Galerkin methods on triangles and quadrilaterals," *International Journal of Numerical Methods in Fluids,* 64: 1336-1362, 2010.
81. Tanaka, S., Bunya, S., Westerink, J.J., Dawson, C. and Luettich, R.A., "Scalability of an unstructured grid continuous Galerkin based hurricane storm surge model," *Journal of Scientific Computing*, 46: 329-358, 2011.
82. Dietrich, J.C., Zijlema, M., Westerink, J.J., Holtuijsen, L.H., Dawson, C., Luettich, R.A., Jr., Jensen, R., Smith, J.M., Stelling, G.S. and Stone, G.W., "Modeling hurricane waves and storm surge using integrally-coupled, scalable computations," *Coastal Engineering*, 58 (1): 45-65, January 2011.
83. Mirabito, C., Dawson, C., Kubatko, E.J., Westerink, J.J. and Bunya, S., "Implementation of a discontinuous Galerkin morphological model on two-dimensional unstructured meshes," *Computer Methods in Applied Mechanics and Engineering,* 200: 189-207, 2011.
84. Liu, R., Wheeler, M.F., Dawson, C., and Dean, R., "A fast convergent rate preserving discontinuous Galerkin framework for rate-independent plasticity problems," *Computer Methods in Applied Mechanics and Engineering*, 199: 3213-3226, 2010.
85. Butler, T., Dawson, C. and Wildey, T., "A posteriori error analysis of stochastic differential equations using polynomial chaos expansions*," SIAM Journal on Scientific Computing*, 33 (3): 1267-1291, 2011.
86. Dietrich, J.C., Westerink, J.J., Kennedy, A.B., Smith, J.M., Jensen, R.E., Zijlema, M., Holthuijsen, L.H., Dawson, C., Luettich, R.A., Jr., Powell, M.D., Cardone, V.J., Cox, A.T., Stone, G.W., Pourtaheri, H., Hope, M.E, Tanaka, S., Westerink., L.G., Westerink. H.J. and Cobell, Z., "Hurricane Gustav (2008) Waves and Storm Surge: Hindcast, Synoptic Analysis and Validation in Southern Louisiana," *Monthly Weather Review*, 139: 2488-2522, 2011.
87. Dawson, C., Kubatko, E.J., Westerink, J.J., Trahan, C., Mirabito, C., Michoski, C. and Panda, N., "Discontinuous Galerkin methods for modeling Hurricane storm surge," *Advances in Water Resources*, 34 (9): 1165-1176, September 2011.
88. Michoski, C., Mirabito, C., Dawson, C., Wirasaet, D., Kubatko, E.J. and Westerink, J.J., "Adaptive hierarchic transformations over dynamic p-enriched schemes applied to generalized DG systems," *Journal of Computational Physics*, 230 (22): 8028-8056, September 2011.
89. Michoski, C., Mirabito, C., Dawson, C., Wirasaet, D., Kubatko, E.J. and Westerink, J.J., "Dynamic *p*-enrichment schemes for multicomponent reactive flows," *Advances in Water Resources*, 34 (12): 1666-1680, December 2011.
90. Dietrich, J.C., Tanaka, S., Westerink, J.J., Dawson, C., Luettich, R.A., Jr., Zijlema, M., Holthuijsen, L.H., Smith, J.M., Westerink, L.G., and Westerink, H.J., "Performance of the unstructured-mesh, SWAN+ADCIRC model in computing hurricane waves and surge," *Journal of Scientific Computing*, 52: 468-497, 2012.
91. Dietrich, J.C., Trahan, C.J., Howard, M.T., Fleming, J.G., Weaver, R.J., Tanaka, S., Yu, L, Luettich, R.A., Jr., Dawson, C., Wells, G., Westerink, J.J., Lu, A., Vega, K., Kubach, A., Dresback, K.M., Kolar, R.L., Kaiser, C. and Twilley, R.R., "Surface trajectories of oil transport along the northern coastline of the Gulf of Mexico," Continental *Shelf Research*, 41: 17-47, 2012.
92. Mattis, S., Dawson, C., Kees, C.E. and Farthing, M.W., "Numerical modeling of drag for flow through vegetated domains and porous structures," *Advances in Water Resources*, 39: 44-59, April 2012.
93. Trahan, C.J. and Dawson, C., "Local time-stepping in Runge-Kutta discontinuous Galerkin finite element methods applied to the shallow water equations," *Computer Methods in Applied Mechanics and Engineerin*g, 217-220: 139-152, April 2012.
94. Butler, T., Altaf, M.U., Dawson, C., Hoteit, I., Luo, X. and Mayo T., "Data Assimilation within the Advanced Circulation (ADCIRC) modeling framework for hurricane storm surge forecasting," *Monthly Weather Review*, 140: 2215-2231, 2012.
95. Kennedy, A.B., Westerink, J.J., Smith, J.M., Hope, M.E., Hartman, M. Taflanidis, A.A., Tanaka, S., Westerink H., Cheung, K.F., Smith, T., Hamann, M., Minamide, M., Ota A. and Dawson, C., "Tropical cyclone inundation potential on the Hawaiian Islands of Oahu and Kauai," *Ocean Modelling*, 52-53: 54-68, August 2012.

96. Miller, C.T., Dawson, C.N., Farthing, M.W., Hou, T.Y., Huang, J., Kees, C.E., Kelley, C.T. and Langtangen, H.P., "Numerical simulation of water resources problems: Models, methods, and trends," *Advances in Water Resources*, 51: 405-437, January 2013.
97. Zhang, Y., Kennedy, A., Panda, N., Dawson, C.N. and Westerink, J.J., "Boussinesq-Green-Naghdi rotational water wave theory," *Coastal Engineering*, 73: 13-27, March 2013.
98. Aizinger, V., Proft, J, Dawson, C., Pothina, D. and Negusse, S., "A three-dimensional discontinuous Galerkin model applied to the baroclinic simulation of Corpus Christi Bay," *Ocean Dynamics*, 63: 89-113, 2013.
99. Dietrich, J.C., Zijlema, M., Allier, P.-E., Holthuijsen, L.H., Booij, N., Meixner, J.D., Proft, J.K., Dawson, C.N., Bender, C.J., Naimaster, A., Smith, J.M., and Westerink, J.J., "Limiters for spectral propagation velocities in SWAN," *Ocean Modelling*, 70: 85-102, October 2013.
100. Povich, T.J., Dawson, C.N., Kees, C.E. and Farthing, M.W., "Finite element methods for variable density flow and solute transport," *Computational Geosciences*, 17: 529-550, 2013.
101. Altaf, M.U., Butler T., Luo, X., Dawson, C., Mayo, T. and Hoteit, I., "Improving short range ensemble Kalman storm surge forecasting using robust adaptive inflation," *Monthly Weather Review*, 141: 2705-2720, 2013.
102. Dawson, C. and Videman, J.H., "A streamline diffusion finite element method for the viscous shallow water equations," *Journal of Computational and Applied Mathematics*, 251: 1-7, October 2013.
103. Dawson, C., Trahan, C.J. Kubatko, E.J., Westerink, J.J., "A parallel local timestepping Runge-Kutta discontinuous Galerkin method with applications to coastal ocean modeling," *Computer Methods in Applied Mechanics and Engineering*, 259: 154-165, June 2013.
104. Hope, M.E., Westerink, J.J., Kennedy, A.B., Kerr, P.C., Dietrich, J.C., Dawson, C., Bender, C., Smith, J.M., Jensen, R.M., Zijlema, M., Holthuijsen, L.H., Luettich, R.A., Jr., Powell, M.D., Cardone, V.J., Cox, A.T., Pourtaheri, H., Roberts, H.J., Atkinson, J.H., Tanaka, S., Westerink, H.J. and Westerink, L.G., "Hindcast and validation of Hurricane Ike (2008) Waves, Forerunner, and Storm Surge," *Journal of Geophysical Research Oceans,* 118: 4424-4460, 2013.
105. Kerr, P., Martyr, R., Donahue, A., Hope, M., Westerink, J.J., Luettich, R., Kennedy A., Dietrich, J., and Dawson, C., "U.S. IOOS coastal and ocean modeling testbed: Evaluation of tide, wave, and hurricane surge response sensitivities to mesh resolution and friction in the Gulf of Mexico," *Journal of Geophysical Research Oceans,*118: 4633-4661, 2013.
106. Martyr, R., Dietrich, J.C., Westerink, J.J., Kerr, P.C., Dawson, C., Smith, J.M., Pourtaheri, H., Powell, N., van Ledden, M., Tanaka, S., Roberts, H.J., Westerink, H.J., and Westerink, L.G., "Simulating hurricane storm surge in the lower Mississippi River under varying flow conditions," *Journal of Hydraulic Engineering,* 139: 492-501, 2013.
107. Butler, T., Dawson, C. and Wildey, T., "Propagation of Uncertainties Using Improved Surrogate Models," *SIAM/ASA Journal on Uncertainty Quantification*, 1 (1): 164-191, 2013.
108. Michoski, C., Dawson, C., Mirabito, C., Kubatko, E.J., Wirasaet, D. and Westerink, J.J., "Fully coupled methods for multiphase morphodynamics," *Advances in Water Resources*, 59: 95-110, September 2013.
109. Meixner, J., Dietrich, J.C., Dawson, C., Zijlema, M. and Holthuijsen, L.H., "A discontinuous Galerkin coupled wave propagation/circulation model," *Journal of Scientific Computing,* 59 (2): 334-370, May 2014.
110. Mayo, T., Butler, T., Dawson C. and Hoteit, I., "Data assimilation within the Advanced Circulation (ADCIRC) modeling framework for the estimation of Manning's Friction Coefficient," *Ocean Modelling,* 76: 43-58, April 2014.
111. Mandli, K.T. and Dawson, C., "Adaptive mesh refinement for storm surge," *Ocean Modelling,*75: 36-50, March 2014.
112. Iglesias, M. and Dawson, C., "The regularizing Levenberg-Marquardt scheme for history matching of petroleum reservoirs," *Computational Geosciences,* 17: 1033-1053, 2013.
113. Wirasaet, D., Kubatko, E.J., Michoski, C., Tanaka, S., Westerink, J.J. and Dawson, C., "Discontinuous Galerkin methods with nodal and hybrid modal/nodal triangular, quadrilateral, and polygonal elements for nonlinear shallow water flow," *Computer Methods in Applied Mechanics and Engineering,* 270: 113-149, March 2014.

114. Zhang, Y., Kennedy, A.B., Panda, N., Dawson, C. and Westerink, J.J., "Generating-absorbing sponge layers for phase-resolving wave models," *Coastal Engineering,* 84:1-9, February 2014.
115. Altaf, M.U., Butler, T., Mayo, T., Luo, X., Dawson, C., Heemink, A. and Hoteit, I., "A comparison of ensemble Kalman filters for storm surge assimilation," *Monthly Weather Review,* 142 (8): 2899-2914, August 2014.
116. Butler, T., Estep, D., Tavener, S., Dawson, C. and Westerink, J.J., "A measure-theoretic computational method for inverse sensitivity problems III: Multiple quantities of interest," *SIAM/ASA Journal on Uncertainty Quantification,* 2 (1): 174-202, 2014.
117. Mirabito, C., Dawson, C. and Aizinger, V., "An a priori error estimate for the local discontinuous Galerkin method for shallow water and morphodynamic flow," *Numerical Methods for Partial Differential Equations*, 31 (2): 397-421, March 2015.
118. Restrepo, J.M., Venkataramani, S.C. and Dawson, C., "Nearshore sticky waters," *Ocean Modelling,* 80: 49-58, August 2014.
119. Sebastian, A., Proft, J., Dietrich, J.C., Du, W., Bedient, P.B. and Dawson, C., "Characterizing hurricane storm surge behavior in Galveston Bay using the SWAN+ADCIRC model," *Coastal Engineering,* 88: 171-181, June 2014.
120. Zhang, Y., Kennedy, A.B., Donahue, A.S., Westerink, J.J., Panda, N. and Dawson, C., "Rotational surf zone modeling for O (μ4) Boussinesq-Green-Naghdi systems," *Ocean Modelling,* 79: 43-53, July 2014.
121. Meixner, J., Dietrich, J.C., Dawson, C., Zijlema, M. and Holthuijsen, L.H., "A Discontinuous Galerkin Coupled Wave Propagation/Circulation Model," *Journal of Scientific Computing*, 59 (2): 334-370, May 2014.
122. Panda, N., Dawson, C., Zhang, Y., Kennedy, A.B., Westerink, J.J. and Donahue, A.S., "Discontinuous Galerkin methods for solving Boussinesq-Green-Naghdi equations in resolving non-linear and dispersive surface water waves," *Journal of Computational Physics,* 273: 570-588, September 2014.
123. Sraj, I, Mandli, K.T., Knio, O.M., Dawson, C.N. and Hoteit, I., "Uncertainty quantification and inference of Manning's friction coefficients using DART buoy data during the Tōhoku tsunami," *Ocean Modelling,* 83: 82-97, November 2014.
124. Donahue, A., Zhang, Y., Kennedy, A.B., Westerink, J.J., Panda, N. and Dawson, C., "A Boussinesq-scaled, pressure-Poisson water wave model," *Ocean Modelling*, 86: 36-57, February 2015.
125. Butler, T., Graham, L., Estep, D., Dawson, C. and Westerink, J.J., "Definition and solution of a stochastic inverse problem for the Manning's *n* parameter field in hydrodynamic models," *Advances in Water Resources,* 78: 60-79, April 2015.
126. Neupane, P. and Dawson, C., "A discontinuous Galerkin method for modeling flow in networks of channels," *Advances in Water Resources*, 79: 61-79, May 2015.
127. Höllt, T., Altaf, M.U., Mandli, K.T., Hadwiger, M., Dawson, C.N., and Hoteit, I., "Visualizing uncertainties in a storm surge ensemble data assimilation and forecasting," *Natural Hazards*, 77 (1): 317-336, May 2015.
128. Mattis, S.A., Dawson, C.N., Kees, C.E. and Farthing, M.W., "An immersed structure approach for fluid-vegetation interaction," *Advances in Water Resources*, 80: 1-16, June 2015.
129. Burleson, D.W., Rifai, H.S., Proft, J.K., Dawson, C. and Bedient, P.B., "Vulnerability of an industrial corridor in Texas to storm surge," *Natural Hazards*, 77 (2): 1183-1203, June 2015.
130. Sund, N., Bolster, D., Mattis, S., and Dawson, C., "Pre-asymptotic Transport Upscaling in Inertial and Unsteady Flows Through Porous Media," *Transport in Porous Media*, 109 (2): 411-432, September 2015.
131. Mattis, S.A., Butler, T.D., Dawson, C.N., Estep, D. and Vesselinov, V.V., "Parameter estimation and prediction for groundwater contamination based on measure theory," *Water Resources Research*, 51 (9):7608-7629, September 2015.
132. Wiraset, D., Brus, S.R., Michoski, C.E., Kubatko, E.J., Westerink, J.J. and Dawson, C., "Artificial boundary layers in discontinuous Galerkin solutions to shallow water equations in channels," *Journal of Computational Physics*, 299: 597-612, October 2015.
133. Hinkelmann, R., Liang, Q., Aizinger, V. and Dawson, C., "Robust shallow water models," *Environmental Earth Sciences,* 74 (11): 7273-7274, December 2015.

Formatted: Indent: Left: 0"

Deleted: ¶
Mirabito, C., Dawson, C. and Aizinger, V., "An A Priori Error Estimate for the Local Discontinuous Galerkin Method Applied to Two-Dimensional Shallow Water and Morphodynamic Flow," *Numerical Methods for Partial Differential Equations*, 31 (2): 397-421, March 2015

134. Michoski, C., Dawson, C., Kubatko, E.J., Wirasaet, D., Brus, S. and Westerink, J.J., "A Comparison of Artificial Viscosity, Limiters, and Filters, for High Order Discontinuous Galerkin Solutions in Nonlinear Settings," *Journal of Scientific Computing*, 66 (1): 406-434, January 2016.
135. Sund, N., Bolster, D. and Dawson, C., "Upscaling transport of a reacting solute through a periodically converging-diverging channel at pre-asymptotic times," *Journal of Contaminant Hydrology*, 182: 1-15, November 2015.
136. Torres, J., Bass, B., Irza, N., Fang, Z., Proft, J., Dawson, C., Kiani, M. and Bedient, P., "Characterizing the hydraulic interactions of hurricane storm surge and rainfall–runoff for the Houston–Galveston region," *Coastal Engineering,* 106: 7-19, December 2015.
137. Samii, A., Panda, N., Michoski, C. and Dawson, C., "A Hybridized Discontinuous Galerkin Method for the Nonlinear Korteweg–de Vries Equation," *Journal of Scientific Computing,* 68 (1): 191-212, July 2016.
138. Donahue, A.S., Kennedy, A.B., Westerink, J.J., Zhang, Y. and Dawson, C., "Simulation of wave phenomena in the nearshore through application of $O(\mu^2)$ and $O(\mu^4)$ pressure-Poisson Boussinesq type models," *Coastal Engineering,* 114: 61-76, August 2016.
139. Samii, A., Michoski, C. and Dawson, C., "A parallel and adaptive hybridized discontinuous Galerkin method for anisotropic nonhomogeneous diffusion," *Computer Methods in Applied Mechanics and Engineering*, 304: 118-139, June 2016.
140. Michoski, C., Alexanderian, A., Paillet, C., Kubatko, E.J. and Dawson, C., "Stability of Nonlinear Convection–Diffusion–Reaction Systems in Discontinuous Galerkin Methods," *Journal of Scientific Computing,* 70, pp. 516-550, 2017.
141. Brus, S.R., Wirasaet, D., Westerink, J.J. and Dawson, C., "Performance and Scalability Improvements for Discontinuous Galerkin Solutions to Conservation Laws on Unstructured Grids," *Journal of Scientific Computing,* 70, pp. 210-242, 2017.
142. Ozgokmen, T., Chasignet, C., Dawson, C., Dukhovskoy, D., Jacobs, G., Ledwell, J., Garcia-Pineda, O., MadDonald, I., Morey, S., Olascoaga, M., Poje, A., Reed, M. and Skancke, J., "Over What Area Did the Oil and Gas Spread During the 2010 Deepwater Horizon Oil Spill?," *Oceanography*, 29 (3): 96-107, September 2016.
143. Graham, L., Butler, T., Walsh, S., Dawson, C. and Westerink, J.J., "A measure-theoretic algorithm for estimating bottom friction in a coastal inlet: Case study of Bay St. Louis during Hurricane Gustav (2008)," *Monthly Weather Review*, 145, pp. 929-954, 2017.
144. Bass, B., Irza, J.N., Proft, J., Bedient, P. and Dawson, C., "Fidelity of the integrated kinetic energy factor as an indicator of storm surge impacts," *Natural Hazards*, 85: 575-595, 2017.
145. Presho, M., Mattis, S. and Dawson, C., "Uncertainty quantification of two-phase flow problems via measure theory and the generalized multiscale finite element method," *Computational Geosciences (2016).* Doi:10.1007/s10596-016-9603-2.
146. Torres, J.M., Bass, B., Irza, J.N., Proft, J., Sebastian, A., Dawson, C., and Bedient, P (2017), "Modeling the Hydrodynamic Performance of a Conceptual Storm Surge Barrier System for the Galveston Bay Region", *Journal of Waterway, Port, Coastal, and Ocean Engineering*. DOI: 10.1061/(ASCE)WW.1943-5460.0000389.
147. Dietrich, J.C., Muhammad, A., Curcic, M., Fathi, A., Dawson, C., Chen, S. and Luettich, R., "Sensitivity of Storm Surge Predictions to Atmospheric Forcing during Hurricane Isaac (2012)", *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 2018, 144(1):04017035.
148. Panda, N., Butler, T., Estep D., Graham, L. and Dawson, C., "A stochastic inverse problem for multiscale models", *International Journal for Multiscale Computational Engineering*, 15, pp. 265-283, 2017.
149. Siripatana, A., Mayo, T., Sraj, I., Knio, O., Dawson, C., Le Maitre, O., and Hoteit, I., "Assessing an ensemble Kalman filter inference of Manning's *n* coefficient of an idealized tidal inlet against a polynomial chaos-based MCMC", *Ocean Dynamics* (2017) 67: 1067. https://doi.org/10.1007/s10236-017-1074-z.
150. Giraldi, L, Le Maître, O.P., Mandli, K.T., Dawson, C.N., Hoteit, I, and Knio, O.M., "Bayesian inference of earthquake parameters from buoy data using a polynomial chaos-based surrogate", *Computational Geosciences,* 17, pp. 683-699, 2017.
151. Rathje, E.M., Dawson, C., Padgett, J. E., Pinelli, J.P., Stanzione D., Adair A., Arduino, P., Brandenberg, S.J. Cockerill T., Dey C., Esteva, M., Haan, F., Hanlon, M., Kareem, A., Lowes, L.,

Formatted: Indent: Left: 0"

Deleted: ¶
Sraj, I., Mandli, K.T., Knio, O.M., Dawson, C. and Hoteit, I., "Quantifying Uncertainties in Fault Slip Distribution during the Tōhoku Tsunami using Polynomial Chaos," submitted to *Ocean Modelling*, July 2016.

Deleted: online published

Deleted:

Deleted: pp.1-35, August 2016

Deleted: online published, pp.1-33, August 2016

Formatted: Font: Bold, Font color: Auto

Formatted: Font: Bold, Font color: Auto

Formatted: Font: Italic, Font color: Auto

Formatted: Font: Bold, Font color: Auto

Mock S., and Mosqueda, G., "DesignSafe: New Cyberinfrastructure for Natural Hazards Engineering", *Natural Hazards Review,* 18, 2017.
152. Bass, B., Torres, J.M., Irza, J.N., Proft, J., Sebastian, A., Dawson, C. and Bedient P., "Surge dynamics across a complex bay coastline, Galveston Bay, TX," *Coastal Engineering* 138, pp. 165-183, 2018.
153. Jain, P.K., Mandli, K., Hoteit, I., Knio, O. and Dawson, C., "Dynamically adaptive data-driven simulation of extreme hydrological flows," *Ocean Modelling* 122, pp. 85-103, 2018.
154. Samii, A. and Dawson, C., "An explicit hybridized discontinuous Galerkin method for Serre-Green-Naghdi wave model," Computer Methods in Applied Mechanics and Engineering, 330, pp. 447-470, 2018.
155. Mattis, S.A., Kees, C.E., Wei, Maya V., Dimakopoulos, A., and Dawson, C., "A computational model for wave attenuation by flexible vegetation," *Journal of Waterway, Port, Coastal, and Ocean Engineering*, to appear.
156. He, J., Mattis, S., Butler, T. and Dawson, C., "Data driven uncertainty quantification for flow and transport modeling using support vector machines," *Computational Geosciences,* to appear.
157. Trahan, C.J., Savant, G., Berger, R.C., Farthing, M., McAlpin, T.O., Pettey, L., Choudhary, G.K., and Dawson, C., "Formulation and application of the adaptive hydraulics three-dimensional shallow water and transport models," *Journal of Computational Physics* 374, pp. 47-90, 2018.
158. Siripatana, A, Mayo, T., Knio, O., Dawson, C., Le Maitre, O., and Hoteit, I., "Ensemble Kalman filter inference of spatially-varying Manning's n coefficients in the coastal ocean," *Journal of Hydrology* 562, pp. 664-684, 2018.
159. Rupp, A., Knabner, P., and Dawson, C., "A local discontinuous Galerkin scheme for Darcy flow with internal jumps," *Computational Geociences* 22, pp. 1149-1159, 2018.
160. Sraj, I., Mandli, K.T., Knio, O., Dawson, C. and Hoteit, I., "Quantifying uncertainties in fault slip distribution during the Tohoku tsunami using polynomial chaos," *Ocean Dynamics* 67, pp. 1535-1551, 2017.

Refereed Conference Proceedings

1. Dawson, C., Dupont, T. F., and Wheeler, M. F., "The rate of convergence of the modified method of characteristics for linear advection equations in one dimension," Mathematics for Large-Scale Computation, J. Diaz, ed., Marcel-Dekker, New York, pp. 115-126, 1989.
2. Chippada, S., Dawson, C. N., Martinez, M. L., and Wheeler, M. F., "A Godunov-type finite volume method for the system of shallow water equations," *Computer Methods in Applied Mechanics and Engineering,* Proceedings of the 1997 Symposium on Advances in Computational Mechanics, 151 (1-2): 105-129, January 1998.
3. Chippada, S., Dawson, C. N., Martinez, M. L., and Wheeler, M. F., "A projection method for constructing a mass conservative velocity field," *Computer Methods in Applied Mechanics and Engineering*, Proceedings of the 1997 Symposium on Advances in Computational Mechanics, 157 (1-2): 1-10, April 1998.
4. Dawson, C., Aizinger, V. and Cockburn, B., "The local discontinuous Galerkin method for contaminant transport problems," Discontinuous Galerkin Methods, Theory, Computation and Applications, Lecture Notes in Computational Science and Engineering, B. Cockburn, G.E. Karniadakis and C.-W. Shu, eds., Springer, Berlin, pp. 309-314, 2000.
5. Dawson, C. and Aizinger, V., "The local discontinuous Galerkin method for advection-diffusion equations arising in groundwater and surface water applications," Resource Recovery, Confinement and Remediation of Environmental Hazards, Institute for Mathematics and its Applications Volume, J. Chadam, A. Cunningham, R. E. Ewing, P. Ortoleva, and M. F. Wheeler, eds., Springer-Verlag, pp. 231-246, 2002.
6. Dawson, C., "Discontinuous, Continuous and Coupled Finite Element Methods for Shallow Water Flows," CMWR XV, Proceedings, Vol. II. (C. Miller, ed.), John Wiley, pp. 1681-1690, 2004.

7. Aizinger, V., and Dawson, C., "A Discontinuous Galerkin Method for Three-Dimensional Shallow Water Flows with Free Surface," CMWR XV, Proceedings, Vol. II. (C. Miller, ed.), John Wiley, pp. 1691-1702, 2004.
8. Dawson, C., Westerink, J., Kubatko, E., Proft, J., and Mirabito, C., "Parallel Finite Element Models for Hurricane Storm Surges," Proceedings of the Teragrid 2008 Conference, Las Vegas, NV, June 9-13, 2008.
9. Kees, C.E., Farthing, M.W., Mattis, S. and Dawson, C., "Homogenization and upscaling of flow through vegetation," XVIII International Conference on Water Resources, CMWR2010, J. Carrera (ed.), CIMNE, Barcelona, 2010.
10. DuChene, M., Spagnuolo, A.M., Kubatko, E., Westerink, J.J. and Dawson, C., "A framework for running the ADCIRC discontinuous Galerkin storm surge model on a GPU," International Conference on Computational Science, ICCS 2011, Procedia Computer Science.

Other Major Publications

1. Dawson, C., Wheeler, M. F., and Borden, R. C., "Numerical Simulation of Microbial Biodegradation of Hydrocarbons in Groundwater," Proceedings of 6th International Symposium on Finite Element Methods in Flow Problems," Antibes, France, pp. 353-358, 1986.
2. Dawson, C., Wheeler, M. F., Nguyen, T. M., and Poole, S. W., "Simulation of Hydrocarbon in Groundwater," Cray Channels, Vol. 8, No. 3, pp. 14-19, 1986.
3. Wheeler, M. F., Dawson, C., Bedient, P. B., Chiang, C. Y., Borden, R. C., and Rifai, H. S., "Numerical Simulation of Microbial Biodegradation of Hydrocarbons in Groundwater," Proceedings, Conference on Solving Groundwater Problems with Models," National Water Wells Association, Denver, CO., pp. 92-108, 1987.
4. Dawson, C., Wheeler, M. F., Nguyen, T. M., and Poole, S. W., "Simulation of Subsurface Contaminant Transport with Biodegradation Kinetics," Proceedings 3rd International Symposium on Science and Engineering on Cray Supercomputers, Mendota Heights, MN, pp. 75-86, 1987.
5. Dawson, C., Wheeler, M. F., and Bedient, P. B., "Numerical Modeling of Subsurface Contaminant Transport with Biodegradation Kinetics," Proceedings of the National Water Wells Meeting, National Water Wells Association, Houston, TX, pp. 329-344, 1987.
6. Dawson, C., Wheeler, M. F., and Kinton, W. A., "Time-Splitting for Advection-Dominated Parabolic Problems in One Space Variable," Communications in Applied Numerical Methods, **4**, pp. 413-423, 1988.
7. Dawson, C., Wheeler, M. F. "Characteristic Methods for Modeling Nonlinear Adsorption in Contaminant Transport," Computational Methods in Water Resources VIII, Computational Mechanics Publications, Southampton, UK, pp. 305-314, 1990.
8. Dawson, C., Du, Q., "A Domain Decomposition Procedure for Parabolic Equations Based on Galerkin Finite Elements," Proceedings of the IVth International Symposium on Domain Decomposition Methods for Partial Differential Equations, Society for Industrial and Applied Mathematics, Philadelphia, PA, pp. 255-263, 1991.
9. Dawson, C., "The performance of an explicit/implicit, domain decomposition procedure on an Intel Hypercube," Proceedings, Vth International Symposium on Domain Decomposition Methods for Partial Differential Equations, D. Keyes, et al, eds., Society for Industrial and Applied Mathematics, Philadelphia, pp. 386-393, 1992.
10. Dawson, C., and Wood, B. D., "Effects of Lag and Maximum Growth in Contaminant Transport and Biodegradation Modeling," in Proceedings, 9th International Conference on Computational Methods in Water Resources, T. F. Russell, et al, eds., Computational Mechanics Publications, Elsevier, New York, pp. 317-324, 1992.
11. Dawson, C., Wheeler, M. F., "Time-Splitting Methods for Advection-Diffusion-Reaction Equations Arising in Contaminant Transport," Proceedings, ICIAM '91, R. O'Malley, ed., Society for Industrial and Applied Mathematics, Philadelphia, pp. 71-82, 1992.
12. Dawson, C., and Dupont, T. R., "Non-iterative Domain Decomposition Procedures for Second-Order Hyperbolic Equations," Domain Decomposition Methods in Science and Engineering, A. Quarteroni, J. Periaux, Y. Kuznetsov, O. Widlunds, eds., American Mathematical Society, Providence, R.I., pp. 45-52, 1994.

13. Dawson, C., "Modeling of nonlinear adsorption in contaminant transport," Computational Methods in Water Resources X, eds. A. Peters, G. Wittum, B. Herrling, U. Meissner, C. A. Brebbia, W. G. Gray, and G. F. Pinder, Kluwer, Dordrecht, pp. 233-240, 1994.
14. Arbogast, T., Dawson, C., and Keenan, P., "Efficient mixed methods for groundwater on triangular or tetrahedral meshes," Computational Methods in Water Resources X, eds. A. Peters, G. Wittum, B. Herrling, U. Meissner, C. A. Brebbia, W. G. Gray, and G. F. Pinder, Kluwer, Dordrecht, pp. 3-10, 1994.
15. Arbogast, T., Dawson, C., and Wheeler, M. F., "A parallel multiphase numerical model for subsurface contaminant transport with biodegradation kinetics," Computational Methods in Water Resources X, eds. A. Peters, G. Wittum, B. Herrling, U. Meissner, C. A. Brebbia, W. G. Gray, and G. F. Pinder, Kluwer, Dordrecht, pp. 1499-1506, 1994.
16. Arbogast, T., Dawson, C., and Wheeler, M. F., "A parallel algorithm for two phase multicomponent contaminant transport," Applications of Mathematics, 40, No. 3, pp. 163-174, 1995.
17. Chippada, S., Dawson, C., Martinez, M., and Wheeler, M. F., "Numerical simulation of the shallow water equations," Proceedings of the Fluids Engineering Division Conference, 1996, Vol. 238 No. 3, American Society of Mechanical Engineers, NY, pp. 409-414, 1996.
18. Chippada, S., Dawson, C., Martinez, M., and Wheeler, M. F., "Parallel computing for finite element models of surface water flow," Computational Methods in Water Resources XI, Vol. 2., A. A. Aldama et al., eds., Computational Mechanics Publications, Southampton, U.K., pp. 63-70, 1996.
19. Wang, P., Yotov, I., Wheeler, M., Arbogast, T., Dawson, C., Parashar, M. and Sepehrnoori, K., "A new generation EOS compositional reservoir simulator: Part I-formulation and discretization," SPE 37979, Proceedings of SPE Reservoir Simulation Symposium, June 8-11, 1997, Dallas, TX, pp. 55-64, 1997.
20. Wheeler, M. F. and Dawson, C., "Multiphase flow and transport in porous media," High Performance Computing, Proceedings of the 1997 Simulation Multiconference, April 6-10, 1997, Atlanta, GA, Society for Computer Simulation International , pp. 58-66.
21. Arbogast, T., Dawson, C., Keenan, P., Wheeler, M. F., and Yotov, I., "The application of mixed methods to subsurface simulation," Modelling and Computation in Environmental Sciences, R. Helmig, W. Jaeger, W. Kinzelbach, P., Knabner, G. Wittum (eds.), Notes on Numerical Fluid Mechanics Vol. 59, Verlag Vieweg, Braunschweig, pp. 1-13, 1997.
22. Dawson, C., Martinez, M., Chippada, S., and Edwards, H.C., "Parallel numerical methods for surface water flow," Mission Earth: Modeling and Simulation for a Sustainable Global System, Proceedings of the 1997 Western Multi-Conference, pp. 66-75, 1997.
23. Dawson, C., Bryant, S., and Kirby, R., "Dynamically adaptive upwind finite volume methods for contaminant transport," Computational Methods in Water Resources XII, Volume 2, V. N. Burganos, G.P. Karatzas, A.C. Payatakes, C.A. Brebbia, W.G. Gray and G. F. Pinder, eds., Computational Mechanics Publications, Southampton, UK, pp. 641-648, 1998.
24. Dawson, C. N., and Chippada, S., "Numerical modeling of shallow water flows with wetting and drying boundaries by a finite volume method," Proceedings of the 1998 Conference on Mission Earth: Modeling and Simulation of the Earth System, A. Sydow and J. Y. Yu, eds., Society for Computer Simulation International, San Diego, CA, pp. 9-14, 1998.
25. Dawson, C., Riviere, B. and Wheeler, M.F., "Discontinuous Galerkin methods for flow and reactive transport," Proceedings of the Department of Defense Users Group Meeting, Albuquerque, N.M., June 5-8 2000 (available on CD-ROM).
26. Wheeler, M.F., Peszynska, M. and Dawson, C., "Multiphysics coupling for environmental problems," Proceedings of the Department of Defense Users Group Meeting, Albuquerque, N.M., June 5-8 2000 (available on CD-ROM).
27. Dawson, C., Parr, V.J., and Wheeler, M.F., "Issues in parallel computation of flow and transport in surface waters," Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications, Vol. 1, H.R. Arabnia, ed., Las Vegas, NV, June 26-29, 2000, CSREA Press, pp. 21-27.
28. Dawson, C. and Proft, J., "Coupling of continuous and discontinuous Galerkin methods for transport problems arising in environmental quality modeling," Proceedings of the Department of Defense Users Group Meeting, Biloxi, MS, June 19-21, 2001.

29. Dawson, C. and Aizinger, V., "Discontinuous Galerkin methods for shallow water flow and transport," to appear in Proceedings, Computational Methods in Water Resources XII, Delft University of Technology, June 23-28, 2002.
30. Dawson, C., Wheeler, M.F. and Pothina D., "Coupling of continuous and discontinuous Galerkin methods for shallow water flow," in Proceedings, Department of Defense High Performance Computing Users Group Meeting, Austin, TX, June 11-14, 2003.
31. Dawson, C. and Aizinger, V., "Shallow water modeling using discontinuous and coupled finite element methods," Proceedings of the 2nd MIT Conference on Computational Fluid and Solid Mechanics, Boston, June 17-20, 2003.
32. Guillot, M. J., Blain, C. A., and Dawson, C. N., "Implementation of a discontinuous Galerkin discretization of the conservation of mass equation in QUODDY," Naval Research Laboratory NFL/FR/7322-03-10,050, Stennis Space Center, MS, 39529-5004, 2003.
33. Usadi, A., and Dawson, C., "50 Years of ADI Methods: Celebrating the Contributions of Jim Douglas, Don Peaceman and Henry Rachford," *SIAM News*, Vol. 39, No. 2, March 2006.

Book Chapters (Authored/Co-Authored, Edited/Co-Edited)

1. Dawson, C., and Wheeler, M. F., "An Operator-Splitting Method for Advection-Diffusion-Reaction Problems," MAFELAP VI, J. A. Whiteman, ed., Academic Press, pp. 463-482, 1988.
2. Dawson, C., "Simulation of Nonlinear Contaminant Transport in Groundwater by a Higher Order Godunov-Mixed Finite Element Method," in *Applications of Supercomputers in Engineering II*, C. A. Brebbia, D. Howard, and A. Peters, eds., Computational Mechanics Publications, Southampton, UK, pp. 419-433, 1991.
3. Dawson, C., and Wheeler, M. F., "Two-Grid Method for Mixed Finite Element Approximations of Nonlinear Parabolic Equations," Contemporary Mathematics, 180, American Mathematical Society, pp. 191-203, 1994.
4. Dawson, C., "Contaminant transport with nonlinear, non equilibrium adsorption kinetics," *Finite Element Modeling of Environmental Problems*, G. F. Carey, ed., Wiley, New York, pp. 265-274, 1995.
5. Wheeler, M. F., Arbogast, T., Bryant, S., Dawson, C., Saaf, F. and Wang, C., "New computational approaches for chemically reactive transport in porous media," *Next Generation Environmental Models and Computational Methods,* edited by G. Delic and M.F. Wheeler, Society for Industrial and Applied Mathematics, Philadelphia, pp. 217-226, 1997.
6. Wheeler, M. F., Dawson, C. N., and Celentano, C., "Multicomponent, multiphase flow and transport in porous media," MAFELAP Highlights 1996, J. A. Whiteman, ed., John Wiley & Sons, Chichester, pp. 223-234, 1997.
7. Cockburn, B. and Dawson, C., "Some extensions of the local discontinuous Galerkin method for convection-diffusion equations in multidimensions," The Mathematics of Finite Elements and Applications X, J. R. Whiteman, ed., Elsevier, Amsterdam, pp. 225-238, 2000.
8. Wheeler, M. F., Lee, W., Dawson, C. N., Arnold, D. C., Kurc, T., and Parashar, M., "Parallel computing in environment and energy," *Sourcebook of Parallel Computing*, J. Dongarra, I. Foster, G. Fox, W. Gropp, K. Kennedy, L. Torczon, and A. White eds. Morgan Kaufman Pubs., Boston. Chapter 6, pp. 145-166, 2003.
9. Dawson, C. and Proft J., "Predicting Storm Surge," *Lessons from Hurricane Ike,* Philip B. Bedient, editor, Chapter 5, pp. 50-65, Texas A&M University Press, College Station, TX, 2012.
10. Dietrich, J.C., Dawson, C.N., Proft, J.M., Howard, M.T., Wells, G., Fleming, J.G., Luettich Jr., R.A., Westerink, J.J., Cobell, Z., Vitse, M., Lander, H., Blanton, B.O., Szpilka, C.M., Atkinson, J.H., "Real-Time Forecasting and Visualization of Hurricane Waves and Storm Surge using SWAN+ADCIRC and FigureGen," *Computational Challenges in the Geosciences,* C. Dawson and M. Gerritsen, eds., The IMA Volumes in Mathematics and Its Applications, Vol 156, Springer, 2013.
11. *Computational Challenges in the Geosciences,* C. Dawson and M. Gerritsen, eds., The IMA Volumes in Mathematics and Its Applications, Vol 156, Springer, 2013.
12. Dawson, C., "A local timestepping Runge-Kutta discontinuous Galerkin method for hurricane storm surge modeling," in *Recent Developments in Discontinuous Galerkin Finite Element Methods for*

Partial Differential Equations, X. Feng, O. Karakashian and Y. Xing, eds., IMA Volumes in Mathematics and its Applications, Vol 157, Springer, pp. 133-148, 2013.

Technical Reports

1. Chippada, S., Dawson, C. N., Martinez, M. and Wheeler, M. F., " A Godunov-type finite volume method for the system of shallow water equations," TICAM Report 96-57, submitted to CMAME.
2. Chippada, S., Dawson, C. N., Martinez, M. and Wheeler, M. F., "Finite element approximations to the system of shallow water equations, part II: Discrete time a priori error estimates," TICAM Report 96-34, submitted to SIAM Journal on Numerical Analysis.
3. Chippada, S., Dawson, C. N., Martinez, M. L., and Wheeler, M. F., "Projection method for constructing a mass conservative velocity field," TICAM Report 97-09, submitted to CMAME.
4. Woodward, C. and Dawson, C. N., " Analysis of expanded mixed finite element methods for a nonlinear parabolic equations modeling flow into variable saturated porous media," Lawrence Livermore National Laboratory Technical Report UCRL-JC-125567, October 1996, submitted to SIAM Journal on Numerical Analysis.
5. Dawson, C., and Martinez-Canales, M., "Finite element approximations to the system of shallow water equations, part III: On the treatment of boundary conditions", TICAM Report 98-15, July 1998.
6. Dawson, C., and Kirby, R., "Solution of parabolic equations by backward Euler-mixed finite element methods on a dynamically changing mesh," TICAM Report 98-17, August 1998.
7. Chippada, S., Dawson, C., Parr, V. J., Wheeler, M. F., Cerco, M. F., Bunch, B., and Noel, M., "PCE-QUAL-ICM: A parallel water quality model based on CE-QUAL-ICM," CEWES MSRC Technical Report 98-10, Waterways Experiment Station, Vicksburg, MS, 1998.
8. Wheeler, M. F., Dawson, C., Chippada, S., Martinez, M., and Parr, V. J., "Progress report: parallelization of ADCIRC3D," CEWES MSRC Technical Report 98-11, Waterways Experiment Station, Vicksburg, MS, 1998.
9. Dawson, C., and Aizinger, V., "Upwind-mixed methods for transport equations," TICAM Report 98-18, August, 1998.
10. Dawson, C. and Martinez-Canales, M.,"A characteristic-Galerkin approximation to a system of shallow water equations," TICAM Report 99-14, April 1999.
11. Dawson, C., and Kirby, R., "Solution of parabolic equations by backward Euler-mixed finite element methods on a dynamically changing mesh," TICAM Report 98-17, August 1998.
12. Chippada, S., Dawson, C., Parr, V. J., Wheeler, M. F., Cerco, M. F., Bunch, B., and Noel, M., "PCE-QUAL-ICM: A parallel water quality model based on CE-QUAL-ICM," CEWES MSRC Technical Report 98-10, Waterways Experiment Station, Vicksburg, MS, 1998.
13. Wheeler, M. F., Dawson, C., Chippada, S., Martinez, M., and Parr, V. J., "Progress report: parallelization of ADCIRC3D," CEWES MSRC Technical Report 98-11, Waterways Experiment Station, Vicksburg, MS, 1998.
14. Dawson, C., and Aizinger, V., "Upwind-mixed methods for transport equations," TICAM Report 98-18, August 1998.
15. Aizinger, V., Dawson, C., Cockburn, B., and Castillo, P., "The Local Discontinuous Galerkin Method for Contaminant Transport," TICAM Report 99-39, November 1999.
16. Bryant, S., Dawson, C., and van Duijn, C.J., "Dispersion-Induced Chromatographic Waves," TICAM Report 99-40, November 1999.
17. Dawson, C., Parr, V.J., and Wheeler, M.F., "Issues in Parallel Computation of Flow and Transport in Surface Waters," TICAM Report 00-13, May 2000.
18. Dawson, C., and Kirby, R., "High Resolution Schemes for Conservation Laws with Locally Varying Time Steps," TICAM Report 00-14, May 2000.
19. Dawson, C. and Proft, J., "A Priori Error Estimates for Interior Penalty Versions of the Local Discontinuous Galerkin Method Applied to Transport Equations," TICAM Report 00-16, June 2000.

ORAL PRESENTATIONS

1. Dawson, C., "Numerical Simulation of Bioremediation in Groundwater," California Institute of Technology, Dept. of Applied Mathematics, December 1987.

2. Dawson, C., "Numerical Methods for Advection-Diffusion-Reaction Equations," University of Chicago, Dept. of Mathematics, March 1988.
3. Dawson, C., "Higher-order Godunov Methods for Two-Phase Flow," Gordon Research Conference on Flow in Porous Media, August 1988.
4. Dawson, C., "Godunov-Mixed Methods for Immiscible Displacement," 7th International Conference on Finite Element Analysis in Fluids, Huntsville, Alabama, April 1989.
5. Dawson, C., "Numerical Simulation of Flow Through Porous Media," Argonne National Laboratory, Division of Applied Mathematics, April 1989.
6. Dawson, C., "Modeling of Contaminant Transport and Bioremediation," University of Notre Dame, Center for Applied Mathematics, April 1989.
7. Dawson, C., "Modeling of Bioremediation by a Modified Method of Characteristics," State University of New York, Stony Brook, Dept. of Applied Mathematics, February, l990.
8. Dawson, C., "Numerical Methods for Contaminant Transport," Massachusetts Institute of Technology, Dept. of Civil Engineering, Parsons Laboratory, February, l990.
9. Dawson, C., "Godunov-Mixed Methods for Transport in Porous Media," Rice University, Dept. of Mathematical Sciences, March 1990.
10. Dawson, C., "Higher-order Godunov Methods for Transport in Porous Media," Purdue University, Dept. of Mathematics, May, l990.
11. Dawson, C., Q. Du, Q., and Dupont, T. F., "Explicit/Implicit Domain Decomposition Methods for Parabolic Equations," IVth International Conference on Domain Decomposition Methods for Partial Differential Equations, Moscow, May 1990.
12. Dawson, C., "Domain Decomposition Methods for Parabolic Equations," Gesellschaft fur Mathematik und Datenverarbeitung MBH, Institut fur Methodische Grundlagen, Bonn, W. Germany, June, 1990.
13. Dawson, C., "Numerical Modeling of Bioremediation in Groundwater," Workshop on Computational Fluid Dynamics in Manufacturing and the Environment, Austin, Texas, December 1990.
14. Dawson, C., and Dupont, T. F., "Conservative, Explicit/Implicit Galerkin Domain Decomposition Methods for Parabolic Equations" Workshop on Domain Decomposition and Multigrid, Center for Research on Parallel Computation, Rice University, March, 1991.
15. Dawson, C., and Dupont, T. F., "Domain Decomposition Methods for Parabolic Equations," SIAM Conference on Parallel Processing, Houston, March 1991.
16. Dawson, C., "Explicit/Implicit Finite Element and Finite Difference Domain Decomposition Methods for Parabolic Problems," University of Minnesota, Army High Performance Computing Center Colloquium, April, 1991.
17. Dawson, C., "Godunov-Mixed Methods for Two-Phase Flow with Large Time Steps," IMACS '91 World Congress, Dublin, Ireland, July 1991.
18. Dawson, C., "Explicit/Implicit, Conservative Domain Decomposition Methods for Parabolic Problems," IMACS '91 World Congress, Dublin, Ireland, July 1991.
19. Dawson, C., "Simulation of Nonlinear Adsorption in Contaminant Transport," Applications of Supercomputers in Engineering, Boston, August 1991.
20. Dawson, C., "Modeling of Remediation of Contaminated Groundwater," Exxon Production Research, Long Range Research Seminar, September 1991.
21. Dawson, C., "Domain Decomposition Methods for Flow Through Porous Media," Numerical Methods for Parallel Computing, Oberwolfach, Germany, February 1992.
22. Dawson, C., "Godunov-Mixed Methods for Nonlinear Contaminant Transport," Texas Finite Element Circus, University of Texas, March, 1992.
23. Dawson, C., "Mixed Finite Element Methods on General Geometry for Flow Through Porous Media, "Dept. of Mathematics and Informatics, Delft University of Technology, Netherlands, May, 1992.
24. Dawson, C., van Duijn, D. J., and Grundy, R. E., "Large-Time Behavior of Solutions for Contaminant Transport Problems in One Space Dimension," Mathematical Problems in Flow in Porous Media, Oberwolfach, Germany, June, 1992.
25. Dawson, C., and Wood, B., "Comparison of Bioremediation Laboratory Experiments with Numerical Simulation," Workshop on Environmental Modeling, Institute for Mathematics and Its Applications, July, 1992.

26. Dawson, C., "Error Estimates for Godunov-Mixed Methods Applied to Nonlinear Contaminant Transport," Department of Mathematics, University of Houston, October, 1992.
27. Dawson, C., "Numerical Simulation of Flow Through Porous Media," Dept. of Mathematics and Informatics, Delft University of Technology, Delft, Netherlands, May, 1993.
28. Dawson, C., "Modeling of Multiphase Flow in Porous Media," Dept. of Environmental Engineering, Rice University, November 1993.
29. Dawson, C., "Modeling Nonlinear Adsorption in Contaminant Transport," Workshop on Finite Elements in Environmental Problems, University of Texas at Austin, March, 1994.
30. Dawson, C., and Wheeler, M. F., "Simulation of Groundwater Remediation," RCI Ltd. Symposium on High Performance Computing in Energy and the Environment, Houston, March, 1994.
31. Dawson, C., "Domain Decomposition Methods for Elliptic and Parabolic Equations," Numerical Analysis Colloquium, University of Chicago, May 1994.
32. Dawson, C., "Asymptotic Behavior of Solutions to Nonlinear Contaminant Transport Problems," Computational Methods in Water Resources '94, Heidelberg, Germany, July 1994.
33. Dawson, C., Klie, H., San Souci, C., and Wheeler, M. F., "A Parallel, Implicit Simulator for Two-Phase Flow," Society for Engineering Science Conference, Texas A&M University, October 1994.
34. Chippada, S., Dawson, C., Martinez, M., and Wheeler, M. F., "Parallelization of a Finite Element Simulator for Shallow Water Flow, "Third SIAM Conference on Geosciences, San Antonio, February, 1995.
35. Dawson, C., "Numerical Simulation of Large-Time Behavior of Solutions for Nonlinear Adsorption in Contaminant Transport, Third SIAM Conference on Geosciences, San Antonio, February, 1995.
36. Dawson, C., "Numerical Methods for Flow Through Porous Media," TICAM Seminar, University of Texas at Austin, March 1995.
37. Dawson, C., "Modeling of Groundwater Cleanup," Dept. of Aerospace Engineering and Engineering Mechanics, University of Texas at Austin, April 1995.
38. Dawson, C., "Upwind-Mixed Methods for Advective Transport with Variable Time-Stepping," Conference on Advances and Trends in Computational and Applied Mathematics, University of Texas at Austin, April 1995.
39. Dawson, C., "Problems in Remediation of Contaminated Porous Media," Program in Environmental Fluid Dynamics Colloquium, Arizona State University, September 1995.
40. Dawson, C., "A Summary of Results on Asymptotic Behavior of Solutions to Nonlinear Contaminant Transport Problems," Workshop on Mathematical Problems in Flow Through Porous Media, Oberwolfach, Germany, February 1996.
41. Chippada, S., Dawson, C., Martinez, M., and Wheeler, M. F., "Parallel Finite Element and Finite Volume Methods for Shallow Water Equations," MAFELAP, Brunel University, London, June 1996.
42. Chippada, S., Dawson, C., Martinez, M., and Wheeler, M. F., "Numerical Simulation of the Shallow Water Equations," ASME Fluids Engineering Division Summer Meeting, San Diego, CA, July 1996.
43. Chippada, S., Dawson, C., Martinez, M., and Wheeler, M. F., "A Parallel, Finite Element Simulator for Shallow Water Flow," Computational Methods in Water Resources XI, Cancun, Mexico, July 1996.
44. Dawson, C., "Modeling of Shallow Water Equations," Center for Subsurface Modeling Industrial Affiliates Annual Meeting, Austin, TX, November 1996.
45. Dawson, C., Chippada, S., Martinez, M. and Edwards, C., "Parallel numerical methods for surface water flow," Society for Computer Simulation Western Multi-conference: Mission Earth '97, Phoenix, AZ, January 1997.
46. Dawson, C., Chippada, S., Martinez, M. and Wheeler, M. F., "A Godunov-type finite volume scheme for the system of shallow water equations," Meeting in honor of J.T. Oden's 60th birthday, Austin, TX, January, 1997.
47. Wheeler, M. F., Chippada, S., Dawson, C., and Martinez, M., "A projection method for constructing a mass conservative velocity field," Meeting in honor of J.T. Oden's 60th birthday, Austin, TX, January, 1997.
48. Woodward, C. and Dawson, C. N., "Mixed finite elements for variably saturated flow," 4th SIAM Conference on Geosciences, Albuquerque, NM, June 1997.

49. Martinez, M., Chippada, S., Dawson, C. and Wheeler, M., "Finite element and characteristic methods for shallow water flow," 4th SIAM Conference on Geosciences, Albuquerque, NM, June 1997.
50. Chippada, S., Dawson, C., Martinez, M. and Wheeler, M., "Finite volume schemes for the system of shallow water equations," 4th SIAM Conference on Geosciences, Albuquerque, NM, June 1997.
51. Dawson, C., Bryant, S. and Kirby R., "Numerical and mathematical treatment of transport of sorbing species in porous media," Fourth U.S. Congress on Computational Mechanics, San Francisco, August 1997.
52. Dawson, C., "Numerical methods for flow and transport in porous media," Lawrence Livermore National Laboratory, August 1997.
53. Dawson, C. and Wheeler. M., "Workshop on domain decomposition methods for partial differential equations," Waterways Experiment Station, February 1997.
54. Martinez, M., Dawson, C. and Wheeler, M., "Characteristic methods for shallow water flow," SIAM National Meeting, July, 1997.
55. Wang, P., Yotov, I., Wheeler, M., Arbogast, T., Dawson, C., Parashar, M. and Sepehrnoori, K., "A new generation EOS compositional reservoir simulator: Part I-formulation and discretization," SPE Reservoir Simulation Symposium, June 1997.
56. Dawson, C., "Newton-Krylov methods for nonlinear systems arising in reservoir simulation," Annual Industrial Affiliates Meeting, Center for Subsurface Modeling, The University of Texas at Austin, November, 1997.
57. Dawson, C., "Numerical solution of shallow water equations by finite element and finite volume methods," Department of Mathematics, Texas Tech University, December 1997.
58. Dawson, C., "Dynamic adaptive methods for chemically reactive transport in porous media," Centrum voor Wiskunde en Informatica (CWI), Amsterdam, December 1997.
59. Dawson, C., "Numerical solution of shallow water equations by a finite volume method with applications to wetting/drying," Society for Computer Simulation, Conference on Mission Earth: Modeling and Simulation of the Earth System, San Diego, CA, January, 1998.
60. Dawson, C., Wheeler, M. F., Parr, V., Edwards, C., and Martinez, M., "Workshop on Domain Decomposition Methods for Parallel Computation," Waterways Experiment Station, Vicksburg, MS, January 1998.
61. Dawson, C., Chippada, S., Wheeler, M. F., Parr, V., Cerco, C., Bunch, B., and Noel, M., "PCE-QUAL-ICM: A parallel water quality model based on CE-QUAL-ICM," Department of Defense Users Meeting, Rice University, June, 1998.
62. Dawson, C., Bryant, S., and Kirby, R., "Dynamically adaptive methods for chemically reactive transport," Computational Methods in Water Resources XII, Crete, June, 1998.
63. Dawson, C., "Biodegradation in subsurface systems," International Workshop on Spatially Heterogeneous Problems in Ecology and Epidemiology: Mathematical Models vs. Polluted Environment Data, Zakopane, Poland, June, 1998.
64. Dawson, C., "The computational and applied mathematics program at The University of Texas at Austin," SIAM National Meeting, Toronto, July 1998.
65. Dawson, C., "Numerical methods for transport on unstructured non-matching grids," Super K Workshop, Saudi Aramco, Dahrain, Saudi Arabia, September 1998.
66. Dawson, C., "Transport schemes on non-matching grids with variable time-steps," Center for Subsurface Modeling Affiliates Meeting, Austin, TX, October, 1998
67. Dawson, C., "Domain decomposition methods for reactive transport," Workshop on Nonlinear Problems in Porous Media, Delft University of Technology, Delft, The Netherlands, November, 1998
68. Dawson, C., "Domain decomposition methods for time-dependent problems," Workshop on Parallel Technology, Waterways Experiment Station, Vicksburg, MS, January, 1999.
69. Dawson, C., "Finite volume methods for the shallow water equations," 5th SIAM Conference on Geosciences, San Antonio, TX, March 1999.
70. Bryant, S., Dawson, C. and van Duijn, H., "Modeling of competitive adsorption in contaminant transport," 5th SIAM Conference on Geosciences, San Antonio, TX, March, 1999.
71. Dawson, C., "Numerical methods for flow and transport in shallow water," Computational and Applied Math Colloquium, University of Chicago, May 1999.

72. Dawson, C., Aizinger V. and Cockburn, B., "The local discontinuous Galerkin method for contaminant transport," First International Symposium on Discontinuous Galerkin Methods, Salve Regina University, Newport, R.I., May, 1999.
73. Dawson, C., "Solution of parabolic equations by a backward-Euler mixed finite element method," MAFELAP 99, Brunel University, London, June 1999.
74. Dawson, C., "Adaptive methods for contaminant transport," Dept. of Applied Mathematics, University of Padova, Italy, July, 1999.
75. Dawson, C., "Local discontinuous Galerkin and upwind mixed methods for transport problems," ICIAM 1999, University of Edinburgh, Scotland, July 1999.
76. Dawson, C., "Research at the Center for Subsurface Modeling at The University of Texas at Austin," AGIP Reservoir Research and Development, Milan, Italy, July, 1999.
77. Dawson, C., "Multistage preconditioners," Workshop on Numerical Methods for Flow and Transport, DOD Engineering Research and Development Center, Vicksburg, MS, Sept. 28-29, 1999.
78. Dawson, C., "Discontinuous Galerkin methods for hyperbolic problems," Workshop on Numerical Methods for Flow and Transport, DOD Engineering Research and Development Center, Vicksburg, MS, Sept. 28-29, 1999.
79. Dawson, C., "Local discontinuous Galerkin methods for contaminant transport," American Mathematical Society, Austin, TX, Oct. 8-10, 1999.
80. Dawson, C., "Numerical simulation of circulation and transport in shallow water systems," American Mathematical Society, Austin, TX, Oct. 8-10, 1999.
81. Dawson, C., "Conservative transport schemes with nonconservative velocity fields," Society for Engineering Science, Austin, TX, Oct. 25-27, 1999.
82. Dawson, C., "Research on advection schemes and related issues," Center for Subsurface Modeling Annual Industrial Affiliates Meeting, Austin, TX, Oct. 27-28, 1999.
83. Dawson, C., "The local discontinuous Galerkin method for transport in groundwater and surface water systems," Applied Mathematics Colloquium, University of North Carolina, Chapel Hill, Nov. 12, 1999.
84. Dawson, C., "Coupling of flow velocities with conservative transport schemes," Workshop on Multiphysics Couplings, DOD Engineering Research and Development Center, Vicksburg, MS, Jan. 10-11, 2000.
85. Dawson, C., "The local discontinuous Galerkin method for transport in groundwater systems," Workshop on Bioremediation in Groundwater Systems, Institute for Mathematics and its Applications, University of Minnesota, Jan. 15-20, 2000.
86. Dawson, C., "The local discontinuous Galerkin method for transport in groundwater systems," Workshop on Mathematics of Porous Media, Oberwolfach, Germany, Jan. 24-28, 2000.
87. Dawson, C., "Time splitting and time stepping methods for reactive transport problems," Copper Mountain Conference on Iterative Methods, Copper Mountain, CO, April 3-7, 2000.
88. Dawson, C., "Mixed and discontinuous Galerkin finite elements for advection-diffusion equations," NSF-CBMS Regional Conference on Superconvergence in the Finite Element Method, Texas Tech University, May 22-26, 2000.
89. Dawson, C., Riviere, B. and Wheeler, M. F., "Discontinuous Galerkin methods for flow and reactive transport," Department of Defense Users Group Meeting, Albuquerque, N.M., June 5-8, 2000.
90. Wheeler, M. F., Peszynska, M. and Dawson, C., "Multiphysics couplings for environmental problems," Department of Defense Users Group Meeting, Albuquerque, N.M., June 5-8, 2000.
91. Dawson, C., Parr, V. J. and Wheeler, M. F., "Issues in parallel computation of flow and transport in surface waters," International Conference on Parallel and Distributed Processing Techniques and Applications, Las Vegas, NV, June 26-29, 2000.
92. Dawson, C., "Discontinuous Galerkin methods for contaminant transport and shallow water problems," SIAM Annual Meeting, Puerto Rico, July 10-14, 2000.
93. Dawson, C., "Discontinuous Galerkin and time-split methods for reactive transport problems," Workshop on Solution Methods for Large-Scale Nonlinear Problems, Pleasanton, CA, July 26-28, 2000.

94. Dawson, C., "The local discontinuous Galerkin finite element method," Workshop on Reactive Transport, Engineering Research and Development Center, Vicksburg, MS, Sept. 25, 2000.
95. Dawson, C., "Local time stepping methods for transport problems," Center for Subsurface Modeling Industrial Affiliates Meeting, Austin, Oct. 11, 2000.
96. Dawson, C., "The local discontinuous Galerkin method for contaminant transport and shallow water flows," Computational Mathematics Colloquium, University of Houston, Nov. 2, 2000.
97. Dawson, C., "Modeling flow in porous media," Computational Mathematics Colloquium, Sandia Livermore National Laboratory, Feb. 6, 2001.
98. Dawson, C., "Coupling continuous and discontinuous Galerkin methods," Workshop on Multiphysics Applications, Engineering Research and Development Center, Vicksburg, MS, March 20, 2001.
99. Dawson, C., "The local discontinuous Galerkin method for contaminant transport and shallow water flows," Dept. of Applied Mathematics Colloquium, University of Padova, Italy, March 16, 2001.
100. Dawson, C., "What does water know about mathematics?" SIAM Student Chapter, Texas Tech University, April 5, 2001.
101. Dawson, C., "The local discontinuous Galerkin method," Schlumberger-Chevron Reservoir Technology Section, La Habra, CA, April 19, 2001.
102. Dawson, C. and Cockburn, B., "The local discontinuous Galerkin method for flow problems and coupling with mixed finite element methods," 6th SIAM Conference on Geosciences, Boulder, CO, June 11-14, 2001.
103. Proft, J. and Dawson, C., "Coupling of continuous and discontinuous finite element methods for transport problems," 6th SIAM Conference on Geosciences, Boulder, CO, June 11-14, 2001.
104. Dawson, C., "Multi-algorithmic coupling strategies for flow and transport problems based on discontinuous Galerkin methods," Joint AMS-IMS-SIAM Summer Research Conference on Porous Media, Mt. Holyoke College, June 17-20, 2001.
105. Dawson, C., "Coupling of continuous and discontinuous Galerkin methods for transport problems arising in environmental quality modeling," DOD Users Group Conference, Biloxi, MS, June 19-21, 2001.
106. Proft, J. and Dawson, C., "Coupling of continuous and discontinuous finite element methods for the shallow water and transport equations," U.S. National Congress on Computational Mechanics, Dearborn, Michigan, Aug 1-3, 2001.
107. Dawson, C., "Recent advances in the local discontinuous Galerkin method," Dept. of Mathematics, University of Pittsburgh, Oct. 19, 2001.
108. Dawson, C., "What does water know about mathematics?" Dept. of Mathematics, University of Texas at Austin, Oct. 22, 2001.
109. Dawson, C., "The local discontinuous Galerkin method for flow problems," Center for Subsurface Modeling Industrial Affiliates Meeting, Oct. 30, 2001.
110. Dawson, C., "Recent advances in the local discontinuous Galerkin method," Texas Institute for Computational and Applied Mathematics, Nov. 29, 2001.
111. Dawson, C., "Discontinuous Galerkin methods for the shallow water equations," Workshop on Finite Element Ocean Modeling, Office of Naval Research, Washington, D.C., Dec. 6-7, 2001.
112. Dawson, C., "Discontinuous Galerkin in ADCIRC," ADCIRC Modeler's Workshop, Naval Research Laboratory, Stennis Space Center, Feb. 27, 2002.
113. Dawson, C., "The local discontinuous Galerkin method for flow and transport problems," Workshop on Computational Methods in the Geosciences, Institute for Mathematics and Its Applications, Minneapolis, March 13-15, 2002.
114. Dawson, C., "Discontinuous Galerkin methods for flow in porous media and shallow water," Workshop on Discontinuous Galerkin Methods, Oberwolfach, Germany, April 22-26, 2002.
115. Dawson, C., "Coupling of continuous and discontinuous Galerkin methods for shallow water flow," Department of Defense Users Group Meeting, Austin, TX, June 11-14, 2002.
116. Dawson, C., "Discontinuous Galerkin methods for shallow water flow and transport," Computational Methods in Water Resources, Delft, June 24-28, 2002.

117. Dawson, C. and Proft, J., "Coupled continuous and discontinuous Galerkin methods for the shallow water equations," United States National Congress on Computational Mechanics, June 24-28, Blacksburg, VA.
118. Dawson, C., "Discontinuous Galerkin methods for elliptic and transient problems with geoscience applications," SIAM Annual Meeting, Philadelphia, PA, July 8-12, 2002.
119. Dawson, C., "What does water know about mathematics?" UT Honors Colloquium, July 26, 2002.
120. Dawson, C., "Recent developments in finite element methods for reservoir simulation and water resources modeling," Plenary address, International conference on Computational and Mathematical Methods in Science and Engineering, Alicante, Spain, September 20-25, 2002.
121. Dawson, C., "Intradomain coupling-flow and transport," Workshop on Multiphysics Applications, NAVO, Stennis Space Center, Mississippi, October 6, 2002.
122. Discontinuous and coupled finite element for flow problems," Center for Subsurface Modeling (CSM) Industrial Affiliates Meeting, October 23-24, 2002.
123. Dawson, C., "Coupled finite element methods for the shallow water equations," American Mathematical Society, Orlando, FL, Nov. 9-10, 2002.
124. Dawson, C., "Simulating shallow water flow," CAM Student Seminar, November 15, 2002.
125. Dawson, C., "Simulating shallow water flow," Sigma Gamma Tau, November 20, 2002.
126. Dawson, C., "Local discontinuous Galerkin methods," Workshop on Discontinuous Galerkin Methods, ERDC, Vicksburg, MS January 14, 2003.
127. Dawson, C., "Numerical methods for conservation laws," One-week course at Burger Institute, Technical University of Eindhoven, The Netherlands, Jan 20-24, 2003.
128. Dawson, C., "Coupled finite element methods for transport and shallow water equations," SIAM Conference on Computational Science, San Diego, CA, February 19-12, 2003.
129. Dawson, C., "The instrumented oilfield of the future," Global Grid Forum 7, Tokyo, March 4-7, 2003.
130. Dawson, C., "Coupled finite element methods for the shallow water equations," 7th SIAM Conference on Geosciences, Austin, TX, March 17-20, 2003.
131. Dawson, C. and Baird, J., "Data assimilation for reservoir simulation," 7th SIAM Conference on Geosciences, Austin, TX, March 17-20, 2003.
132. Dawson, C. and Proft, J., "Coupled finite element methods for transport," 7th SIAM Conference on Geosciences, Austin, TX, March 17-20, 2003.
133. Dawson, C., "An overview of discontinuous Galerkin methods," Colloquium, Statistical and Applied Mathematics Institute, Research Triangle Park, NC, April 30, 2003.
134. Dawson, C., "Simulation shallow water flow," Colloquium, Dept. of Mathematics, Penn State University, PA, March 28, 2003.
135. Dawson, C., "Discontinuous Galerkin methods for convection-diffusion problems," Workshop on Environmental Modeling, Statistical and Applied Mathematics Institute, Research Triangle Park, NC, May 5-7, 2003.
136. Dawson, C., "Coupled finite element methods for the shallow water equations," 2nd MIT Conference on Computational Fluid and Solid Mechanics, Boston, June 17-20, 2003.
137. Dawson, C., "Continuous and discontinuous finite element methods for the shallow water equations," 6th International Congress on Industrial and Applied Mathematics, Sydney, Australia, July 7-11, 2003.
138. Dawson, C., "Some comparisons of continuous and discontinuous Galerkin methods for the shallow water equations," Keynote address, 7th U.S. National Congress on Computational Mechanics, Albuquerque, NM, July 28-30, 2003.
139. Dawson, C., "A discontinuous Galerkin method for the three-dimensional shallow water equations," with V. Aizinger, 7th U.S. National Congress on Computational Mechanics, Albuquerque, NM, July 28-30, 2003.
140. Dawson, C., "Coupled continuous and discontinuous finite element methods for shallow water," Workshop on Solution Methods for Large-Scale Nonlinear Problems, Lawrence Livermore National Laboratory, Livermore, CA, Aug 6-8, 2003.

141. Dawson, C., and Baird, J., "Incorporation of Measured Data into Reservoir Simulation," Center for Subsurface Modeling Industrial Affiliates Meeting, Oct. 2003.
142. Dawson, C., "Coupled Discontinuous and Continuous Finite Element Methods for Shallow Water," Workshop on Discontinuous Galerkin Methods, University of Minnesota, Oct. 2003.
143. Dawson, C., and Eslinger, O., "Discontinuous Galerkin Methods for Convection-Diffusion Problems," Workshop on Error Estimators and Indicators, Engineering Research and Development Center, Vicksburg, MS, Nov. 2004.
144. Dawson, C., and Proft, J., "Compatible Algorithms for Coupled Flow and Transport," Workshop on Mass Conservation Issues in Flow and Transport, Stennis Space Center, MS, February 2004.
145. Dawson, C., and Wheeler, M. F., "Environmental Quality Modeling," PET Technical Review, Austin, TX, March 2004.
146. Dawson, C., "Coupled Discontinuous and Continuous Finite Element Methods for Shallow Water," ADCIRC Users Workshop, Naval Research Laboratory, Stennis Space Center, MS, March 2004.
147. Dawson, C., "Coupled Discontinuous and Continuous Finite Element Methods for Shallow Water," Workshop on Discontinuous Galerkin Methods, Army High Performance Computing Center, University of Minnesota, May 2004.
148. Dawson, C., "Compatible Algorithms for Coupled Flow and Transport," Dept. of Defense Users Group Conference, Williamsburg, VA, June 2004.
149. Dawson, C., "Discontinuous, Continuous and Coupled Finite Element Methods for Shallow Water Flows," Computational Methods in Water Resources XV, Chapel Hill, NC, June 2004.
150. Aizinger, V., and Dawson, C., "A Discontinuous Galerkin Method for Three-Dimensional Shallow Water Equations," Computational Methods in Water Resources XV, Chapel Hill, NC, June 2004.
151. Dawson, C., "Compatible Algorithms for Coupled Flow and Transport," International Conference on Spectral and Higher Order Methods, Brown University, June 2004.
152. Dawson, C., "Data Assimilation in Subsurface Modeling," Idaho National Energy and Environmental Laboratory, June 28, 2004.
153. Dawson, C., "Reservoir Simulation in the 21st Century: An Overview," SIAM Annual Meeting, Portland, OH, July 2004.
154. Proft, J. and Dawson, C., "Coupled Continuous and Discontinuous Finite Element Methods," WONAPDE 2004: The First Chilean workshop on Numerical Analysis of Partial Differential Equations, Universidad de Concepcion, Chile, January 2004.
155. Dawson, C., "Discontinuous, continuous and coupled finite element methods for shallow water flows," Keynote lecture, World Congress on Computational Mechanics, Beijing, China, September 2004.
156. Westerink, J., Kubatko, E. and Dawson, C., "An unstructured grid morphodynamic model with a discontinuous Galerkin method for bed evolution," The 3rd International Workshop on Unstructured Grid Numerical Modelling of Coastal Shelf and Ocean Flows, Toulouse, France, September 2004.
157. Dawson, C., "Discontinuous Galerkin finite element methods for shallow water flows," Workshop on Modeling and Computation in Environmental Science, Hohenwart, Germany, October 2004.
158. Dawson, C. and Baird, J., "Data assimilation using the representer method and mixed finite elements," Center for Subsurface Modeling Industrial Affiliates Meeting, Austin, TX, October 2004.
159. Dawson, C., "Discretization techniques for coupled flow and transport," Center for Applied Scientific Computing, Lawrence Livermore National Laboratory, Livermore, CA, November 2004.
160. Li, H., Farthing, M., Dawson, C. and Miller, C., "Local discontinuous Galerkin and variable step size, variable order time integration for Richards equation," American Geophysical Union, San Francisco, CA, December 2004.
161. Dawson, C., "Recent advances in surface water modeling," Plenary lecture, 7th SIAM Conference on Mathematical and Computational Issues in the Geosciences, Avignon, France, June 2005.
162. Dawson, C., "Numerical methods for ground water/surface water coupling," 7th SIAM Conference on Mathematical and Computational Issues in the Geosciences, Avignon, France, June 2005.
163. Dawson, C., "Discontinuous Galerkin methods for ground water/surface water coupling," SIAM Annual Meeting, New Orleans, July 2005.

164. Dawson, C., "Discontinuous Galerkin methods for 2-D and 3-D Shallow Water Equations," Keynote lecture, 8th U.S. National Congress on Computational Mechanics, Austin, July 2005.
165. Kubatko, E., Westerink J., and Dawson, C., "Hp discontinuous Galerkin methods for shallow water flow and transport," 8th U.S. National Congress on Computational Mechanics, Austin, July 2005.
166. Dawson, C., "A posteriori error estimation of the representer method for data assimilation in subsurface flows," Center for Subsurface Modeling Industrial Affiliates Meeting, Austin, TX, Oct. 2005
167. Dawson, C. and J.J. Westerink, "`From Katrina forward: How mathematical modeling predicts storm surges," American Mathematical Society Congressional Briefing, Washington, D.C., Nov. 2005
168. Dawson, C., "Modeling of hurricane storm surges," 50 Years of ADI Methods, Rice University, Nov. 2005
169. Dawson, C., "Numerical simulation of coupled ground water/surface water flow and transport," AMS/SIAM/MAA Joint Mathematics Meeting, San Antonio, January 2006.
170. Dawson, C., "Modeling of Hurricane Katrina," Institute for Computational Engineering and Sciences Board of Visitors, Jan. 2006
171. Dawson, C., "DG methods for shallow water modeling," Department of Defense PET workshop, Engineering Research and Development Center, Vicksburg, MS, Feb. 2006.
172. Dawson, C., "Mass conservation and flux postprocessing," ADCIRC Workshop, National Oceanographic and Atmospheric Administration, Washington, D.C., March 2006.
173. Dawson, C., J. Westerink, R. Luettich and R. Kolar, "Storm surge modeling in the Gulf of Mexico using the ADCIRC unstructured grid hydrodynamic model," Severe Storms-Impacts and Disaster Response in Gulf Coast Communities, Rice University, March 2006.
174. Dawson, C., "Modeling coastal hydrodynamics and hurricanes Katrina and Rita," Departmental Colloquium, Computational and Applied Mathematics Dept., Rice University, April 2006.
175. Dawson, C., "Modeling coastal hydrodynamics and hurricanes Katrina and Rita," Nonlinear Dynamics Seminar, Physics Dept., The University of Texas at Austin, April 2006.
176. Dawson, C., "Modeling coastal hydrodynamics and hurricanes Katrina and Rita," Aerospace Engineering and Engineering Mechanics External Advisory Committee, The University of Texas at Austin, April 2006.
177. Dawson, C., "Modeling coastal hydrodynamics and hurricane storm surges," NSF-CBMS Conference, University of Nevada-Las Vegas, May 2006.
178. Dawson, C., "Modeling coastal hydrodynamics and hurricanes Katrina and Rita," Joint TACC/ICES Distinguished Lecture Series on Petascale Computing, UT Austin, June 2006.
179. Dawson, C., "Discontinuous and continuous Galerkin methods for shallow water and hurricane storm surges," MAFELAP, Brunel University, United Kingdom, June 2006.
180. Dawson, C., "Prediction and hindcasting of hurricane storm surges," SIAM Annual Meeting, Boston, MA, July, 2006.
181. Dawson, C., "Discontinuous Galerkin methods for coupled ground water/surface water flow and transport," World Congress on Computational Mechanics 7, Los Angeles, CA, July 2006.
182. Westerink, J.J., Bunya, S., Dietrich, C., Westerink, H., Luettich, R. and Dawson, C., "High-resolution unstructured storm surge models of the Gulf of Mexico," World Congress on Computational Mechanics 7, Los Angeles, CA July 2006.
183. Bunya, S., Westerink, J., Kubatko, E., Dawson, C. and Yoshimura, S., "A new wetting and drying algorithm for discontinuous Galerkin solutions to the shallow water equations," World Congress on Computational Mechanics 7, Los Angeles, CA, July 2006.
184. Dawson, C., "Discontinuous Galerkin methods for 2D and 3D shallow water equations," Fifth International Workshop on Unstructured Grid Numerical Modelling of Coastal, Shelf and Ocean Flows, Miami, FL, November 2006.
185. Dawson, C., "Discontinuous Galerkin Methods for Coupled Surface Water-Ground Water Flow and Transport, " SIAM Conference on Mathematical and Computational Issues in the Geosciences, Santa Fe, NM, March 2007.
186. Dawson, C., "Modeling Coastal Hydrodynamics and Hurricane Storm Surges," Colloquium, Mathematics Department, University of Pittsburgh, April 2007.

187. Dawson, C. and Kubatko, E., "Discontinuous Galerkin Methods for Coastal Hydrodynamics," ADCIRC Users Group Workshop, Engineering Research and Development Center, Vicksburg, MS, May 2007.
188. Dawson, C., "Discontinuous Galerkin Methods for Coastal Hydrodynamics," Dept. of Civil Engineering, Louisiana State University, June 2007.
189. Dawson, C., "Discontinuous Galerkin Methods for Coastal Hydrodynamics," ICIAM 2007, Zurich, July 2007.
190. Iglesias, M. and Dawson, C. "The Representer Method for Parameter and State Estimation in Reservoir Modeling," 9th U.S. Congress on Computational Mechanics, San Francisco, July 2007.
191. Kubatko, E., Bunya, S., Dawson, C. and Westerink, J., "Verification and validation of a discontinuous Galerkin model for shallow water flow and transport," 9th U.S. Congress on Computational Mechanics, San Francisco, July 2007.
192. Westerink, J., Atkinson, J., Bunya, S., Dawson, C., Dietrich, J., Kubatko, E., Luettich, R., and Westerink, H., "Modeling Hurricane Storm Surge Along the Gulf Coast—Towards Petaflop Computing," 9th U.S. Congress on Computational Mechanics, San Francisco, July 2007.
193. Bunya, S., Dawson, C., Kubatko, E., Westerink, J. And Yoshimura, S., "Validation of a Moving Boundary RKDG Method for the Shallow Water Equations," 9th U.S. Congress on Computational Mechanics, San Francisco, July 2007.
194. Dawson, C., "A Local Discontinuous Galerkin Framework for Flow in the Vadose Zone," 9th U.S. National Congress on Computational Mechanics, July 2007.
195. Dawson, C., "Discontinuous Galerkin Methods for 2D and 3D Coastal Hydrodynamics," Department of Civil Engineering and Environmental Sciences, Louisiana State University, August, 2007.
196. Dawson, C., "Finite Element Models for Hurricane Storm Surges," Workshop in Honor of Todd Dupont's 65th Birthday, University of Chicago, September, 2007.
197. Dawson, C., "Hurricane Storm Surge Modeling," YOU@UT, Women in Engineering Program, University of Texas at Austin, October 2007.
198. Dawson, C. and Iglesias, M., "The Representer Method for State and Parameter Estimation in Porous Media," Mathematics, Analysis, Modeling, Optimization and Simulation (MAMOS) Workshop, University of Texas at Austin, October, 2007.
199. Dawson, C. and Iglesias, M., "The Representer Method for State and Parameter Estimation in Porous Media," Center for Subsurface Modeling Industrial Affiliates Meeting, University of Texas at Austin, October 2007.
200. Dawson, C., "Modeling of Coupled Ground Water-Surface Water Flow and Transport," Dept. of Mathematics Colloquium, Louisiana State University, November, 2007.
201. Dawson, C., "Discontinuous Galerkin Methods for Shallow Water Flow and Transport," Dept. of Mathematics Colloquium, Virginia Tech University, November, 2007.
202. Dawson, C., Kubatko, E., Westerink, J., "High Performance Computing to Resolve Propagation and Advection Dominated Multi-Scale Multi-Process Physics," 10th International Workshop on Wave Hindcasting and Forecasting and Coastal Hazard Symposium, Oahu, Hawaii, November, 2007.
203. Dawson, C., "Discontinuous Galerkin Methods for Shallow Water Flow and Transport," Workshop on Discontinuous Galerkin Methods, Banff, Canada, November 2007.
204. Dawson, C., "Finite Element Models for Hurricane Storm Surges," ICES Forum, University of Texas at Austin, September 2007.
205. Westerink, J., Bunya, S., Dietrich, C., Kubatko, E., Dawson, C., Luettich, R., "Modeling Hurricane Storm Surge along the Gulf Coast in the Wake of Katrina: Towards Petaflop Computations," Third Asian Pacific Congress on Computational Mechanics, Kyoto, Japan, December 2007.
206. Dawson, C., "Computer Science and Computational Science Issues Related to Hurricane Storm Surge Modeling," Empowering Leadership Alliance Conference and Texas Region SIAM Student Chapter Conference, Rice University, April 2008.
207. Dawson, C., "Discontinuous Galerkin Methods for Shallow Water Flow and Transport," Dept. of Mathematics Colloquium, Texas A&M University, March 2008.

208. Dawson, C., Westerink, J., Kubatko, E., Proft, J. and Mirabito, C., "Hurricane Storm Surge Simulation on Petascale Computers," Teragrid 2008 Conference, Las Vegas, NV, June 2008.
209. Kubatko, E. and Dawson, C., "Stage-Exceeding Order SSP Time-stepping for Runge-Kutta Discontinuous Galerkin Methods," World Congress on Computational Mechanics, Venice, June 2008.
210. Dawson, C., "Modeling of Hurricane Storm Surges Driven by Winds and Waves," SIAM Annual Meeting, San Diego, July, 2008.
211. Santillana, M. and Dawson, C., "Analytical and Numerical Properties of the Diffusive Wave Approximation of the Shallow Water Equations with Applications to Water Flow in Wetlands," Computational Methods in Water Resources XVII, San Francisco, July 2008.
212. Dawson, C. and Kubatko, E., "Stage-Exceeding Order SSP Time-stepping for Runge-Kutta Discontinuous Galerkin Methods," SIAM Annual Meeting, San Diego, July 2008.
213. Dawson, C., "Multiscale Effects in Modeling Flows of Coastal Environments," Workshop on Multiscale Modeling and Analysis, University of Texas at Austin, August, 2008.
214. Dawson, C., "A Comparative Study of Continuous and Discontinuous Finite Element Methods for the SWE," 7th International Workshop on Unstructured Mesh Numerical Methods for Coastal, Shelf and Ocean Flows, Bedford Institute of Oceanography, Halifax, Canada, September, 2008.
215. Dawson, C., "Discontinuous Galerkin Methods for Coastal Hydrodynamics Modeling," Dept. of Mathematics Colloquium, Oregon State University, October, 2008.
216. Dawson, C., "An Iterative Representer-Based Scheme for Parameter Estimation in Reservoir Simulation," Dept. of Mathematics Colloquium, Oregon State University, October 2008.
217. Dawson, C., An Iterative Representer-Based Scheme for Parameter Estimation," Center for Subsurface Modeling Industrial Affiliates Meeting, October, 2008.
218. Dawson, C., "Hurricane Storm Surge Modeling using the ADCIRC Model," Severe Storms Emergency Evacuation and Response Conference, Rice University, October, 2008.
219. Dawson, C., "Circulation and Storm Surge Modeling at UT Austin," Grand Challenges in Coastal Resiliency I: Transforming Coastal Inundation Modeling to Public Security, Louisiana State University, January, 2009.
220. Dawson, C., "HPC for Circulation and Storm Surge Modeling," SIAM Conference on Scientific Computing, Miami, FL, March, 2009.
221. Proft, J. and Dawson, C., "Hurricane Storm Surge Modeling for Texas," ADCIRC Users Group Meeting, National Oceanographic and Atmospheric Administration, Silver Spring, MD, April 2009.
222. Dawson, C., "Hurricane Storm Surge Modeling," Applied Sciences Colloquium, Harvard University, May, 2009.
223. Dawson, C., "Discontinuous Galerkin Methods for Groundwater/Surface water Coupling," SIAM Conference on Geosciences, Leipzig, Germany, June 2009.
224. Dawson, C., "The Current and Future State of Hurricane Storm Surge Modeling," U.S. National Congress on Computational Mechanics X, Columbus, OH, July 2009.
225. Mirabito, C., Dawson, C., Kubatko, E., Westerink, J. and Bunya, S., "Implementation of a Discontinuous Galerkin Morphological Model on Two-Dimensional Unstructured Meshes," U.S. National Congress on Computational Mechanics X, Columbus, OH, July 2009.
226. Dawson, C., "Implementation of a Discontinuous Galerkin Morphological Model on Two-Dimensional Unstructured Meshes," Engineering Research and Development Center, Vicksburg, MS, July 2009.
227. Dawson, C., "H-p Discontinuous Galerkin Methods for Shallow Water Hydrodynamics," 2nd International Conference on High Performance Computing and Applications, Shanghai, China, August, 2009.
228. Dawson, C., " Hurricane Storm Surge Modeling for Texas Storms Using the ADCIRC Model", Hurricane Ike Revisited, Severe Storm Prediction, Education and Evacuation from Disasters Center, Rice University, September, 2009.
229. Dawson, C., "Parameter Estimation in Two-Phase Flow," Center for Subsurface Modeling Industrial Affiliates Meeting, October 2009.
230. Dawson, C., " Modeling Storm Surge from Hurricanes and Tropical Storms," Department of Applied Mathematics Colloquium, University of Twente, The Netherlands, February 2010.

231. Dawson, C., "HPC for Hurricane Storm Surge and Sediment Transport Using DG Methods," IWACOM II, Yokohoma, Japan, April 2010.
232. Dawson, C., "Application of the Advanced Circulation Model for Predicting Impact from Hurricane Storm Surge," SSPEED Center, Rice University, May 2010.
233. Dawson, C., "DG Methods for Hurricane Storm Surge and Sediment Transport," SIAM Annual Meeting, Pittsburgh, PA, July 2010.
234. Kees, C., Farthing, M., Mattis, S. and Dawson, C., "Homogenization and Upscaling of Flow Through Vegetation," Computational Methods in Water Resources XVIII, Barcelona, Spain, June 2010.
235. Dawson, C., "Modeling Near-Shore and Coastal Processes and Extreme Events," Los Alamos National Laboratory, July 2010.
236. Dawson, C., "HPC for Hurricane Storm Surge and the BP Oil Spill," TACC Institute, The University of Texas at Austin, July 2010.
237. C. Dietrich, J. Westerink, M Zijlema, L. Holthuijsen, C. Dawson, R. Luettich, Coupled Waves and Storm Surge during Hurricane Gustav, 14th ADCIRC Model Workshop, U.S. Army Engineer Research and Development Center, Vicksburg, MS, April 20-21, 2010.
238. M.E. Hope, J.J. Westerink, A.B. Kennedy, J.C. Dietrich, C. Dawson, J. Proft, J. Atkinson, H. Roberts, Application of the Coupled ADCIRC+SWAN Model to Hurricane Ike on the Texas Gulf Coast, IMUM2010, MIT, August, 2010.
239. S. Tanaka, J.J. Westerink, C. Dawson and R.A. Luettich, Jr., Parallel scalability of hurricane storm surge model, IWACOM II, Yokohoma, Japan, April 2010.
240. S. Tanaka, S. Bunya, J. Westerink, C. Dawson, R. Luettich, D. Wirasaet, Parallel Scalability of Implicit/Explicit ADCIRC and Outputting Process, 14th ADCIRC Model Workshop, U.S. Army Engineer Research and Development Center, Vicksburg, MS, April 20-21, 2010
241. S. Tanaka, J.J. Westerink, C. Dawson and R.A. Luettich, Jr., Scalability of Unstructured Grid Based Hurricane Storm Surge Model, 9th International Workshop on Multiscale Unstructured Mesh Numerical Modeling for Coastal, Shelf and Global Ocean Dynamics (IMUM2010), MIT, August, 2010.
242. J.J. Westerink, J. C. Dietrich, C. Dawson, R. Luettich, A. Kennedy, M Hope, High performance coupling of unstructured hurricane wave and current model, IWACOM II, Yokohoma, Japan, April 2010.
243. J.J. Westerink, C. Dietrich, A. Kennedy, S. Tanaka, M. Hope, C. Dawson, J. Smith, R. Jensen, Modeling Hurricane Waves and Storm Surge in Coastal Texas, Louisiana and Mississippi using Integrated Tightly Coupled Scalable Unstructured Mesh Computations, State of the Coast, Implementing a Sustainable Coast for Louisiana, Baton Rouge, LA, June 8-10, 2010.
244. J.J. Westerink, D. Wirasaet, S. Tanaka, E.~J. Kubatko, and C. Dawson, Nodal Discontinuous Galerkin Solutions to Shallow Water Flow and Transport on Triangles and Quadrilaterals, the 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics (WCCM/APCOM 2010), Sydney, Australia, 2010.
245. J.J. Westerink, J.C. Dietrich, A.B. Kennedy, M. Zijlema, L.H. Holthuijsen, C. Dawson and R.A. Luettich, Jr., "Coupled Waves and Storm Surge during Hurricane Gustav," IMUM2010, MIT, August, 2010.
246. D. Wirasaet, S. Tanaka, E. Kubatko, J. Westerink, C. Dawson, "A Study on Performances of Nodal Discontinuous Galerkin Methods on Quadrilaterals and Triangles,"14th ADCIRC Model Workshop, U.S. Army Engineer Research and Development Center, Vicksburg, MS, April 20-21, 2010.
247. C. Dawson, "Advances in the ADCIRC Storm Surge Model for Forecasting and Hindcasting Texas Storms," SSPEED Center Conference on Lessons Learned from Hurricane Ike, October, 2010, Rice University.
248. C. Dawson, "Hurricane Forecasting: Katrina and Other Hurricanes, Humboldt Conference," The University of Texas at Austin, January 2011.
249. C. Dawson, "Modeling Near-Shore Processes and Extreme Events," Joint Mathematics Meeting, Mathematics Association of America, New Orleans, January 2011.
250. C. Dawson, "Modeling Hurricane Storm Surges and the BP Oil Spill," Institute for Computational Science and Engineering, The University of Texas at Austin, November, 2010.

251. C. Dawson, "Discontinuous Galerkin Methods for Sediment Transport and Hurricane Storm Surges," Workshop on Shallow Water Modeling, Center for Scientific Computing and Applied Mathematics, The University of Maryland, October, 2010.
252. C. Dawson, "Saltwater Intrusion and Density Driven Flow Modeling," Department of Defense Workshop on Performance Assessment and Technology Transfer, Pittsburgh, October, 2010.
253. C. Dawson, Issues in Coastal Ocean Modeling, SIAM Conference on Mathematical and Computational Issues in the Geosciences, Long Beach, March, 2011.
254. C. Dawson, Short Course on Coastal Ocean Modeling, Institute for Mathematics and Its Applications, The University of Minnesota, February, 2011.
255. C. Dawson, Finite Elements in Coastal Ocean Circulation Modeling, MIT Seminars in Computational Engineering Series, Massachusetts Institute of Technology, April, 2011
256. C. Dawson, Modeling of Multiscale Processes in the Coastal Ocean, Dept. of Civil Engineering, University of Notre Dame, May 2011.
257. C. Dawson, Finite Elements in Coastal Ocean Modeling, Finite Element Methods in Technology, FEMTEC3, South Lake Tahoe, NV, May 2011.
258. C. Dawson, Applications of DG Methods to Shallow Water and Near-Shore Processes, International Congress on Industrial and Applied Mathematics (ICIAM), Vancouver, Canada, July 2011.
259. C. Dawson, Lagrangian Transport of Oil in the Gulf of Mexico, International Congress on Industrial and Applied Mathematics (ICIAM), Vancouver, Canada, July 2011.
260. C. Dawson, Hurricane Forecasting and HPC at TACC, Texas Advanced Computing Center 10th Anniversary Celebration, The University of Texas at Austin, June 2011.
261. C. Dawson, Application of DG Methods to Hurricane Storm Surge, U.S. National Congress on Computational Mechanics, USNCCM, Minneapolis, July 2011.
262. C. Dietrich, C. Dawson, and J.J. Westerink, Development and Application of Coupled Hurricane Wave and Surge Models for Southern Louisiana, CHAMPS Lab Seminar, University of Central Florida, July, 2011.
263. C. Dietrich, C. Dawson, and J.J. Westerink, Development and Application of Coupled Hurricane Wave and Surge Models for Southern Louisiana." Ocean Engineering Seminar Series, Texas A&M University, February, 2011.
264. C. Dietrich, C. Dawson, and J.J. Westerink, Issues in Wave-Circulation Coupling." 15th ADCIRC Workshop, Stennis Space Center, Mississippi, April, 2011.
265. C. Dietrich, C. Dawson, and J.J. Westerink, "Performance of the Integrally - Coupled, Unstructured - Mesh SWAN +ADCIRC(DG) Model," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Long Beach, California, March, 2011
266. S. Mattis, C. Dawson, C. Kees and M. Farthing, Numerical Modeling of Flow Through Porous Structures and Vegetated , SIAM Conference on Mathematical and Computational Issues in the Geosciences, Long Beach, California, March, 2011.
267. T. Butler, C. Dawson and T. Wildey, A Posteriori Error Estimates for Polynomial Chaos Expansions of Response Surfaces for Differential Equations, SIAM Conference on Computational Science and Engineering, Reno, Nevada, February 2011.
268. T. Butler, C. Dawson, Recent Advances and Applications of A Posteriori Error Estimates for Polynomial Chaos Expansions for Differential Equations, International Conference on Industrial and Applied Mathematics , Vancouver, Canada, July 2011
269. T. Mayo, T. Butler and C. Dawson, "Reducing Hurricane Storm Surge Model Error Using the Ensemble Kalman Filter," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Long Beach, California, March, 2011 (best poster award winner).
270. T. Mayo, T. Butler and C. Dawson, "Reducing Hurricane Storm Surge Model Error Using the Ensemble Kalman Filter," Richard Tapia Celebration of Diversity in Computing Conference, April 3-5, 2011, San Francisco, CA (best poster award winner).
271. T. Povich and C. Dawson, "Discontinuous Galerkin Methods for Variable Density Groundwater Flow and Solute Transport," United States National Congress on Computational Mechanics, USNCCM11, Minneapolis, MN, July 2011.

272. C. Dawson, "Modeling Multiscale Processes in the Coastal Ocean," Workshop on Discontinuous Galerkin Methods for Partial Differential Equations, Archimedes Center for Modeling, Analysis, and Computation, Heraklion, Greece, September, 2011.
273. C. Dawson, "Modeling of Hydrodynamics and Waves for Hurricane Forecasting and Hindcasting, and the BP Oil Spill in the Gulf of Mexico," IV International Conference on Computational Methods in Marine Engineering, Lisbon, Portugal, September, 2011.
274. C. Dawson, "Hurricane Forecasting and Hindcasting: Katrina and Other Hurricanes," Workshop on Mathematics in the Geosciences, Northwestern University, October 2011.
275. C. Dawson, "Storm Surge Modeling and Hazard Mitigation," Panel on Hazard Mitigation and Climate Adaptation, American Meteorological Society Annual Meeting, New Orleans, January 2012.
276. C. Dawson, "Advances in Wave/Current Coupling with Applications to the Deepwater Horizon Oil Spill," Advances in Computational Science, Engineering and Mathematics, The University of Texas at Austin, January 2012.
277. C. Dawson, "Validation and Data Assimilation for Shallow Water Models," SIAM Conference on Uncertainty Quantification, Raleigh, NC, April 2012.
278. C. Dawson, "Coastal Modeling Flow and Hydrocarbon Transport," Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE), Miami, FL, April 2012.
279. C. Dawson, "Local Timestepping in the Discontinuous Galerkin Method," Barrett Lecture Series, Recent Developments on Discontinuous Galerkin Finite Element Methods for Partial Differential Equations, The University of Tennessee, Knoxville, TN, May 2012.
280. C. Dawson, "Hurricane Storm Surge Modeling in the Galveston Bay Region Using ADCIRC," Prediction of Coastal Surge Impacts and Sea Level Rise, World Environmental and Water Resources Congress 2012, Albuquerque, NM, May 2012.
281. C. Dawson and T. Povich, "Discontinuous Galerkin Methods in Variable Density Flow and Transport," Computational Methods in Water Resources 2012, University of Illinois, Urbana-Champaign, June, 2012.
282. J. Meixner, C. Dawson and C. Dietrich, "A Discontinuous Galerkin Spectral Wave Model," SIAM Conference on Nonlinear Waves and Coherent Structures, June 2012.
283. J. Proft and C. Dawson, "Modeling Hurricanes in the Gulf of Mexico using ADCIRC," Gulf Coast Hurricanes: Mitigation and Response, Rice University, April 2012.
284. C. Michoski and C. Dawson, "Fully Coupled Multiphase Morphodynamics," SIAM Annual Meeting, Minneapolis, MN, July 2012.
285. C. Michoski and C. Dawson, "Adaptive Multiscale Discontinuous Galerkin Methods for Multiphase Morphodynamics," Adaptive Multiscale Methods for the Atmosphere and Ocean (AMMWO1), Newton Institute for Mathematical Sciences, Cambridge, UK, August, 2012.
286. C. Dietrich and C. Dawson, "Surface Trajectories of Oil Transport along the Northern Coastline of the Gulf of Mexico," Computational Methods in Water Resources 2012, University of Illinois, Urbana-Champaign, June 2012.
287. C. Dietrich and C. Dawson, "Surface Trajectories of Oil Transport in the Gulf of Mexico," 16th ADCIRC Workshops, Silver Springs, MD, April 2012.
288. C. Dietrich and C. Dawson, "Surface Trajectories of Oil Transport along the Northern Coastline of the Gulf of Mexico," Oil Spill Response Research and Development Forum, Baton Rouge, LA, January 2012.
289. C. Dietrich and C. Dawson, "Oil Transport along the Northern Coastline of the Gulf of Mexico," Central Texas Chapter, Air & Waste Management Association, Austin, TX, Sept. 2011.
290. C. Dietrich and C. Dawson, "Oil Transport along the Northern Coastline of the Gulf of Mexico," Lakeway Men's Breakfast Club, Lakeway, TX, Dec. 2011.
291. T. Butler, T. Mayo, I. Hoteit, M. Altaf and C. Dawson, "Data Assimilation within the Advanced CIRCulation (ADCIRC) Modeling Framework for Hurricane Storm Surge Forecasting," AGU Ocean Sciences Meeting, Salt Lake City, UT, Feb. 2012.
292. T. Butler and C. Dawson, "Estimating and Bounding Errors in Distributions Propagated via Surrogate Models," SIAM Conference on Uncertainty Quantification, Raleigh, NC, April 2012.

293. C. Dawson, "ADCIRC Tutorial," Center for Severe Storms, Prediction, Education and Evacuation from Disasters, December 2011.
294. S. A. Mattis, C.N. Dawson, C.E. Kees and M.W. Farthing, "Numerical Modeling of Flow Over Flexible Vegetation," SIAM Annual Meeting, July 2012.
295. S.A. Mattis, C.N. Dawson, C.E. Kees and M.W. Farthing, "Numerical Modeling of Flow Through Porous Structures and Vegetated Regions," Computational Methods in Water Resources 2012, University of Illinois, Urbana-Champaign, June 2012.
296. T. Mayo and C. Dawson, "Improving Hurricane Storm Surge Forecasting Using Data Assimilation Methods," SIAM Annual Meeting, July 2012.
297. C. Dawson, "Numerical Simulation of the Coastal Ocean with Applications to Hurricane Storm Surges and Oil Spills," ALGORITMY Conference (Plenary talk), Podbanske, Slovakia, September 2012.
298. C. Dawson, "Numerical Simulation of the Coastal Ocean with Applications to Hurricane Storm Surges," Workshop on Impacts of Sea Level Rise, University of Texas Marine Science Institute, Port Aransas, TX, September, 2012.
299. C. Dawson, "Numerical Simulation of the Coastal Ocean with Applications to Hurricane Storm Surges and Oil Spills," Workshop on Computational Mathematics in the Geosciences, Princeton University, October, 2012.
300. C. Dawson, "Numerical Simulation of the Coastal Ocean with Applications to Hurricane Storm Surges and Oil Spills," Department of Mathematics Applied Math Colloquium, University of Arizona, Tucson, AZ, November, 2012.
301. C. Dawson, "High Fidelity Simulation of Hurricane Storm Surges and Oil Spills," Department of Physics Colloquium, University of Texas at Austin, November, 2012.
302. C. Dawson, "Local Timestepping in the Discontinuous Galerkin Method," Finite Element Methods in Fluids (in honor of T. Hughes 70th birthday), San Diego, CA, February 2013.
303. C. Dawson, "DG Methods for Circulation and Waves in the Coastal Ocean," Department of Mathematics Colloquium, University of Utah, Salt Lake City, UT, March 2013.
304. J.C. Dietrich, C Dawson, H. Arabshahi and A. Muhammad, "Coastal Models of Oil Transport in the Gulf of Mexico in Normal and Extreme Conditions," Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans, LA, January 2013.
305. C. Dawson and J. Proft, "Update on Hurricane Modeling Scenarios in the Houston Region using ADCIRC," ADCIRC Users Group Meeting, Vicksburg, MS, April 2013.
306. C. Dawson, "Finite Element Methods in Coastal Ocean Modeling: Some Successes and Challenges," Department of Applied Maths Colloquium, University of Oxford, Oxford, UK, June 2013.
307. C. Dawson, "Finite Element Methods in Coastal Ocean Modeling: Some Successes and Challenges," Zienkiewicz Lecture, The Mathematics of Finite Elements and Applications (MAFELAP) 2013, Brunel University, Uxbridge, UK, June, 2013.
308. C. Dawson, "Some Success and Challenges in Coastal Ocean Modeling," SIAM Geosciences Career Prize Lecture, SIAM Conference on Mathematical and Computational Issues in the Geosciences, Padova, Italy, June 2013.
309. C. Dawson, "Local Timestepping in the Discontinuous Galerkin Method," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Padova, Italy, June 2013.
310. K. Mandli, C. Dawson, "Advances in Simulating Storm Surge", MSU Mathematics Seminar, East Lansing, MI, July 2013.
311. S. Mattis, C. Dawson, C. Kees and M. Farthing, "An Immersed Boundary Method for Fluid-Vegetation Interaction," U.S. National Congress on Computational Mechanics, Raleigh, NC, July, 2013
312. C. Michoski, C. Dawson, F. Waelbroeck, J. Westerink, E. Kubatko, K. Mandli, C. Dietrich, D. Wirasaet, M. Vitse, C. Mirabito, "Discontinuous Galerkin Methods in Convection Dominated Application Models," SIAM, CSE, Boston, February 2013
313. C. Michoski, C. Dawson, F. Waelbroeck, J. Westerink, E. Kubatko, K. Mandli, C. Dietrich, D. Wirasaet, M. Vitse, C. Mirabito, "Discontinuous Galerkin Methods in Nonlinear Dynamics," MIT, Multidisciplinary simulation, estimation, and assimilation systems, February 2013 (invited talk).

314. C. Michoski, C. Dawson, F. Waelbroeck, J. Westerink, E. Kubatko, K. Mandli, C. Dietrich, D. Wirasaet, M. Vitse, C. Mirabito,, "Discontinuous Galerkin Methods in Coastal Dynamics," 12th U.S. National Congress on Computational Mechanics (USNCCM12), Raleigh, NC, July 2013.
315. J. Meixner, C. Dawson, C. Dietrich, " Discontinuous Galerkin Methods for Spectral Wave/Circulation Modeling" ADCIRC Workshop, Vicksburg, MS, April 2013.
316. C. Dawson, J. Proft, "A Parallel Finite element Hurricane Storm Surge Model for Galveston Bay", USNCCM 12, Raleigh, NC, July 2013.
317. N. Panda, C. Dawson, Y. Zhang, A. Kennedy, and J. Westerink, "Discontinuous Galerkin Methods for Solving Green-Naghdi Equations: Resolving Highly Non-Linear and Dispersive Water Waves," 12th U.S. National Congress on Computational Mechanics, Raleigh, NC, July 2013.
318. C. Dawson, "Long and Short Waves in Shallow Water," Department of Mathematics Colloquium, University of Pittsburgh, October 2013.
319. C. Dawson, "Long and Short Waves in Shallow Water," Department of Mathematics Colloquium, Baylor University, November 2013.
320. C. Dawson, "Can Houston Protect Itself From Storm Surges," Shell Lecture Series, Rice University, November 2013.
321. C. Dawson, J. Proft and W. Du, "Storm Surge Modeling in Galveston Bay," Severe Storms, Prediction, Education and Evacuation from Disaster (SSPEED) Annual Conference, Rice University, Houston, TX, September 2013.
322. C. Dawson, "Studying the Impacts and Mitigation of Hurricane Storm Surges and Oilspills," Texas Academy of Medicine, Engineering and Science (TAMEST) Conference, Bastrop, TX, January 2014.
323. C. Dawson, "Long and Short Waves in Shallow Water," Applied Mathematics Colloquium, Brown University, March 2014.
324. C. Dawson, "Discontinuous Galerkin Methods for Modeling Short Waves in Shallow Water," International Conference on Spectral and High-Order Methods, ICOSAHOM 2014, Salt Lake City, June 2014.
325. C. Dawson, "Some Successes and Challenges in Coastal Ocean Modeling," Workshop on Computational Challenges in 21st Century Experimental Mathematics, Institute for Computational and Experimental Research in Mathematics, Providence, RI, July 2014.
326. C. Michoski and C. Dawson, "Stabilization Techniques in Discontinuous Galerkin Methods," World Congress on Computational Mechanics (WCCM IX), Barcelona, Spain, July 2014.
327. C. Michoski and C. Dawson, "Regularizing Nonlinear Systems with Discontinuous Solutions in Higher Order Methods," International Conference on Spectral and High-Order Methods, ICOSAHOM 2014, Salt Lake City, June 2014.
328. S. Mattis, C. Dawson, C. Kees and M. Farthing, "Modeling Resistance Due to Flexible Vegetation," 12th International Workshop on Multi-scale Unstructured Mesh Numerical Modeling for Coastal, Shelf and Global Ocean Dynamics, University of Texas, Austin, TX, September 2013.
329. S. Mattis, C. Dawson, T. Butler, D. Estep, "Measure-theoretic uncertainty quantification and parameter estimation for groundwater contaminant transport", SIAM Annual Meeting, Chicago, IL, July 2014
330. S. Mattis, C. Dawson, T. Butler, D. Estep, "Uncertainty quantification and parameter estimation for groundwater contaminant transport," The XX. International Conference on Computational Methods in Water Resources, The University of Stuttgart, Germany, June 2014
331. L. Graham, C. Dawson, T. Butler, D. Estep, and J. Westerink, "Parameter Estimation within the Advanced Circulation (ADCIRC) Model: A Computational Framework" (Poster), ICERM Workshop on Challenges in 21st Century Experimental Mathematical Computation, Providence, RI, July 2014
332. L. Graham, C. Dawson, T. Butler, J. Westerink, and D. Estep, "Spatially Heterogeneous Parameter Estimation Within the Advanced Circulation (ADCIRC) Model", SIAM Annual Meeting, Chicago, IL, July 2014
333. K. T. Mandli, C. N. Dawson "Numerical Forecasting of Coastal Hazards: Approaches to Modeling Tsunamis and Storm Surge", University of Hamburg-Clima Campus Seminar, Hamburg Germany, May, 2014.

334. K. T. Mandli, I. Sraj, C. N. Dawson and I. Hoteit, "An Approach to Quantifying Uncertainty in the Context of Tsunamis" ASCETE Workshop, Bayrischzell, Germany, May, 2014.
335. K. T. Mandli, C. N. Dawson, "Computational Approaches to Forecasting Storm Surge", TUM Informatik-Kolloquium, Munich, Germany, May, 2014.
336. K. T. Mandli and C. N. Dawson, "Mathematical Modeling for Coastal Hazards (and Other ``Shallow'' Flows)", Seattle University Mathematics Colloquium, May 15, 2014.
337. K. T. Mandli and C. N. Dawson, "Numerically Forecasting Storm Surge", Iowa State University Mathematics Colloquium, April 21, 2014.
338. K. T. Mandli, I. Sraj, C. N. Dawson and I. Hoteit, "Polynomial Chaos for the Estimation of Manning's Based Friction", COMPSAFE 2014, Sendai, Japan, April 15, 2014
339. K. T. Mandli and C. N. Dawson, "Numerical Modeling for Tsunamis and Storm Surge", Texas A&M Oceanography Seminar, March 31, 2014
340. K. T. Mandli and C. N. Dawson, "Approaches to Forecasting Storm Surge More Quickly and Accurately", Columbia University Applied Mathematics Colloquium, March 6, 2014.
341. K. T. Mandli, M. Berger, and C. N. Dawson, "Parallel Strategies for Modeling Storm Surge With Adaptive Mesh Refinement", SIAM Parallel Processing, Portland OR, February, 2014
342. Butler, T., Estep, D., Tavener, S., Wildey, T., Dawson, C. and Graham, L., "Solving Stochastic Inverse Problems using Sigma-Algebras on Contour Maps," Rocky Mountain Workshop on Uncertainty Quantification, July 2014.
343. Dawson, C., "Long and short waves in shallow water," Institute for Mathematics and Its Applications Workshop on Impacts of Waves Along Coastlines, U. Minnesota, October 2014.
344. Mattis, S.A., Dawson, C. and Butler, T., "UQ and Decision Making for Groundwater Contamination: A Measure-Theoretic Approach," AGU Fall Meeting, 1, pp. 1026, December 2014.
345. Altaf, M.U., Raboudi, N., Gharamti, M.E., Dawson, C., McCabe, M.F. and Hoteit, I., "Hybrid vs Adaptive Ensemble Kalman Filtering for Storm Surge Forecasting," AGU Fall Meeting, 1, pp. 3352, December 2014.
346. Dawson, C., "Mathematics of the coastal ocean," Symposium on Mathematics of Planet Earth, Joint Mathematics Meeting, San Antonio, January, 2015.
347. Neupane, P. and Dawson, C.N., "A Runge-Kutta discontinuous Galerkin method for modeling storm-water flow in networks of drainage channels," SIAM Conference on Computational Science and Engineering, Salt Lake City, UT, March 2015.Mattis, S. and Dawson, C., ``Modeling Flow and Transport Through Idealized Coastal Vegetation.'' SIAM Conference on Computational Science and Engineering, Salt Lake City, UT, March 2015.
348. Mattis, S., Dawson, C., and Butler, T., ``A Scalable Measure-Theoretic Approach to the Stochastic Inverse Problem for Groundwater Contamination.'' SIAM Conference on Computational Science and Engineering, Salt Lake City, UT, March 2015.
349. Graham, L., Butler, T. and Dawson, C. "Adaptive Measure-Theoretic Inverse Techniques for High Dimensional Parameter Domains and Complex Multi-Scale Models," SIAM Conference on Computational Science and Engineering, Salt Lake City, UT, March 2015.
350. Graham, L., Mattis, S., Butler, T. and Dawson, C. "BET: Applications for an Open Source Inverse Problems Package," SIAM Conference on Computational Science and Engineering, Salt Lake City, UT, March 2015.
351. Dawson, C., "Can the Gulf Coast protect itself from hurricane storm surge," Frontiers in Computational Science Lecture, Louisiana State University, Baton Rouge, April 2015.
352. Dawson, C. and Neupane, P., "Discontinuous Galerkin methods for modeling surface water flow in watersheds," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Stanford, CA, June 2015.
353. Graham, L., Dawson, C.N., Butler, T. and Westerink, J. "Adaptive Measure-Theoretic Parameter Estimation for Coastal Ocean Modeling," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Stanford, CA, June 2015.
354. Michoski, C., Dawson, C.N., Kubatko, E., Alexanderian, A. and Paillet, C. "Stabilization in Runge-Kutta Methods for Nonlinear Geophysics," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Stanford, CA, June 2015.

355. Westerink, J., Brus, S., Wirasaet, D. and Dawson, C.N. "Aspects of Higher Order Discontinuous Galerkin Solutions to the Shallow Water Equations," SIAM Conference on Mathematical & Computational Issues in the Geosciences, June 2015.
356. Restrepo, J., Dawson, C.N. and Venkataramani, S. "An Ocean Oil Spill Model," SIAM Conference on Mathematical & Computational Issues in the Geosciences, Stanford, CA, June 2015.
357. Dawson, C., "Uncertainty in coastal ocean models," Rocky Mounty Workshop on Uncertainty Quantification, University of Colorado at Denver, Denver, July 2015.
358. Dawson, C., "Application of coupled hurricane wave and storm surge models in the Gulf of Mexico," U.S. National Congress on Computational Mechanics, San Diego, July 2015.Graham, L., Dawson, C.N., and Butler, T. "Measure-Theoretic Parameter Estimation for Hydrodynamic Models," 13th U.S. National Congress on Computational Mechanics, San Diego, CA, July 2015.
359. Dawson, C., Proft, J., Samii, A., Du, W., and Choudhary, G. "Algorithms and High-Performance Computing for Hurricane Mitigation Analysis," 13th U.S. National Congress on Computational Mechanics, San Diego, CA, July 2015.
360. Mattis, S., Dawson, C., and Butler, T., ``Uncertainty Quantification for Groundwater Contamination Using Measure Theory." 13th U.S. National Congress on Computational Mechanics, San Diego, CA, July 2015
361. Dawson, C., "Grand Challenges in Cyberinfrastructure for Interdisciplinary Research," Keynote Lecture, National Science Foundation Cyberbridges Workshop, Arlington, VA, August 2015.
362. Dawson, C., Westerink, J.J., Michoski, C. and Brus, S., "High Order Numerical Methods for Geophysical Fluid Flows on HPC Architectures," 96th American Meteorological Society Annual Meeting, New Orleans, LA, January 2016.
363. Westerink, J.J., Luettich, R. and Dawson, C., "Rationale for Large Domain High Resolution Unstructured Grids to Simulate Coastal Hydrodynamic Processes," 96th American Meteorological Society Annual Meeting, New Orleans, LA, January 2016.
364. Dawson, C., "Discontinuous Galerkin Shallow Water Models," 96th American Meteorological Society Annual Meeting, New Orleans, LA, January 2016.
365. J. C. Dietrich, A. Muhammad, M. Curcic, A. Fathi, C.N. Dawson, S. Chen, R.A. Luettich, "Sensitivity of storm surge predictions to atmospheric forcing during Hurricane Isaac (2012)," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa, Florida, February 2016.
366. A. Fathi, C. Dietrich, C. Dawson and K. Dresback, "Recent enhancements in the three-dimensional ADvanced CIRCulation (ADCIRC) model," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa, Florida, February 2016.
367. Proft, J. and Dawson, C., "Hurricane storm surge simulation via the finite element method," ALGORITMY 2016 Conference on Scientific Computing, Bratislava, Slovakia, March 2016.
368. Dawson, C., "Overview of the Advanced Circulation (ADCIRC) Model, Avoiding Disaster Conference: How to Reduce Impacts from the Next Big Storm," Severe Storm Prediction, Education and Evacuation from Disaster Center, Rice University, Houston, TX, April 2016.
369. Dawson, C., Butler, T., Mattis, S. and Graham, L., "A Measure-Theoretic Approach to Parameter Estimation," SIAM Conference on Uncertainty Quantification, Lausanne, Switzerland, April 2016.
370. Sripitana, A., Mayo, T., Sraj, I., Dawson, C., Knio, O., Le Maitre, O. and Hoteit, I., "Bayesian Inference of Manning's N Coefficient of a Storm Surge Model: An Ensemble Kalman Filter Vs. a Polynomial Chaos-Mcmc," SIAM Conference on Uncertainty Quantification, Lausanne, Switzerland, April 2016.
371. Dawson, C., "NHERI: Natural Hazards Engineering Research Infrastructure Designsafe Cyberinfrastructure," University of Washington, Seattle, WA, May 2016
372. Dawson, C., "Modeling Hurricane Storm Surge and Proposed Mitigation Systems in the Houston, TX Region," University of Washington, Seattle, WA, May 2016.
373. Mattis, S., Butler, T., and Dawson, C., "Error Estimation and Control for Stochastic Inversion of Groundwater Contamination Problems," European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016.

374. Michoski, C., Dawson, C., Bremer, M. and Samii, A., "Stabilizing/Optimizing Fluvial-Shallow Water Systems with Discontinuous Galerkin Methods," European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016.
375. Graham, L., Dawson, C. and Butler, T., "Measure-Theoretic Parameter Estimation for Hurricane Storm Surge," European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016.
376. Ait-El-Fquih, B., Raboudi, N., Knio, O., Dawson, C. and Hoteit, I., "Enhanced Ensemble Kalman Filtering with One-Step-Ahead-Smoothing," European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016.
377. Giraldi, L., Le Maitre, O., Knio, O., Dawson, C., Mandli, K. and Hoteit, I., "Bayesian Inference of Source Parameters for the Chile 2010 Tsunami," European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016.
378. Dawson, C., Mattis, S., Butler, T. and Graham, L., "Solution of Large-Scale Inverse Problems," European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016.
379. R. Cyriac, C. Dietrich, A. Fathi, C. Dawson, K. Dresback, M. Bilskie, S. Hagen, "Models for barotropic and baroclinic circulation in the Choctawhatchee Bay and River System" Estuarine and Coastal Modeling Conference, Kingston, Rhode Island, June 2016.
380. Proft, J. and Dawson, C., "Influence of Storm Characteristics on Hurricane Surge," Computational Methods for Water Resources, University of Toronto, Canada, June 2016.
381. Dietrich, C., Thomas, A. and Dawson, C., "Improved Efficiency for Wave and Surge Models via Adaptive Domain Decomposition," Computational Methods for Water Resources, University of Toronto, Canada, June 2016.
382. Dawson, C. and Samii, A., "Hybrid Discontinuous Galerkin Methods for Shallow Water Wave Models," Computational Methods for Water Resources, University of Toronto, Canada, June 2016.
383. Proft, J. and Dawson, C., "Improved multi-scale characterization of hurricane storm surge," SIAM Annual Meeting, Boston, MA, July 2016.
384. Dawson, C., "Parameter estimation for some geoscience applications using a measure-theoretic approach," Frontiers in Geosciences Speaker Series, Los Alamos National Laboratory, NM, August, 2016.
385. Dawson, C., "Evaluation of coastal protection systems for hurricane storm surge," SIAM Mathematics of Planet Earth Conference, Philadelphia, PA, September 2016.
386. Dawson, C., "Modeling hurricane storm surge and proposed mitigation systems for floods in the Texas coast," Texas Tech University, Lubbock, TX, November 2016.
387. Dawson, C., "Parameter estimation for some geoscience applications using a measure-theoretic approach," American Geophysical Union, San Francisco, December, 2016.
388. Dawson, C., "Modeling hurricane storm surge and proposed mitigation systems for floods in the Texas coast," Texas Weather Conference (Keynote), Austin, TX., March 2017.
389. Dawson, C., "Hybridized discontinuous Galerkin method for nonlinear dispersive water waves," SIAM Computational Science and Engineering, Atlanta, GA, March 2017.
390. Dawson, C., "Natural Hazards Engineering Research Infrastructure DesignSafe CI," ADCIRC Users Group, Boston, MA, May, 2017.
391. Dawson, C., "Hybrid discontinuous Galerkin methods for Serre-Green-Naghdi water wave models," Institute for Mathematics and Its Applications, July, 2017.
392. Pushkar Kumar Jain, Kyle Mandli, Ibrahim Hoteit, Omar Knio, Clint Dawson, "Dynamically Adaptive Data-driven Simulation of Extreme Hydrological Flows", 16th IMUM, Stanford University; August 2017.
393. Pushkar Kumar Jain, Kyle Mandli, Ibrahim Hoteit, Omar Knio, Clint Dawson, "*Dynamically Adaptive Data-driven Simulation of Extreme Hydrological Flows*", Clifford Lectures 2017, Tulane University; April 8 2017.
394. Gajanan Choudhary, Corey Trahan, Lucas Pettey, Matthew Farthing, and Clint Dawson, "Algebraic coupling of 2D and 3D shallow water finite element models, " 16th IMUM, Stanford University, August 2017.

395. C. Michoski, R. Moser, C. Dawson, C. Simmons and V. Carey, "Scaling at Exascale in Blended Isogeometric, Discontinuous Galerkin and PIC Approaches, SIAM Conference on Computational Science and Engineering, Atlanta, GA, February 2017.
396. M. Bremer, C. Dawson, Z. Byerly, H. Kaiser, C. Michoski, A. Schafer, "Application of High Performance ParallelX (HPX) for High Performance Computing of Hurricane Storm Surge", American Meteorological Society Annual Meeting, 3rd Symposium on HPC for Weather, Water, and Climate. Seattle, WA, Jan 2017.
397. (Poster) M. Bremer, C. Michoski, Z. Byerly, H. Kaiser, C. Dawson, "Performance Comparison of HPX vs. OCCA for the Discontinuous Galerkin Finite Element Method on Knights Landing Chips", DOE Computational Science Graduate Fellowship Annual Program Review. Arlington, VA, July 2017.
398. M. Bremer, C. Michoski, Z. Byerly, H. Kaiser and C. Dawson, "Optimizing discontinuous Galerkin finite element kernels on Knights Landing chips," Texas Applied Matheamtics and Engineering Symposium, Austin, TX, September 2017.
399. M. Bremer, Z. Byerly, H. Kaiser, C. Michoski and C. Dawson, "Performance comparison of HPX versus traditional parallelization methods for finite element models of environmental flows," American Meteorological Society Annual Meeting, Austin, TX, January 2018.
400. M. Bremer, K. Kazhyken, H. Kaiser, C. Michoski, and C. Dawson, "Task-based parallelism for finite-element models of shallow water flows," World Congress on Computational Mechanics, New York, NY, July 2018.
401. C. Dawson, "Parameter estimation for some geoscience applications using a measure-theoretic approach," SIAM Conference on Mathematical and Computational Issues in the Geosciences, Erlangen, Germany, September, 2017.
402. C. Dawson, "Resilient and sustainable coasts: How mathematics plays a role," American Association for the Advancement of Science Annual Meeting, Austin, TX, February 2018.
403. C. Dawson, "Forecasting and predictive simulation for coastal ocean processes," World Congress on Computational Mechanics, New York, NY, July 2018.
404. C. Dawson, "Some HPC Challenges in Coastal Modeling," National Science Foundation Workshop on the Future of Coastal and Estuarine Modeling, Raleigh, NC, June 2018.
405. C. Dawson, "Algorithms for hurricane storm surge modeling: Current state and future outlook," (keynote) SIAM South East Atlantic Section Annual Meeting, University of North Carolina, Chapel Hill, NC, March 2018.
406. C. Dawson, "Parameter estimation for some geoscience applications using a measure-theoretic approach," Department of Energy Resources Engineering Colloquium, February, 2018.
407. C. Dawson, "HPC and algorithms for hurricane storm surge modeling," Conference on High Performance Scientific Computing, Hanoi, Vietnam, March 2018.
408. C. Dawson, "High performance computing and algorithms for hurricane storm surge modeling," Department of Applied Mathematics Colloquium, Columbia University, New York, NY, October 2017.
409. (Poster) C. Dawson, "Natural Hazards Research Engineering Infrastructure DesignSafe-CI," American Geophysical Union, New Orleans, LA, December, 2017.
410. C. Dawson, "Storm surge forecasting and impacts from Harvey," Urban Flooding and Infrastructure Conference: Moving Forward from Harvey, Rice University, February 2018.
411. C. Dawson, "Algorithms for hurricane storm surge modeling: Current state and future outlook," Van Tuyl Lecture, Colorado School of Mines, April 2018.
412. C. Dawson, "Uncertainty quantification in fractured reservoirs using the consistent Bayes approach," SIAM Conference on Uncertainty Quantification, Anaheim, CA, April 2018.

Formatted: Indent: Left: 0.25", No bullets or numbering

CURRENT RESEARCH TOPICS

Numerical methods for flow and transport through porous media.
Numerical methods for shallow water systems.
Compressible flows.

High performance computing
Hurricane storm surge modeling
Data assimilation and parameter and state estimation for complex systems
Large Eddy Simulation
Saltwater Intrusion and Density Driven Flow Modeling
Coastal Ocean Modeling
Geomorphology

GRANTS AND CONTRACTS

1. "National Science Foundation Postdoctoral Fellowship," National Science Foundation, $74,500, 8/88-1990.
2. Center for Subsurface Modeling, Industrial Affiliates Program, with T. Arbogast and M. F. Wheeler, $175,000, 6/91 - 8/96.
3. "Domain Decomposition for Time-Dependent Problems," National Science Foundation, $21,000, 9/91 - 9/92.
4. "Partnership in Computational Science (PICS)," Department of Energy, with T. Arbogast and M. F. Wheeler, $1,066,666, 5/92 - 9/97.
5. "Numerical Analysis and Algorithm Design," Batelle-Pacific Northwest Laboratory, with T. Arbogast and M. F. Wheeler, $125,000, 5/92 - 12/96.
6. "Parallel Algorithms for Surface Water Flow and Transport," National Science Foundation, with M. F. Wheeler, W. G. Gray (Notre Dame), R. Glowinski (U. of Houston), and B. Ramaswamy (University of California at Santa Barbara), $140,000, 8/94 - 8/98.
7. Industrial Postdoctoral Fellowship, NSF-British Petroleum, with M. F. Wheeler, $111,000, 6/95 - 6/97.
8. "Development of a Data Evaluation/Decision Support System for Remediation of Subsurface Contamination," Environmental Protection Agency, Kerr Laboratories, $11,904, 8/95 - 9/95.
9. "Advanced Computational Technology Initiative - Development of New Generation Reservoir Simulator," Department of Energy, with T. Arbogast, D. McKinney, G. Pope, K. Sepehrnoori and M. F. Wheeler, $144,625, 9/95 - 9/97.
10. "Performance Evaluation and Training in Environmental Quality Modeling," Department of Defense, with M. F. Wheeler, $161,000, 9/96-3/98.
11. Center for Subsurface Modeling, Industrial Affiliates Program, with T. Arbogast and M. F. Wheeler, $40,000, 9/96-9/97.
12. Center for Subsurface Modeling, Industrial Affiliates Program, with T. Arbogast, S. Bryant and M. F. Wheeler, $33,750, 9/97-8/98.
13. "Performance Evaluation and Training in Environmental Quality Modeling," Department of Defense, with M. F. Wheeler, $131,120, 4/98-3/99.
14. Texas Water Development Board, with M.F. Wheeler, $10,000, 8/98-10/99
15. Center for Subsurface Modeling, Industrial Affiliates Program, with T. Arbogast, S. Bryant and M. F. Wheeler, $33,750, 9/98-8/99.
16. "Multi Scale Physics-based Simulations of Fluid Flow for Energy & Environmental Applications," National Science Foundation, with T. Arbogast, S. Bryant, M. F. Wheeler, and C. Bajaj $340,000, 10/98-9/02
17. "A Posteriori Error Estimates for Discontinuous Finite Element Methods Applied to Problems in Geosciences & Medicine," National Science Foundation, $155,000, 10/98-9/02.
18. "Performance Evaluation and Training in Environmental Quality Modeling," Department of Defense High Performance Computing Modernization Program, $131,638 (total with M. F. Wheeler, $434,916), 4/99-4/2000.
19. Center for Subsurface Modeling, Industrial Affiliates Program, with T. Arbogast and M.F. Wheeler, $120,000, 1999.
20. "Modeling Texas Bays & Estuaries", Texas Water Development Board, $15,000, with M.F. Wheeler, 8/99-10/00.
21. "Simulation of Corpus Christi Bay", Texas Water Development Board, $22,000, 5/00- 8/01.

22. "Performance Evaluation and Training in Environmental Quality Modeling," Department of Defense High Performance Computing Modernization Program, $178,318 (total with M. F. Wheeler, $534,956), 9/00-10/2001.
23. "Modeling Texas Bays & Estuaries", Texas Water Development Board, $15,000, 9/00-9/01.
24. Center for Subsurface Modeling, Industrial Affiliates Program, $45,000 (total with T. Arbogast and M.F. Wheeler, $135,000), 9/00-9/01.
25. "Modifications of the ADCIRC-NO Hurricane Model," University of Notre Dame, $110,000, 9/00-9/01.
26. "ITR/AP & IM Data Challenge: The Instrumented Oilfield of the Future," National Science Foundation, $121,250 (total with M.F. Wheeler, M. Peszynska and M. Sen, $485,001), 9/01-9/02.
27. "Performance Evaluation and Training," Department of Defense, $179,210 (total with M. F. Wheeler, $537,630), 9/01-9/02.
28. "Adaptive Multi-Numeric Finite Element Methods for Shallow Water Flow," National Science Foundation, $169,888, 9/01-9/05.
29. "Enhancements to the Texas Water Development Board Model TxBLEND, Texas Water Development Board, $20,000, 8/1/03 - 8/31/04.
30. "ITR/AP & IM Data Challenge: The Instrumented Oilfield of the Future," National Science Foundation, $121,250 (total with M.F. Wheeler, and M. Sen, $485,001), 9/03-9/05.
31. "Performance Evaluation and Training," Department of Defense, $105,332 (total with M. F. Wheeler, $587,000), 9/03-5/04.
32. "Numerical Modeling of Coupled Ground and Surface Water Flow and Transport," National Science Foundation, $200,000 (total with M.F. Wheeler $400,000), 9/1/04-9/1/08.
33. "ITR Collaborative Research: Data Driven Simulation of the Subsurface: Optimization and Uncertainty Estimation," National Science Foundation, $138,800 (total with M.F. Wheeler, P. Stoffa, H. Klie and M. Sen $694,002), 9/1/04-9/1/07.
34. "Discretizations and Splitting Methods for Radiation-Diffusion and Compressible Flows," Dept. of Energy, $34,923, 6/1/04-8/31/04.
35. "DG Based Circulation and Transport Models," Dept. of Defense PET Program, $101,529, 6/1/05 – 5/31/06.
36. "Waves and Circulation on Unstructured Grids," Office of Naval Research (subcontract through University of Notre Dame), $134,100, 12/12/05 – 12/31/09.
37. "Improvements to the UTBEST Hydrodynamics Model," Texas Water Development Board, $23,000, 9/1/05 – 12/31/06.
38. "Unstructured Grid Flow and Transport Models," Department of Defense PET Program, $100,000 (total with M. F. Wheeler, $200,000), 6/1/06 – 5/31/08.
39. "Discretizations and Splitting Methods for Radiation-Diffusion Problems," Department of Energy (subcontract through Lawrence Livermore National Laboratory), $25,311, 7/23/06 – 8/31/06.
40. "Unstructured Grid Flow and Transport Models," Department of Defense PET Program, $187,500 (with M.F. Wheeler), 6/1/07-5/31/08.
41. "Adaptive Numerical Methods for Shallow Water Circulation with Applications to Hurricane Storm Surge Modeling," National Science Foundation, $225,000, 9/1/06-8/31/10.
42. "Improvements to the UTBEST Hydrodynamic Model," Texas Water Development Board, $25,000, 9/1/06-8/31/07.
43. "The Empowering Leadership Alliance," National Science Foundation (subcontract through Rice University), $120,000, 3/1/07-3/1/11.
44. "Unstructured Grid Flow and Transport Models," Department of Defense PET Program, $188,500 (with M.F. Wheeler), 6/1/08-5/31/09.
45. "Hydrodynamic Model Improvements," Texas Water Development Board, $20,000, 1/1/08-12/31/08.
46. "Collaborative Research NSF PetaApps: Storm Surge Modeling on Petascale Computers," National Science Foundation, $769,000, 10/1/07-9/30/12.
47. "Advanced Modeling, Methodology and Algorithms Targeting Open Problems in Coastal Processes and Navigation," Department of Defense US Army Corps of Engineers, $100,000, 8/1/08-7/31/11.
48. "FEMA/USACE Texas Coastal Flood Map Study," Federal Emergency Management Agency (subcontract through U. of Notre Dame), $45,000, 1/1/08-12/31/08.

49. "Academic Excellence Alliance," King Abdullah University of Science and Technology, $32,500, 6/1/08-5/31/10.
50. "Large-Scale Optimization for Bayesian Inference in Complex Systems," Department of Energy, $450,928 (with O. Ghattas), 8/15/08-8/14/11.
51. "Hydrodynamic Model Improvements," Texas Water Development Board, $30,000, 1/1/09-8/31/10.
52. "Iterative Representer Based Schemes for Multiphase Flow," KAUST U.S. Limited, $100,000, 8/15/08-1/15/10.
53. "SSPEED Center," Houston Endowment (through Rice University) (with G. Wells), $75,000, 6/1/09-5/31/11.
54. "FEMA/USACE Texas Coastal Flood Map Study," Federal Emergency Management Agency (subcontract through U. of Notre Dame), $44,000, 12/1/09-5/31/10.
55. "Collaborative Research: Computational Methods for Coupled Wave, Current, Sediment Transport and Morphological Evolution," National Science Foundation, $270,000, 9/1/09-8/31/12.
56. "BPC-AE: Collaborative Research; Strengthening and Expanding the Empowering Leadership Alliance," $140,000, National Science Foundation, 2/1/10-1/31/12.
57. "Saltwater Intrusion and Density Driven Flow Modeling in ADH," $66,000, Department of Defense PETTT Program, 3/1/10-8/31/10.
58. "Numerical Methods and Computational Science for Modeling Waves, Currents, Sediment Transport and Bed Morphology," $191,272, Department of Defense, 4/1/10-4/30/11.
59. "Extension of the ADCIRC Model for Simulating the Deepwater Horizon Oilspill," $40,000, NSF RAPID, Office of Cyberinfrastructure, 6/1/10-5/31/11.
60. "Extension of the ADCIRC Model for Simulating the Deepwater Horizon Oilspill," (with G. Wells), $50,000, Department of Homeland Security, subcontract through University of North Carolina-Chapel Hill, 8/1/10-7/31/11.
61. "Saltwater Intrusion and Density Driven Flow Modeling in ADH," $75,000, Department of Defense PETTT Program, 2/1/11-8/31/11.
62. "Nonlinear Filtering for Hurricane Storm Surge Forecasting," $160,000, KAUST Academic Excellence Alliance, 5/1/10-4/30/11.
63. "Hydrodynamic Model Improvements," Texas Water Development Board, $30,000, 9/1/10-8/31/12.
64. "CMG Collaborative Research: Simulation of Wave-Current Interaction Using Novel, Coupled Non-Phase and Phase Resolving Wave and Current Models," National Science Foundation, $159,972, 10/1/10-9/30/14.
65. "The Severe Storms Prediction, Education and Evacuation from Disasters Center," Houston Endowment (subcontract through Rice University), $200,002, 6/1/11-7/31/14.
66. "State/Parameter Estimation and Uncertainty Quantification for Advanced Predictive Models of Extreme Events in the Coastal Ocean," KAUST Academic Excellence Alliance, $518,031, 9/1/11-8/31/14.
67. "The Consortium for Advanced Research on Transport of Hydrocarbons in the Environment," Gulf of Mexico Research Initiative, $540,000, 10/1/11-12/31/14.
68. "Parallelization of the PT123 particle tracking engine for mixed Eulerian-Lagrangian methods, " Department of Defense PETTT Program, 112,084, 9/1/12-8/31/13.
69. "Collaborative Research: Data-driven Inverse Sensitivity Analysis for Predictive Coastal Ocean Modeling," National Science Foundation, $249,398, 9/1/12-8/31/16.
70. **"**Collaborative Research: Computational methods for complex coastal watersheds," National Science Foundation, $165,000, 9/1/12-8/31/16.
71. "Advanced numerical methods and software infrastructure for multiscale processes in coastal hydrology," Department of Defense/Army, $643,828, 12/6/12-12/5/15.
72. "DIAMOND: An Integrated Multifaceted Approach to Mathematics at the Interfaces of Data, Models, and Decisions," PI Omar Ghattas, Department of Energy, $858,208, 12/15/12-02/14/17
73. "Numerical Upscaling of Flow and Transport Through Obstructed Regions over a Broad Ranger of Reynolds Numbers," Department of Defense/Army, $300,000, 4/1/13-3/31/16.
74. "PETTT Strategic Planning," Department of Defense PETTT Program, $10,000, 11/19/12-8/31/13.
75. "Improvement of Salinity Transport Algorithms in Hydrodynamic Modeling Applications to Texas Estuaries," Texas Water Development Board, $60,000, 1/1/13-12/31/14.
76. "Adaptive Hydraulics Shallow Water 3d Verification and Validation," Department of Defense PETTT Program, $60,300, 10/1/13-8/31/14.
77. "SSPEED Center Funding for Gate Design and Coastal Resiliency," Rice University/Houston Endowment, Inc., $249,000, 6/1/14-03/31/17.
78. "Coastal Impacts Assistance Program: Hurricane Ike Wave Height Breakwater Island Project," Houston Advanced Research Center, $132,146, 3/1/14-12/31/14.

79. "UTMB Pilot Project," (Co-PI; Gordon Wells PI), University of Texas System, $24,000, 3/1/14-4/1/15.
80. "Parallel Meteorological Input Library Development," Department of Defense PETTT Program, $120,000, 9/1/14-8/31/15.
81. "SI2-SSI: Collaborative Research: STORM: a Scalable Toolkit for an Open community supporting near Realtime, high resolution coastal Modeling," National Science Foundation (subcontract through Louisiana State University), $540,012, 10/1/2014-9/30/2018.
82. "Consortium for Advanced Research on Hydrocarbon Transport in the Environment (CARTHE II)," University of Miami/British Petroleum, $447,086, 1/1/2015-12/31/2017.
83. "Dynamically Adaptive Data-driven Simulation and Uncertainty of Coastal Flows," King Abdullah University of Science and Technology (KAUST), $339,889, 3/1/2015-2/28/2018.
84. "Improved Coupling of Multiscale Computational Models within the Adaptive Hydraulics (AdH) Framework," Department of Defense PETTT Program, $367,605, 9/1/2015-8/31/2017.
85. "Collaborative Research: Numerical and Probabilistic Modeling of Aboveground Storage Tanks Subjected to Multi-Hazard Storm Events," National Science Foundation, $240,000, 08/15/16-07/31/19.
86. "Improving the Efficiency of Wave and Surge Models via Adaptive Mesh Resolution," University of North Carolina at Chapel Hill/Department of Homeland Security, $150,000, 01/01/16-12/31/17.
87. "Natural Hazards Engineering Research Infrastructure: Cyberinfrastructure," PI Ellen Rathje, National Science Foundation, $3,240,043, 07/01/2015-06/30/2020.

ADDITIONAL TEACHING ACTIVITIES:

"Spend a Summer with a Scientist Program," (funded through the National Science Foundation), Rice University, 1991, 1992, 1995.
"POSSE Minority Engineers Program," mentor for two undergraduates, Rice University, 1994-95.
"ASE Undergraduate Research Supervision", Betty Quintanilla, Spring 1997.
"Research Experience for Undergraduates," University of Texas at Austin, Summer, 2002.

Ph. D. SUPERVISIONS COMPLETED (UT Austin):

1. Kirby, R., 2000, "Local Time Stepping and A Posteriori Error Estimates for Flow and Transport in Porous Media."
2. Proft, J., 2002, "Multi-algorithmic Numerical Solution Strategies for the Solution of Shallow Water Models."
3. Aizinger, V., 2003, "A Discontinuous Galerkin Method for Two and Three Dimensional Shallow Water Equations."
4. Ahn, Hyung, 2005, "A New Incompressible Navier-Stokes Method with General Hybrid Meshes and Its Application to Flow/Structure Interaction."
5. Liu, Ruijie, 2004, "Discontinuous Galerkin Finite Element Solution for Poromechanics" (with M. F. Wheeler)
6. Baird, J., Summer 2006, "Numerical Analysis of the Representer Method Applied to Reservoir Modeling."
7. Iglesias-Hernandez, Marco, August 2008, "An Iterative Representer-Based Scheme for Data Inversion in Reservoir Modeling."
8. Santillana, Mauricio, August 2008, "Analysis and Numerical Simulation of the Diffusive Wave Approximation of the Shallow Water Equations."
9. Mirabito, Chris, August, 2011, "Analysis, Implementation, and Verification of a Discontinuous Galerkin Method for Prediction of Storm Surges and Coastal Deformation."
10. Povich, Timothy, December 2012, "Discontinuous Galerkin (DG) Methods for Variable Density Groundwater Flow and Solute Transport."
11. Mattis, Steve, August 2013, "Mathematical Modeling of Flow through Vegetated Regions."
12. Meixner, Jessica, August 2013, "Discontinuous Galerkin Methods for Spectral Wave/Circulation Modeling."
13. Mayo, Talea, December 2013, "Data Assimilation for Parameter Estimation in Coastal Ocean Hydrodynamics Modeling."
14. Panda, Nishant, May 2014, "Discontinuous Galerkin Methods for Resolving Nonlinear and Dispersive Nearshore Waves."

15. Graham, Lindley, August 2015, "Adaptive Measure-Theoretic Parameter Estimation for Coastal Ocean Modeling."
16. Arabshahi, Hamidreza, August 2016, "Hybrid discontinuous Galerkin methods for shallow water equations,"
17. Neupane, Prapti, August 2016, "Advances towards a multi-dimensional discontinuous Galerkin method for modeling hurricane storm surge induced flooding in coastal watersheds."
18. Du, Wei, December 2016, "Mathematical modeling of two-phase environmental flow and hydraulic structure interaction."
19. Samii, Ali, February 2017, "A hybridized discontinuous Galerkin method for nonlinear dispersive water waves."
20. Jain, Pushkar Kumar, June 2018, "Dynamically adaptive data-driven simulation of extreme hydrologic flows."

M. S. SUPERVISIONS COMPLETED (Thesis only--UT Austin):

1. Proft, Jennifer, 1999, "Adaptive stencil and discontinuous Galerkin methods for transport equations on triangular grids"
2. Pothina, Dharhas, 2002, "A coupled discontinuous/continuous finite element method for hydrodynamic simulations using the shallow water equations."
3. Goya, Anshul, 2016, "Parallel computing for multiscale finite element methods for subsurface flows."

Ph. D. SUPERVISION IN PROGRESS

Chen, Chen
Choudhary, Gajanan
He, Jiachuan
Jain, Pushkar Kumar
Lin, Yuxiang
Estes, Samuel
Bremer, Max
Kazhyken, Kazbek
Li, Wei

M. S. SUPERVISION IN PROGRESS

OTHER RESEARCH SUPERVISION

Keenan, Phil, NSF Postdoctoral Fellow, (with M. F. Wheeler), Rice University, 1993 - 1996.
Minkoff, Sue, NSF Industrial Post-Doctoral Fellow, (with M. F. Wheeler), BP/Rice University, 1995-1997.
Chippada, Srinivas, Research Scientist, (with M. F. Wheeler), 1995-98.
Martinez, Monica, Research Scientist, (with M. F. Wheeler), 1997-98.
Aksoylu, Burak, ICES Postdoctoral Fellow, 2003-05
Kubatko, Ethan, ICES Postdoctoral Fellow, 2006-2008
Trahan, Corey, Postdoctoral Fellow, 2008-2011.
Rodriguez, Joaquin, REU, Spring 2009
Muhammad, Adnan, REU, Summer 2009
Zanello, Francesa, visiting Ph.D. student, 2009-2010.
Fitch, Ruben, REU and McNair Fellow, Spring and Summer, 2011.
Butler, Troy, ICES Postdoctoral Fellow and Research Assistant, August 2009—July 2012.
Proft, Jennifer, Research Associate, 2007-present
Michoski, Craig, Research Associate, 2009—2015.
Dietrich, Casey, ICES Postdoctoral Fellow and Research Assistant, November 2010—August 2013.
Mandli, Kyle, ICES Postdoctoral Fellow, 2011—2014.
Mattis, Steve, Postdoctoral Fellow, 2013—2016.
Terrel, Andy, Research Scientist, 2013.
Presho, Michael, Postdoctoral Fellow, 2014—2016.

Deleted: Anshul

Deleted: Du, Wei¶

Deleted: Neupane, Prapti¶

Deleted: ~~Wei, Maya~~¶

Fathi, Arash, Postdoctoral Fellow, 2015—2017.
Samii, Ali, Postdoctoral Fellow, 2017—present.
Poursartip, Babak, Postdoctoral Fellow, 2018—present.
Supervised REU Students Jack Gaither and Nilo Espinoza for DesignSafe-CI, University of Texas at Austin, Summer 2018.
Supervised Moncrief Research Intern Mark Loveland, Institute for Computational Engineering and Sciences, Summer 2018.

Clint Dawson, Professor
The University of Texas at Austin
Department of Aerospace Engineering
and Engineering Mechanics

Clint Dawson is the John J. McKetta Centennial Energy Chair in Engineering and Professor in the Department of Aerospace Engineering and Engineering Mechanics, and a member of the Institute for Computational Engineering and Sciences. He received Bachelor of Arts and Master of Science degrees in mathematics from Texas Tech University in 1982 and 1984, respectively. He received his Ph.D. from Rice University in 1988 in mathematical sciences. From 1988-90 he was a National Science Foundation Postdoctoral Fellow and Dickson Instructor in the Department of Mathematics at the University of Chicago. In 1990 he returned to Rice as an assistant professor in the Department of Computational and Applied Mathematics. He was promoted to associate professor in 1994 and moved to the University of Texas in 1995. He was promoted to full professor in 2000. He was named the Edward S. Hyman Endowed Chair in Engineering in 2011 and received the John J. McKetta Centennial Energy Chair in Engineering in 2014.

Dr. Dawson has authored or co-authored over 200 technical articles in the areas of numerical analysis, numerical methods and parallel computing, with applications to flow and transport in porous media, and shallow water systems. In 2001, he was elected Chair of the Society for Industrial and Applied Mathematics Activity Group on Geosciences, and has served on numerous conference organizing committees and review panels. He has served on numerous editorial boards, and is currently managing editor of *Computational Geosciences*. In 2011, he was given the Institute for Computational Engineering and Sciences Distinguished Research Excellence Award. He received the Society for Industrial and Applied Mathematics Geosciences Career Prize in 2013. He was named a Fellow of the Society for Industrial and Applied Mathematics in 2016.