

ALEXANDER H.-D. CHENG

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EDUCATION

- Ph.D.** 1981 School of Civil and Environmental Engineering, CORNELL UNIVERSITY
M.S. 1978 Department of Civil Engineering, UNIVERSITY OF MISSOURI—COLUMBIA
B.S. 1974 Department of Civil Engineering, NATIONAL TAIWAN UNIVERSITY
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ACADEMIC POSITIONS

- Professor and Chair**, 2001–present, Department of Civil Engineering,
UNIVERSITY OF MISSISSIPPI
Professor, 1993–2001, Department of Civil and Environmental Engineering,
UNIVERSITY OF DELAWARE
Associate Professor, 1985–93 (tenured 1987), Department of Civil and Environmental Engineering,
UNIVERSITY OF DELAWARE
Assistant Professor, 1982–85, Department of Civil Engineering and Engineering Mechanics,
COLUMBIA UNIVERSITY
Acting Assistant Professor, 1981–82, School of Civil and Environmental Engineering,
CORNELL UNIVERSITY
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OTHER APPOINTMENTS

- Board of Directors**, WESSEX INSTITUTE OF TECHNOLOGY, Southampton, UK, 2005–
Fellow, WESSEX INSTITUTE OF TECHNOLOGY, Southampton, UK, 2001–
Adjunct Professor, WESSEX INSTITUTE OF TECHNOLOGY, Southampton, UK, 2005–
Honorary Professor, Department of Engineering, KINGS COLLEGE, UNIVERSITY OF ABERDEEN,
Scotland, UK, 2001–
Consulting Professor, WUHAN UNIVERSITY OF HYDRAULIC AND ELECTRIC ENGINEERING,
Wuhan, China, 1997–2001.
National Science Council Visiting Researcher, NATIONAL TAIWAN UNIVERSITY, Taipei,
Taiwan, 1998–99. (Sabbatical)
Visiting Scientist, SCHLUMBERGER CAMBRIDGE RESEARCH, Cambridge, UK, 1991. (Sabbatical)
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EDITORSHIP

- Editor-in-Chief**, PROGRESS IN WATER RESOURCES (Book Series), WIT Press, 1997–
Editor, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS (Journal), Elsevier, 1996–
Associate Editor, JOURNAL OF ENGINEERING MECHANICS, ASCE, 1998-2000, 2002–04
Associate Editor, ADVANCES IN BOUNDARY ELEMENTS (Book Series), WIT Press, 1996–

Guest Editor, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, 6 special issues.

Guest Editor, INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, 1 special issue.

Guest Editor, INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, 1 special issue.

Guest Editor, JOURNAL OF THE CHINESE INSTITUTE OF ENGINEERS, 3 special issues.

Guest Editor, TRANSPORT IN POROUS MEDIA, 1 special issue.

Guest Editor, JOURNAL OF ENGINEERING MECHANICS, ASCE, 1 special issue

Editorial Board, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Elsevier, 1991–96.

Editorial Board, JOURNAL OF THE CHINESE INSTITUTE OF ENGINEERS, 2002–

Editorial Board, OPEN MECHANICS JOURNAL, 2007–

Editorial Board, COMPUTATIONAL ENGINEERING (Book Series), Elsevier/WIT Press, 1991–

Editor, INTERNATIONAL ASSOCIATION FOR BOUNDARY ELEMENT METHODS NEWSLETTER, 1990–94.

AWARDS AND HONORS

1994 **Walter L. Huber Civil Engineering Research Prize**, American Society of Civil Engineers, “*For research on poroelasticity, groundwater flow, and the boundary element method*”

1994, 1999 **Basic Research Award**, U.S. National Committee for Rock Mechanics, National Research Council, “*For significant, original contribution*”

2001 **Eminent Scientist Award**, Wessex Institute of Technology, U.K., “*In recognition for his contribution to boundary element research*”

2004 **Faculty Service Award**, School of Engineering, University of Mississippi, “*For outstanding performance in service*”

2007 **Outstanding Engineering Faculty Member of the Year**, University of Mississippi Alumni Association.

PROFESSIONAL CERTIFICATION

Registered Professional Hydrogeologist—Ground Water, Certificate No. 95-HGW-1086, American Institute of Hydrology, 1995–

WHO'S WHO CITATIONS

Who's Who in the World, Marquis

Who's Who in America, Marquis

Who's Who in the East, Marquis

Who's Who in the South and Southwest

Who's Who in Science and Engineering, Marquis

Who's Who in American Education, Marquis

American Men and Women of Science, R.R. Bowker

Who's Who in Engineering, American Association of Engineering Societies

Who's Who in Technology, Gale Research Inc.

Who's Who Among Asian Americans, Gale Research Inc.

PROFESSIONAL SOCIETY OFFICES

Engineering Mechanics Institute, American Society of Civil Engineers:

- Governing Board, *Vice President*, 2007–
- Awards Committee: *Member*, 2007–

American Society of Civil Engineers, Engineering Mechanics Division:

- Executive Committee, *Chair*, 2005–06, *Vice Chair*, 2003–05, *Secretary*, 2002–03, *Member*, 2001–07.
- Task Committee on the Development of Engineering Mechanics Institute, *Chair*, 2006, *Member*, 2006–07.
- Advisory Committee, *Member*, 2006–07.
- Poromechanics Committee, (*Founding*) *Chair*, 2002–04, *Member*, 2002–07.
- Fluids Committee, *Chair*, 1998–2000, *Vice Chair*, 1997–98, *Member*, 1995–07.

American Institute of Hydrology: *Vice President for Academic Affairs and Executive Committee Member*, 2003–2004.

American Society of Civil Engineers, Irrigation and Drainage Division: *Member*, Groundwater Committee, 1991–98.

Universities Council on Water Resources: *Institution Delegate*, 1999–2001.

International Association for Boundary Element Methods: *Founding Recording Secretary and Executive Committee Member*, 1990–92, *Member*, 1990–96.

International Association of Hydrogeologists: *Member*, Commission on Coastal Aquifer Dynamics and Coastal Zone Management, 2003–

International Union of Geodesy and Geophysics/International Association of Hydrological Sciences: *Member*, Joint Commission on Groundwater-Seawater Interactions, 2003–

CONFERENCES FOUNDED

1998 **Founder.** The First Biot Conference on Poromechanics, Université catholique de Louvain, Belgium, 1998, with J.-F. Thimus, E. Detournay, Y. Abousleiman, and O. Coussy. 2nd Conference, Université Joseph Fourier, Grenoble, France, 2002. 3rd Conference, University of Oklahoma, Norman, Oklahoma, USA, 2005. 4th Conference, Columbia University, New York, USA, 2009.

2001 **Founder.** The First International Conference and Workshop on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, Essaouira, Morocco, 2001, with D. Ouazar, J. Bear, L. Konikow, C.I. Voss, and G. Barrocu. 2nd Conference, Merida, Mexico, 2003. 3rd Conference, Cagliari-Chia Laguna, Italy, 2006. 4th Conference, Naples, Florida, USA, 2008.

CONFERENCES CHAIRED

- 1990 **Conference Chair**, The Fifth International Conference on Boundary Element Technology, University of Delaware, Newark, Delaware, July 10–12, with C.A. Brebbia and S. Grilli.
- 1995 **Conference Chair**, The Third International Conference on Computer Methods and Water Resources, Beirut, Lebanon, September 25–28, with Y. Abousleiman, C.A. Brebbia, and D. Ouazar.
- 1997 **Conference Co-Chair**, The Fourth International Conference on Computer Methods and Water Resources, Byblos, Lebanon, June 16–18, with Y. Abousleiman and C.A. Brebbia (Conference Chairs), R. Ghanem and D. Ouazar (Co-Chairs).
- 2001 **Conference Chair**, The First International Conference on Water Resources Management, Halkidiki, Greece, September 24–26, with C.A. Brebbia, P. Anagnostopoulos, and K. Katsifarakis.
- 2005 **Conference Co-Chair**, The Third Biot Conference on Poromechanics, May 24–27, University of Oklahoma, with Y. Abousleiman (Conference Chair) and F. Ulm (Co-Chair).
- 2007 **Conference Technical Co-Chair**, Mid-South Area Engineering and Sciences Conference, May 17–18, Oxford, Mississippi, with K.-F. Lee (Conference Chair) and A. Elsherbeni (Technical Co-Chair)

CONFERENCE KEYNOTE/PLENARY LECTURES

- 2001 “Poroelasticity and BEM,” *Keynote Lecture* delivered at the 14th International Conference on Boundary Element Technology, Orlando, Florida, March 12–14.
- 2001 “Recent advances in meshless methods,” *Keynote Lecture* delivered at the 22nd Ibero Latin-American Congress on Computational Methods in Engineering, Campinas, Brazil, November 7–9.
- 2003 “Recent advances in meshless methods and radial basis functions,” *Keynote Lecture* delivered at the 15th International Conference on Boundary Element Technology, Detroit, May 19–21.
- 2004 “Pumping optimization in coastal aquifers,” *Keynote Lecture* delivered at the 18th Salt Water Intrusion Meeting, Cartagena, Spain, May 31–June 3.
- 2005 “Modeling and management of coastal aquifers,” *Magistral Lecture* delivered at Quinto Congreso Nacional de Aguas Subterráneas, Hermosillo, Sonora, México, October 26–28.
- 2007 “Collocation (meshless) method for well- and ill-posed problems in partial differential equations,” *Plenary Lecture* delivered at the First Workshop on Method of Fundamental Solutions, Ayia Napa, Cyprus, June 11–13.
- 2007 “Radial basis function collocation method,” *Semi-Plenary Lecture*, International Symposium on Computational Mechanics, Beijing, China, July 30–August 1.
- 2008 “Stability and error estimates of Trefftz method and method of fundamental solutions,” *Keynote Lecture* to be delivered, the 5th Workshop on Trefftz Methods, Katholieke Universiteit Leuven, Belgium, March 31–April 2.

CONFERENCE ADVISORY/SCIENTIFIC BOARD

- 2009 4th Biot Conference on Poromechanics, Columbia University, New York, June 8–10.
- 2008 3rd International Conference on Coupled T-H-M-C Processes in Geo-Systems: Fundamentals, Modeling, Experiments & Applications, Lille, France, June 2–6.
- 2008 20th Salt Water Intrusion Meeting, Naples, Florida, June 23–25.

- 2008 5th Workshop on Trefftz Methods, Katholieke Universiteit Leuven, Belgium, March 31–April 2.
- 2007 9th International Symposium on Fluid Control, Measurement and Visualization, Tallahassee, Florida, September 16–19, 2007.
- 2007 International Symposium on Computational Mechanics, Beijing, China, July 30–August 1, 2007.
- 2007 29th World Conference on Boundary Element Methods and Other Mesh Reduction Methods, New Forest, UK, June 4–6.
- 2007 Conference on Computational Modeling and Experiments of the Composite Materials with Micro- and Nano-Structure, Liptovský Mikuláš, Slovakia, May 28–31.
- 2007 International Conference on Environment: Survival and Sustainability, Near East University, Northern Cyprus, Turkey, February 19–24.
- 2006 The Ravage of the Planet Conference, Patagonia, Argentina, December 12–14.
- 2006 First International Joint Salt Water Intrusion Conference, Cagliari-Chia Laguna, Italy, September 24–29.
- 2006 International Conference on Sustainable Irrigation Management, Technologies and Policies, Bologna, Italy, September 5–7.
- 2006 IABEM 2006, International Association for Boundary Element Methods, Graz University of Technology, Graz, Austria, July 10–12.
- 2006 15th U.S. National Congress of Theoretical and Applied Mechanics, Boulder, Colorado, June 25–30.
- 2006 28th World Conference on Boundary Element Methods and Other Mesh Reduction Methods, Skiathos, Greece, May 10–12.
- 2005 US-China Workshop on Advanced Computational Modeling in Hydrosience and Engineering, Oxford, Mississippi, September 20–21, 2005.
- 2005 27th World Conference on Boundary Element Methods and Other Mesh Reduction Methods, Orlando, Florida, March 15–17.
- 2004 International Conference on Computational Methods, Singapore, December 15–17, 2004.
- 2004 17th Engineering Mechanics Conference, ASCE, University of Delaware, Newark, Delaware, June 13–16.
- 2004 18th Salt Water Intrusion Meeting, Cartagena, Spain, May 31–June 3.
- 2004 IABEM 2004, International Association for Boundary Element Methods, University of Minnesota, May 24–26.
- 2004 26th World Conference on Boundary Element Method, Bologna, Italy, April 19–21.
- 2003 International Conference on Coupled T-H-M-C Processes in Geosystems: Fundamentals, Modelling, Experiments, and Applications, GeoProc 2003, Royal Institute of Technology, Stockholm, Sweden, October 13–15.
- 2003 25th World Conference on Boundary Element Method, Split, Croatia, September 8–10.
- 2003 Global Chinese Workshop on Boundary Element and Meshless Methods, Yanshan University, Qinhuangdao City, Hebei, China, August 5–8.
- 2003 University Council on Water Resources Conference—Water Security in the 21st Century, Washington D.C., July 30–August 1.
- 2003 16th Engineering Mechanics Conference, ASCE, University of Washington, Seattle, July 16–18.
- 2003 15th International Conference on Boundary Element Technology, Detroit, May 19–21.

- 2003 2nd International Conference on Water Resources Management, Las Palmas, Gran Canaria, April 30–May 2.
- 2003 2nd International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, Merida, Mexico, March 27–April 2.
- 2002 3rd International Conference on Boundary Element Techniques, Tsinghua University, Beijing, China, September 10–12.
- 2002 2nd Biot Conference on Poromechanics, Grenoble, France, August 26–28.
- 2002 24th World Conference on Boundary Element Method, Sintra, Portugal, June 17–19.
- 2002 21st Southeastern Conference on Theoretical and Applied Mechanics, Orlando, Florida, May 19–21.
- 2002 International Conference on Environmental Problems of the Mediterranean Region, Near East University, Nicosia, North Cyprus, Turkey, April 15–20.
- 2002 International Conference on Water Resources Management in Arid Regions, Kuwait, March 23–27.
- 2002 14th International Conference on Domain Decomposition Methods, Hacienda de Cocoyoc, Morelos, Mexico, January 6–11.
- 2001 1st International Conference on River Basin Management, Cardiff, Wales, UK, September 11–13.
- 2001 Euromech Colloquium 425: Nonlinear Dynamics, Control, and Condition Monitoring, Aberdeen University, UK, August 20–24.
- 2001 International Conference on Computational Engineering Science, ICES 2001, Puerto Vallarta, Mexico, August 19–24.
- 2001 2nd International Conference on Boundary Element Techniques, Rutgers University, New Jersey, July 16–18.
- 2001 23rd World Conference on Boundary Element Method, Lemnos, Greece, May 7–9.
- 2001 14th International Conference on Boundary Element Technology, Orlando, Florida, March 12–14.
- 2000 2nd International Conference on Oil Spill, Las Palmas de Gran Canaria, Spain, September 20–22.
- 2000 3rd International Conference on Coastal Environment, Las Palmas de Gran Canaria, Spain, September 18–20.
- 2000 22nd World Conference on Boundary Element Method, Cambridge University, UK, September 4–6.
- 2000 8th International Conference on Hydraulic Engineering Software, Hydrossoft 2000, Lisbon, Portugal, July 12–14.
- 2000 14th Engineering Mechanics Conference, ASCE, University of Texas at Austin, May 21–24.
- 2000 18th International Conference on Mathematical Modelling in Mechanics by Boundary and Finite Element Methods, BEM/FEM-2000, St. Petersburg, Russia, May 16-19.
- 1999 21st World Conference on Boundary Element Method, Worcester College, Oxford University, UK, August 25–27.
- 1999 14th International Conference on Boundary Element Technology, BETECH99, University of Nevada, Las Vegas, June 8–10.
- 1998 7th International Conference on Hydraulic Engineering Software, Hydrossoft 98, Como, Italy, September 16–18.
- 1998 2nd International Conference on Environmental Problems in Coastal Regions, Cancun, Mexico, September 8–10.

- 1998 20th World Conference on Boundary Element Methods in Engineering, Orlando, Florida, August 19–21.
- 1997 International Conference on Water Problems in the Mediterranean Countries, Near East University, Nicosia, North Cyprus, Turkey, November 17–21.
- 1997 19th World Conference on Boundary Element Methods in Engineering, Università di Roma “La Sapienza”, Rome, Italy, September 10–12.
- 1997 12th International Conference on Boundary Element Technology, University of Knoxville, Tennessee, April 9–11.
- 1996 1st International Conference on Environmental Problems in Coastal Regions, Rio de Janeiro, Brazil, August 7–9.
- 1996 Symposium on Industrial Applications and Recent Developments in Boundary Element Method, ASME Applied Mechanics and Materials Meeting, Johns Hopkins University, Baltimore, Maryland, June 12–14.
- 1996 6th International Conference on Hydraulic Engineering Software, Hydrosoft 96, Penang, Malaysia, September 10–12.
- 1996 11th International Conference on Boundary Element Technology, Hawaii, April 24– 26.
- 1995 International Conference on Computational Engineering Science, ICES '95, Hawaii, July 30–August 3.
- 1995 Symposium of International Association of Boundary Element Method, Hawaii, July 30–August 3.
- 1994 2nd International Workshop on Boundary Element in Fluid Dynamics, Southampton, U.K., September 8–9.
- 1994 5th International Conference on Hydraulic Engineering Software, Portocarras, Greece, September 21–23.
- 1993 9th International Conference on Boundary Element Technology, Vilamoura, Algarve, Portugal, November 9–11.
- 1992 4th International Conference on Hydraulic Engineering Software, Valencia, Spain, July 21–23.
- 1991 2nd International Conference on Computer Methods and Water Resources, Rabat, Morocco, October 7–11.
- 1991 13th International Conference on Boundary Element Methods in Engineering, Tulsa, Oklahoma, USA, August 21–23.
- 1991 6th International Conference on Boundary Element Technology, Southampton, UK, June 11–13.
- 1990 12th International Conference on Boundary Element Methods in Engineering, Sapporo, Hokkaido, Japan, September 24–28.
- 1990 Japan/USA Boundary Elements Symposium, Palo Alto, California, USA, June 5–7.
- 1989 11th International Conference on Boundary Element Methods in Engineering, Cambridge, Massachusetts, USA, August 29–31.
- 1988 10th International Conference on Boundary Element Methods in Engineering, Southampton, UK, September 6–9.

JOURNAL REVIEWER

- ◆ American Society of Civil Engineers Journals:
 - Journal of Hydraulic Engineering

- ❑ Journal of Hydrologic Engineering
- ❑ Journal of Engineering Mechanics
- ❑ Journal of Geotechnical and Geoenvironmental Engineering
- ❑ Journal of Environmental Engineering
- ❑ Journal of Structural Engineering
- ❑ Journal of Waterway, Port, Coastal, and Ocean Engineering
- ❑ Journal of Water Resources, Planning, and Management
- ❑ Journal of Computing in Civil Engineering
- ❑ Journal of Aerospace Engineering
- ❑ International Journal of Geomechanics
- ◆ American Geophysical Union Journals:
 - ❑ Water Resources Research
 - ❑ Journal of Geophysical Research, Solid Earth
 - ❑ Geophysical Research Letters
- ◆ American Society of Mechanical Engineers
 - ❑ Journal of Applied Mechanics
- ◆ Institute of Electrical and Electronic Engineers
 - ❑ Control Systems Magazine
- ◆ American Institute of Aeronautics and Astronautics
 - ❑ Journal of Thermophysics and Heat Transfer
- ◆ Advances in Water Resources
- ◆ Advances in Engineering Software
- ◆ Applicable Analysis
- ◆ Applied Mathematics Letters
- ◆ Applied Numerical Mathematics
- ◆ Boundary Element Methods Communications
- ◆ Communications for Numerical Methods in Engineering
- ◆ Computer Modeling in Engineering and Science
- ◆ Computers and Mathematics with Applications
- ◆ Computational Mechanics
- ◆ Computer, Materials, and Continua
- ◆ Electronic Journal of Boundary Elements
- ◆ Engineering Analysis with Boundary Elements
- ◆ Engineering Computations
- ◆ Environmental Modelling and Software
- ◆ Finite Elements in Analysis and Design
- ◆ Geologica Acta
- ◆ Geophysical Journal International
- ◆ Géotechnique
- ◆ Ground Water
- ◆ Hydrogeology Journal
- ◆ International Journal for Numerical and Analytical Methods in Geomechanics

- ◇ International Journal for Numerical Methods in Engineering
 - ◇ International Journal for Numerical Methods in Fluids
 - ◇ International Journal of Engineering Science
 - ◇ International Journal of Fracture
 - ◇ International Journal of Modelling and Simulation
 - ◇ International Journal of Solids and Structures
 - ◇ International Journal of Sustainable Development and Planning
 - ◇ Journal of Engineering Mathematics
 - ◇ Journal of Fluid Mechanics
 - ◇ Journal of Geochemical Exploration
 - ◇ Journal of Hydrology
 - ◇ Journal of Porous Media
 - ◇ Journal of the Acoustical Society of America
 - ◇ Journal of the Chinese Institute of Engineers
 - ◇ Journal of Environmental Management
 - ◇ Korean Journal of Computational and Applied Mathematics
 - ◇ Mathematical and Computer Modeling
 - ◇ Mechanics Research Communications
 - ◇ Microfluidic and Nanofluidics
 - ◇ Numerical Methods for Partial Differential Equations
 - ◇ Proceedings of the Royal Society of London
 - ◇ Quarterly Journal of Mechanics and Applied Mathematics
 - ◇ Structural Engineering and Mechanics
 - ◇ Transport in Porous Media
 - ◇ Water International
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CONTRACTS AND GRANTS

1. Boundary integral solution of problems in porous-elastic soil consolidation, Initiation Grant, National Science Foundation, PI, \$48,000, 1983–85. (Columbia University)
2. Foundation stability of marine structures under wave loadings, University of Delaware Research Foundation, PI, \$12,000, 1986–87. (University of Delaware)
3. Poroelastic hydraulic fracturing code, Gas Research Institute, PI, \$35,346, 1987. (UD)
4. Groundwater modeling in multi-aquifer systems, Delaware State Water Resources Institute Program/U.S. Department of Interior, PI, \$15,000, (with \$15,000 matching), 1989–90. (UD)
5. Poroelastic consideration in in-situ stress determination by micro hydraulic fracturing, Gas Research Institute, PI, \$79,207, 1989–90. (UD)
6. Environmental fate investigation of chromium contamination, New Jersey Department of Environmental Protection, Co-PI, with C.P. Huang (PI) and H.E. Allen, \$49,767, 1990–91. (UD)
7. Poroelasticity in rock mechanics, University of Oklahoma, PI, \$10,000, 1992. (UD)
8. Effect of specific chemical reactions on the transformation and the transport of chromium in the soil-water system and in concrete walls, New Jersey Department of Environmental Protection, Co-PI, with C.P. Huang (PI) and H.E. Allen, \$65,895, 1992–93. (UD)

9. Boundary element for poroelastodynamics and soil-structure interaction, NATO Scientific Affairs Division, PI, with J. Dominguez, 204,000 BF (\$6,000), 1992–94. (UD)
10. Microcomputer based regional groundwater modeling systems, U.S. Agency for International Development, PI, with G. Dagan (Israel), D. Ouazar (Morocco), and O. Lafe (Nigeria), \$198,827, 1991–94. (UD)
11. Stochastic and deterministic analysis of acoustic plane wave reflection from a random inhomogeneous anisotropic porous seafloor, Office of Naval Research, Co-PI, with M. Badiey (PI), \$168,200, 1992–94. (UD)
12. Analysis of broadband acoustic signals in shallow water, Office of Naval Research, PI, \$15,000 (including a \$7,145 subgrant), 1993–94. (UD)
13. Groundwater modeling for wellhead protection under hydrological and geological uncertainties, Delaware State Water Resources Institute Program/U.S. Department of Interior, PI, with A.S. Andres, \$34,000, (with \$74,000 matching), 1993–95. (UD)
14. Critical Poroelastic Effects in Rocks, NSF Rock Mechanics Research Center, subcontract from University of Oklahoma, PI, \$113,800, 1993–95. (UD)
15. Monitoring and modeling of saltwater intrusion, implemented to Gaza Strip and Morocco, U.S. Agency for International Development, PI, with S. Sorek (Israel), S.K. Shaath (Gaza Strip), D. Ouazar (Morocco), A. Melloul (Israel), and L. Konikow (USGS), \$422,857, 1994–96. (UD)
16. Acoustic wave reflection and scattering in shallow water sediments, Office of Naval Research, PI, \$95,000, 1993–96. (UD)
17. Stability and bifurcation of sound propagation in the ocean, Office of Naval Research, PI, with M. Badiey, \$57,000, 1995–97. (UD)
18. Earthquake mitigation related to floatation of buried pipelines, (travel grant), National Science Foundation, Co-PI, with P. Ling (PI), \$7,000, 1997–98. (UD)
19. An intelligent integrated saltwater intrusion modeling system, U.S. Agency for International Development, PI, with D. Ouazar (Morocco), G. Dagan (Israel), and I. Herrera (Mexico), \$200,000 (including a \$70,000 Israel subgrant), 1995–98. (UD)
20. Shallow water seismo-acoustics of porous seafloor, Office of Naval Research, PI, \$103,525, 1995–99. (UD)
21. Development of a lighthouse platform for multivariate environmental monitoring in estuaries, Delaware Sea Grant College Program, Co-PI, with M. Badiey (PI) and K.-C. Wong, \$184,191, plus \$10,000 equipment grant from University of Delaware, 1999–2001. (UD)
22. A thermoelastic hydraulic fracture design tool for geothermal reservoir development, Department of Energy, through University of North Dakota, PI (U. Delaware subcontract), \$58,066, with A. Ghassemi (PI) and E. Detournay, total \$201,000, 1999–2001. (UD)
23. Development of a multivariate environmental monitoring network in Delaware Bay, Delaware Sea Grant College Program, Co-PI, with M. Badiey (PI), K.-C. Wong, and Y. Mu, \$295,848, 2001–03. (UD)
24. Investigation of mechanics of magnetoporoelastic materials, NASA EPSCoR Research Infrastructure Grants, PI, \$4,000, 2002-03. (University of Mississippi)
25. Organization building of the Southeastern Water Resources Research and Environmental Policy Consortium, Mississippi Water Resources Research Institute, Co-PI, with E. Holmes (PI), \$35,000, 2002-2003. (UM)

26. Erosion control technology for levees and streambanks, and determination of sediment-transport rates in diffused and concentrated flows, USDA Cooperative Agreement, National Sedimentation Laboratory, PI, with amendments 1–5, \$331,334, 2003–2008. (UM)
27. Optimal groundwater modeling for sustainable management of coastal aquifers, National Science Foundation, PI, \$41,313, 2004–2007. (UM)
28. Nanotechnology: Modeling of polymer-carbon nanotube composites at multiple spatial and time scales, Mississippi Space Grant Consortium, Co-PI, with A. Al-Ostaz (PI), P.R. Mantena, C.S. Song and E. Jao, \$25,000, 2005. (UM)
29. Dynamic response and simulations of nanoparticle-enhanced composites, Office of Naval Research, Co-PI, with P.R. Mantena (PI) and A. Al-Ostaz, \$75,000, 2006–2007. (UM)
30. Mississippi embayment regional ground-water study, University of Memphis/Environmental Protection Agency, P.I., \$68,278, 2006–2007. (UM)
31. Nano particle reinforced composites for critical infrastructure protection, Southeast Region Research Initiative, Department of Homeland Security, PI, \$769,800, 2007–2008. (UM)
32. Blast and impact resistant composite structures for navy ships, Office of Naval Research (Congressional earmark), Co-PI, with P.R. Mantena (PI) and A. Al-Ostaz, \$925,000, 2007–2008. (UM)
33. Structural, material, and geotechnical solutions to levee and floodwall construction and retrofitting Southeast Region Research Initiative, Department of Homeland Security, PI, \$1,959,537, 2007–2010.

PUBLICATIONS

AUTHORED BOOKS

1. Cheng, A.H.-D., MULTILAYERED AQUIFER SYSTEMS—FUNDAMENTALS AND APPLICATIONS, Marcel Dekker, New York/Basel, 384 p., 2000.
2. Li, Z.C., Lu, Z.-Z., Hu, H.-Y., and Cheng, A.H.-D., TREFFTZ AND COLLOCATION METHODS, WIT Press, in press, 2007.
3. Bear, J. and Cheng, A.H.-D., MODELING GROUNDWATER FLOW AND CONTAMINANT TRANSPORT, in preparation.

EDITED BOOKS

1. Cheng, A.H.-D. and Yang, C.Y. (eds.), COMPUTATIONAL STOCHASTIC MECHANICS: THEORY, COMPUTATIONAL METHODOLOGY AND ENGINEERING APPLICATION, Computational Mechanics Publications/Elsevier Applied Science, Southampton/Boston/London, 673 p., 1993.
2. Bear, J., Cheng, A.H.-D., Sorek, S., Ouazar, D., and Herrera, I. (eds.), SEAWATER INTRUSION IN COASTAL AQUIFERS—CONCEPTS, METHODS, AND PRACTICES, Kluwer Academic Publishers, Dordrecht/Boston/London, 625 p., 1999.
3. Shen, H.H., Cheng, A.H.-D., Wang, K.-H., Teng, M.H., and Liu, C.C.K. (eds.), ENVIRONMENTAL FLUID MECHANICS—THEORIES AND APPLICATIONS, ASCE, 467 p., 2002.
4. Cheng, A.H.-D. and Ouazar, D. (eds.), COASTAL AQUIFER MANAGEMENT—MONITORING, MODELING, AND CASE STUDIES, Lewis Publishers, 280 p., 2003.

EDITED CONFERENCE PROCEEDINGS BOOKS

1. Grilli, S., Brebbia, C.A., and Cheng, A.H.-D. (eds.), COMPUTATIONAL ENGINEERING WITH BOUNDARY ELEMENTS, VOL. 1: FLUID AND POTENTIAL PROBLEMS, Proceedings, BETECH 90, Computational Mechanics Publications, Southampton/Boston, 353 p., 1990.
2. Cheng, A.H.-D., Brebbia, C.A., and Grilli, S. (eds.), COMPUTATIONAL ENGINEERING WITH BOUNDARY ELEMENTS, VOL. 2: SOLID AND COMPUTATIONAL PROBLEMS, Proceedings, BETECH 90, Computational Mechanics Publications, Southampton/Boston, 399 p., 1990.
3. Abousleiman, Y., Brebbia, C.A., Cheng, A.H.-D., and Ouazar, D. (eds.), COMPUTER METHODS AND WATER RESOURCES III, Proceedings, CMWR 95, Computational Mechanics Publications, Southampton/Boston, 504 p., 1996.
4. Thimus, J.-F., Abousleiman, Y., Cheng, A.H.-D., Coussy, O., and Detournay, E. (eds.), POROMECHANICS—A TRIBUTE TO MAURICE A. BIOT, Proceedings, Biot Conference on Poromechanics, A.A. Balkema, Rotterdam/Brookfield, 648 p., 1998.
5. Abousleiman, Y., Brebbia, C.A., and Cheng, A.H.-D. (eds.), COMPUTER METHODS AND WATER RESOURCES IV, Proceedings, CMWR 97, WIT Press, Southampton/Boston, 311 p., 2000.
6. Brebbia, C.A., Anagnostopoulos, P., Katsifarakis, K. L., and Cheng, A.H.-D., (eds.), WATER RESOURCES MANAGEMENT, WMR 2001, WIT Press, Southampton/Boston, 396 p., 2001.
7. Abousleiman, Y., Cheng, A.H.-D., and Ulm, F.-J. (eds.), POROMECHANICS III—BIOT CENTENNIAL (1905-2005), Proceedings, 3rd Biot Conference on Poromechanics, A.A. Balkema, Leiden/London/New York/Philadelphia/Singapore, 828 p., 2005.

EDITED CONFERENCE PROCEEDINGS CD-ROMS

1. Ouazar, D. and Cheng, A.H.-D. (eds.), CD-ROM Proceedings, 1st International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, Essaouira, Morocco, April 23-23, 2001.
2. Marin, L. and Cheng, A.H.-D. (eds.), CD-ROM Proceedings, 2nd International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, Merida, Mexico, March 30-April 2, 2003.

EDITED CD-ROM

1. Thimus, J.-F., Abousleiman, Y., Cheng, A.H.-D., Detournay, E., and Coussy, O., (eds.), COLLECTED PAPERS OF M. A. BIOT, Louvain-la-Neuve, Belgium, 1998.

GUEST-EDITED JOURNAL SPECIAL ISSUES

1. Cheng, A.H.-D., Burczynski, T., and Ouazar, D. (Guest Editors), SPECIAL ISSUE: OPTIMIZATION AND SENSITIVITY ANALYSIS, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 19, No. 2, Elsevier, March, 1997.
2. Cheng, A.H.-D. and Burczynski, T. (Guest Editors), SPECIAL ISSUE: STOCHASTIC BOUNDARY ELEMENT METHODS, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 19, No. 3, Elsevier, April, 1997.
3. Cheng, A.H.-D., Detournay, E., and Abousleiman, Y. (Guest Editors), SPECIAL ISSUE: POROELASTICITY, MAURICE A. BIOT MEMORIAL ISSUE, INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, Vol. 35, No. 34/35, Pergamon, December, 1998.
4. Abousleiman, Y., Bai, M., Cheng, A.H.-D., and M. Zaman (Guest Editors), SPECIAL ISSUE: POROELASTICITY, INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, Wiley, Vol. 23, No. 13, November, 1999.
5. Cheng, A.H.-D., Hong, H.-K., Young, D.-L., and Chen, J.-T. (Guest Editors), SPECIAL ISSUE: BOUNDARY ELEMENT METHODS—I, JOURNAL OF THE CHINESE INSTITUTE OF ENGINEERS, Vol. 22, No. 6, November, 1999.
6. Cheng, A.H.-D., Hong, H.-K., Young, D.-L., and Chen, J.-T. (Guest Editors), SPECIAL ISSUE: BOUNDARY ELEMENT METHODS—II, JOURNAL OF THE CHINESE INSTITUTE OF ENGINEERS, Vol. 23, No. 3, May, 2000.
7. Brebbia, C.A. and Cheng, A.H.-D. (Guest Editors), SPECIAL ISSUE: TOM CRUSE COMMEMORATIVE ISSUE: I, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 24, No. 10, December, 2000.
8. Brebbia, C.A. and Cheng, A.H.-D. (Guest Editors), SPECIAL ISSUE: TOM CRUSE COMMEMORATIVE ISSUE: II, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 25, No. 4–5, April/May, 2001.
9. Brebbia, C.A. and Cheng, A.H.-D. (Guest Editors), SPECIAL ISSUE: TOM CRUSE COMMEMORATIVE ISSUE: III, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 25, No. 9, October, 2001.
10. Cheng, A.H.-D., Konikow, L.F., and Ouazar, D. (Guest Editors), SPECIAL ISSUE: SALTWATER INTRUSION IN COASTAL AQUIFERS, TRANSPORT IN POROUS MEDIA, Vol. 43, No. 1, April, 2001.

11. Young, D.-L., Chen, C.S., Cheng, A.H.-D., Hong, H.-K., and Chen, J.-T. (Guest Editors), SPECIAL ISSUE: MESHLESS METHODS, JOURNAL OF THE CHINESE INSTITUTE OF ENGINEERS, Vol. 27, No. 4, July, 2004.
12. Cheng, A.H.-D., Lopatnikov, S.L., Nikolaevskiy, V., Shapiro, S., and Gurevich, B. (Guest Editors), SPECIAL ISSUE: PORODYNAMICS—A TRIBUTE TO YACOV IL'ICH FRENKEL, JOURNAL OF ENGINEERING MECHANICS, ASCE, Vol. 131, No. 9, 2005.
13. Cheng, A.H.-D., Kassab, A., Pan, E., and Hon, Y.C. (Guest Editors), SPECIAL ISSUE: INNOVATIVE NUMERICAL METHODS FOR MICRO AND NANO MECHANICS AND STRUCTURES—I, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 31, No. 5, 2007.
14. Cheng, A.H.-D., Kassab, A., Pan, E., and Hon, Y.C. (Guest Editors), SPECIAL ISSUE: INNOVATIVE NUMERICAL METHODS FOR MICRO AND NANO MECHANICS AND STRUCTURES—II, ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, in press.

ENCYCLOPEDIA ARTICLES

1. Detournay, E. and Cheng, A.H.-D., "Elastic behavior of geological materials," ENCYCLOPEDIA OF MATERIALS: SCIENCE AND TECHNOLOGY, Pergamon, 2001.
2. Cheng, A.H.-D., "Groundwater, Saltwater intrusion in," ENCYCLOPEDIA OF WATER SCIENCE, Marcel-Dekker, pp. 404-406, 2003.

BOOK CHAPTERS

1. Cheng, A.H.-D., "Heterogeneities in flows through porous media by the boundary element method," Chapter 6 in TOPICS IN BOUNDARY ELEMENT RESEARCH, VOL. 4: APPLICATIONS IN GEOMECHANICS, ed. C.A. Brebbia, Springer-Verlag, pp. 129-144, 1987.
2. Detournay, E. and Cheng, A.H.-D., "Fundamentals of poroelasticity," Chapter 5 in COMPREHENSIVE ROCK ENGINEERING: PRINCIPLES, PRACTICE AND PROJECTS, VOL. II, ANALYSIS AND DESIGN METHOD, ed. C. Fairhurst, Pergamon Press, pp. 113-171, 1993.
3. Cheng, A.H.-D. and Ouazar, D., "Groundwater," Chapter 8 in BOUNDARY ELEMENT TECHNIQUES IN GEOMECHANICS, eds. G.D. Manolis and T.G. Davies, CMP/Elsevier, pp. 243-294, 1993.
4. Lafe, O. and Cheng, A.H.-D., "Stochastic indirect boundary element method," Chapter 14 in COMPUTATIONAL STOCHASTIC MECHANICS: THEORY, COMPUTATIONAL METHODOLOGY AND ENGINEERING APPLICATION, eds. A.H.-D. Cheng and C.Y. Yang, CMP/Elsevier, pp. 301-322, 1993.
5. Yang, C.Y. and Cheng, A.H.-D., "Integrated earthquake reliability design of concrete arch dam-reservoir systems," Chapter 29 in COMPUTATIONAL STOCHASTIC MECHANICS: THEORY, COMPUTATIONAL METHODOLOGY AND ENGINEERING APPLICATION, eds. A.H.-D. Cheng and C.Y. Yang, CMP/Elsevier, pp. 661-674, 1993.
6. EL Harrouni, K., Wrobel, L.C., Ouazar, D., and Cheng, A.H.-D., "Parameter identification in groundwater systems," Chapter 7 in BOUNDARY INTEGRAL FORMULATIONS FOR INVERSE ANALYSIS, eds. D.B. Ingham and L.C. Wrobel, CMP, pp. 171-196, 1997.
7. Wiercigroch, M. and Cheng, A.H.-D., "Chaotic and stochastic dynamics of orthogonal metal cutting," in MULTI-BODY DYNAMICS: MONITORING AND SIMULATION TECHNIQUES, eds. H. Rahnejat and R. Whalley, MEP, London, pp. 351-366, 1997.

8. Bear, J. and Cheng, A.H.-D., "An overview," Chapter 1 in SEAWATER INTRUSION IN COASTAL AQUIFERS—CONCEPTS, METHODS, AND PRACTICES, eds. J. Bear, A.H.-D. Cheng, S. Sorek, D. Ouazar, and I. Herrera, Kluwer, pp. 1-8, 1999.
9. Cheng, A.H.-D. and Ouazar, D., "Analytical solutions," Chapter 6 in SEAWATER INTRUSION IN COASTAL AQUIFERS—CONCEPTS, METHODS, AND PRACTICES, eds. J. Bear, A.H.-D. Cheng, S. Sorek, D. Ouazar, and Herrera, Kluwer, pp. 163-191, 1999.
10. Ouazar, D. and Cheng, A.H.-D., "Application of genetic algorithms in water resources," Chapter 7 in GROUNDWATER POLLUTION CONTROL, ed. K.L. Katsifarakis, WIT Press, pp. 293-316, 1999.
11. Pan, E. and Cheng, A.H.-D., "Treatment of body forces in single-domain boundary integral equations method for anisotropic elasticity," Chapter 5 in TRANSFORMATION OF DOMAIN EFFECTS TO THE BOUNDARY, eds. Y.F. Rashed and C.A. Brebbia, WIT Press, pp. 95-119, 2003.
12. Cheng, A.H.-D., Benhachmi, M.K., Halhal, D., Ouazar, D., Naji, A., and EL Harrouni, K., "Pumping optimization in saltwater-intruded aquifers," Chapter 11 in COASTAL AQUIFER MANAGEMENT—MONITORING, MODELING, AND CASE STUDIES, eds. A.H.-D. Cheng and D. Ouazar, Lewis Publishers, pp. 233-256, 2003.

REFEREED JOURNAL PAPERS

1. Liu, H. and Cheng, A.H.-D., "Modified Fickian model for predicting dispersion," JOURNAL OF THE HYDRAULICS DIVISION, ASCE, Vol. 106, No. HY6, pp. 1021-1040, 1980.
2. Lafe, O.E., Montes, J.S., Cheng, A.H.-D., Liggett, J.A., and Liu, P.L-F., "Singularities in Darcy flow through porous media," JOURNAL OF THE HYDRAULICS DIVISION, ASCE, Vol. 106, No. HY6, pp. 977-997, 1980.
3. Cheng, A.H.-D., Liggett, J.A., and Liu, P.L-F., "Boundary calculations of sluice and spillway flows," JOURNAL OF THE HYDRAULICS DIVISION, ASCE, Vol. 107, No. HY10, pp. 1163-1178, 1981.
4. Liu, P.L-F., Cheng, A.H.-D., Liggett, J.A., and Lee, J.H., "Boundary integral equation solutions to moving interface between two fluids in porous media," WATER RESOURCES RESEARCH, Vol. 17, No. 5, pp. 1445-1452, 1981.
5. Cheng, A.H.-D., "Darcy's flow with variable permeability—a boundary integral solution," WATER RESOURCES RESEARCH, Vol. 20, No. 7, pp. 980-984, 1984.
6. Taigbenu, A.E., Liggett, J.A., and Cheng, A.H.-D., "Boundary integral solution to seawater intrusion into coastal aquifers," WATER RESOURCES RESEARCH, Vol. 20, No. 8, pp. 1150-1158, 1984.
7. Cheng, A.H.-D. and Liggett, J.A., "Boundary integral equation method for linear porous-elasticity with applications to soil consolidation," INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, Vol. 20, No. 2, pp. 255-278, 1984.
8. Cheng, A.H.-D. and Liggett, J.A., "Boundary integral equation method for linear porous-elasticity with applications to fracture propagation," INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, Vol. 20, No. 2, pp. 279-296, 1984.
9. Liu, P.L-F. and Cheng, A.H.-D., "Boundary solutions for fluid-structure interaction," JOURNAL OF HYDRAULIC ENGINEERING, ASCE, Vol. 110, No. 1, pp. 51-64, 1984.
10. Cheng, A.H.-D., "Effect of sediment on earthquake-induced reservoir hydrodynamic response," JOURNAL OF ENGINEERING MECHANICS, ASCE, Vol. 112, No. 7, pp. 654-665, 1986.

11. Cheng, A.H.-D. and Liu, P.L.-F., "Seepage force on a pipeline buried in a poroelastic seabed under wave loadings," APPLIED OCEAN RESEARCH, Vol. 8, No. 1, pp. 22–32, 1986.
12. Lafe, O.E. and Cheng, A.H.-D., "A perturbation boundary element code for groundwater flow in heterogeneous aquifer," WATER RESOURCES RESEARCH, Vol. 23, No. 6, pp. 1079–1084, 1987.
13. Cheng, A.H.-D. and Predeleanu, M., "Transient boundary element formulation for poroelasticity," APPLIED MATHEMATICAL MODELLING, Vol. 11, No. 4, pp. 285–290, 1987.
14. Detournay, E. and Cheng, A.H.-D., "Poroelastic solution of a plane strain point displacement discontinuity," JOURNAL OF APPLIED MECHANICS, ASME, Vol. 54, No. 4, pp. 783–787, 1987.
15. Detournay, E. and Cheng, A.H.-D., "Poroelastic response of a borehole in a non-hydrostatic stress field," INTERNATIONAL JOURNAL FOR ROCK MECHANICS AND MINING SCIENCES AND GEOMECHANICS ABSTRACTS, Vol. 25, No. 3, pp. 171–182, 1988.
16. Cheng, A.H.-D. and Detournay, E., "A direct boundary element method for plane strain poroelasticity," INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, Vol. 12, No. 5, pp. 551–572, 1988.
17. Vandamme, L., Detournay, E., and Cheng, A.H.-D., "A two-dimensional poroelastic displacement discontinuity method for hydraulic fracture simulation," INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, Vol. 13, No. 2, pp. 215–224, 1989.
18. Detournay, E., Cheng, A.H.-D., Roegiers, J.-C., and McLennan, J.D., "Poroelasticity considerations in *in situ* stress determination by hydraulic fracturing," INTERNATIONAL JOURNAL OF ROCK MECHANICS AND MINING SCIENCES AND GEOMECHANICS ABSTRACTS, Vol. 26, No. 6, pp. 507–513, 1989.
19. Cheng, A.H.-D. and Ou, K., "An efficient Laplace transform solution for multiaquifer systems," WATER RESOURCES RESEARCH, Vol. 25, No. 4, pp. 742–748, 1989.
20. Cheng, A.H.-D. and Springer, J.C., "A visually based microcomputer solution for aquifer parameter determination," HYDROSOFT, Vol. 3, No. 1, pp. 24–27, 1990.
21. Detournay, E., Cheng, A.H.-D., and McLennan, J.D., "A poroelastic PKN hydraulic fracture model based on an explicit moving mesh algorithm," JOURNAL OF ENERGY RESOURCES TECHNOLOGY, ASME, Vol. 112, No. 4, pp. 224–230, 1990.
22. Cheng, A.H.-D. and Lafe, O.E., "Boundary element solution for stochastic groundwater flow: Random boundary condition and recharge," WATER RESOURCES RESEARCH, Vol. 27, No. 2, pp. 231–242, 1991.
23. Detournay, E. and Cheng, A.H.-D., "Plane strain analysis of a stationary hydraulic fracture in a poroelastic medium," INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, Vol. 37, No. 13, pp. 1645–1662, 1991.
24. Cheng, A.H.-D., Badmus, T., and Beskos, D.E., "Integral equation for dynamic poroelasticity in frequency domain with BEM solution," JOURNAL OF ENGINEERING MECHANICS, ASCE, Vol. 117, No. 5, pp. 1136–1157, 1991.
25. Yang, C.Y., Cheng, A. H.-D., and Roy, R.V., "Chaotic and stochastic dynamics for a nonlinear structural system with hysteresis and degradation," PROBABILISTIC ENGINEERING MECHANICS, Vol. 6, No. 3/4, pp. 193–203, 1991.
26. Cheng, A.H.-D., Abousleiman, Y., and Badmus, T., "A Laplace transform BEM for axisymmetric diffusion utilizing pre-tabulated Green's function," ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 9, No. 1, pp. 39–46, 1992.

27. Badmus, T., Cheng, A.H.-D., and Grilli, S., "A Laplace-transform-based three-dimensional BEM for poroelasticity," *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING*, Vol. 36, No. 1, pp. 67–85, 1993.
28. Zhang, L., Yang, C.Y., Chajes, M.J., and Cheng, A.H.-D., "Stability of active tendon structural control with time delay," *JOURNAL OF ENGINEERING MECHANICS, ASCE*, Vol. 119, No. 5, pp. 1017–1024, 1993.
29. Cheng, A.H.-D. and Morohunfola, O.K., "Multilayered leaky aquifer systems: I. Pumping well solution," *WATER RESOURCES RESEARCH*, Vol. 29, No. 8, pp. 2787–2800, 1993.
30. Cheng, A.H.-D. and Morohunfola, O.K., "Multilayered leaky aquifer systems: II. Boundary element solution," *WATER RESOURCES RESEARCH*, Vol. 29, No. 8, pp. 2801–2811, 1993.
31. Cheng, A.H.-D., Abousleiman, Y., Ruan, F., and Lafe, O.E., "Boundary element solution for stochastic groundwater flow: Temporal weakly stationary problems," *WATER RESOURCES RESEARCH*, Vol. 29, No. 8, pp. 2893–2908, 1993.
32. Hackl, K., Yang, C.Y., and Cheng, A.H.-D., "Stability, bifurcation and chaos of nonlinear structures with control, Part I: Autonomous case," *INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS*, Vol. 28, No. 4, pp. 441–454, 1993.
33. Cheng, A.H.-D., Yang, C.Y., Hackl, K., and Chajes, M.J., "Stability, bifurcation, and chaos of nonlinear structures with control, Part II: Non-autonomous case," *INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS*, Vol. 28, No. 5, pp. 549–565, 1993.
34. Cheng, A.H.-D., Abousleiman, Y., and Roegiers, J.-C., "Review of some poroelastic effects in rock mechanics," *INTERNATIONAL JOURNAL OF ROCK MECHANICS AND MINING SCIENCES AND GEOMECHANICS ABSTRACTS*, Vol. 30, No. 7, pp. 1119–1126, 1993.
35. Abousleiman, Y., Cheng, A.H.-D., Jiang, C., and Roegiers, J.-C., "A micromechanically consistent poroviscoelasticity theory for rock mechanics applications," *INTERNATIONAL JOURNAL OF ROCK MECHANICS AND MINING SCIENCES AND GEOMECHANICS ABSTRACTS*, Vol. 30, No. 7, pp. 1177–1180, 1993.
36. Cheng, A.H.-D., Sidauruk, P., and Abousleiman, Y., "Approximate inversion of the Laplace transform," *MATHEMATICA JOURNAL*, Vol. 4, No. 2, pp. 76–82, 1994.
37. Badiy, M., Cheng, A.H.-D., and Jaya, I., "Propagator matrix for plane wave reflection from inhomogeneous anisotropic poroelastic seafloor," *JOURNAL OF COMPUTATIONAL ACOUSTICS*, Vol. 2, No. 1, pp. 11–27, 1994.
38. Abousleiman, Y. and Cheng, A.H.-D., "Boundary element solution for steady and unsteady Stokes flow," *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*, Vol. 117, pp. 1–13, 1994.
39. Abousleiman, Y., Cheng, A.H.-D., and Gu, H., "Formation permeability determination by micro or mini hydraulic fracturing," *JOURNAL OF ENERGY RESOURCES TECHNOLOGY, ASME*, Vol. 116, No. 2, pp. 104–114, 1994.
40. Desroches, J., Detournay, E., Lenoach, B., Papanastasiou, P.C., Pearson, J.R.A., Thiercelin, M., and Cheng, A.H.-D., "The crack tip region in hydraulic fracturing," *PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON, SER. A*, Vol. 447, pp. 39–48, 1994.
41. Badiy, M., Jaya, I., and Cheng, A.H.-D., "A shallow water acoustic/geoacoustic experiment near the New Jersey Atlantic Generating Station site," *JOURNAL OF ACOUSTICAL SOCIETY OF AMERICA*, Vol. 96, No. 4, pp. 3593–3604, 1994.

42. Weng, C.H., Huang, C.P., Allen, H.E., Cheng, A.H.-D., and Sanders, P.F., "Chromium leaching behavior in soil derived from chromite ore processing waste," *SCIENCE OF TOTAL ENVIRONMENT*, Vol. 154, pp. 71–86, 1994.
43. Cheng, A.H.-D., Lafe, O., and Grilli, S., "Dual reciprocity BEM based on global interpolation functions," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 13, No. 4, pp. 303–311, 1994.
44. Cheng, A.H.-D., Antes, H., and Ortner, N., "Fundamental solutions of products of Helmholtz and polyharmonic operators," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 14, No. 2, pp. 187–191, 1994.
45. EL Harrouni, K., Ouazar, D., Wrobel, L.C., and Cheng, A.H.-D., "Global interpolation function based DRBEM applied to Darcy's flow in heterogeneous media," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 16, No. 3, pp. 281–285, 1995.
46. Lafe, O.E. and Cheng, A.H.-D., "A global interpolation function based boundary element method for deterministic, non-homogeneous, and stochastic flows in porous media," *COMPUTERS AND STRUCTURES*, Vol. 56, No. 5, pp. 861–870, 1995.
47. Cheng, A.H.-D. and Ouazar, D., "Theis solution under aquifer parameter uncertainty," *GROUND WATER*, Vol. 33, No. 1, pp. 11–15, 1995.
48. Cheng, A.H.-D. and Sidauruk, P., "A groundwater flow Mathematica package," *GROUND WATER*, Vol. 34, No. 1, pp. 41–48, 1996.
49. Ouazar, D., Cheng, A.H.-D., and Kizamou, A.D., "An object oriented pumping test expert system," *JOURNAL OF COMPUTING IN CIVIL ENGINEERING*, ASCE, Vol. 10, No. 1, pp. 4–9, 1996.
50. Indelman, P., Dagan, G., Cheng, A.H.-D., and Ouazar, D., "Sensitivity analysis of flow in multiple leaky aquifer systems," *JOURNAL OF HYDRAULIC ENGINEERING*, ASCE, Vol. 122, No. 1, pp. 41–45, 1996.
51. Badiy, M., Cheng, A.H.-D., and Jaya, I., "Deterministic and stochastic analyses of acoustic plane wave reflection from inhomogeneous porous seafloor," *JOURNAL OF ACOUSTICAL SOCIETY OF AMERICA*, Vol. 99, No. 2, pp. 903–913, 1996.
52. Abousleiman, Y., Cheng, A.H.-D., Cui, L., Detournay, E., and Roegiers, J.-C., "Mandel's problem revisited," *GÉOTECHNIQUE*, Vol. 46, No. 2, pp. 187–195, 1996.
53. Cui, L., Cheng, A.H.-D., Kaliakin, V., Abousleiman, Y., and Roegiers, J.-C., "Finite element analyses of anisotropic poroelasticity: A generalized Mandel's problem and an inclined borehole problem," *INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS*, Vol. 20, No. 6, pp. 381–401, 1996.
54. Abousleiman, Y., Cheng, A.H.-D., Jiang, C., and Roegiers, J.-C., "Poroviscoelastic analysis of borehole and cylinder problems," *ACTA MECHANICA*, Vol. 109, No. 1-4, pp. 199–219, 1996.
55. Wiercigroch, M. and Cheng, A.H.-D., "Non-linear dynamics of acoustic ray propagation in an underwater sound channel," *MACHINE VIBRATION*, Vol. 5, pp. 229–235, 1996.
56. EL Harrouni, K., Ouazar, D., Walters, G.A., and Cheng, A.H.-D., "Groundwater optimization and parameter estimation by genetic algorithm and dual reciprocity boundary element method," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 18, No. 4, pp. 287–296, 1996.
57. EL Harrouni, K., Ouazar, D., Wrobel, L.C., and Cheng, A.H.-D., "Groundwater parameter estimation by optimization and DRBEM," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 19, No. 2, pp. 97–103, 1997.

58. EL Harrouni, K., Ouazar, D., Wrobel, L.C., and Cheng, A.H.-D., "Uncertainty analysis of groundwater flow with DRBEM," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 19, No. 3, pp. 217–221, 1997.
59. EL Harrouni, K., Ouazar, D., Wrobel, L.C., and Cheng, A.H.-D., "Aquifer parameter estimation by extended Kalman filtering and boundary elements," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 19, No. 3, pp. 231–237, 1997.
60. Cui, L., Cheng, A.H.-D., and Abousleiman, Y., "Poroelastic solution for an inclined borehole," *JOURNAL OF APPLIED MECHANICS, ASME*, Vol. 64, No. 1, pp. 32–38, 1997.
61. Wiercigroch, M. and Cheng, A.H.-D., "Chaotic and stochastic dynamics of orthogonal metal cutting," *CHAOS, SOLITONS AND FRACTALS*, Vol. 8, No. 4, pp. 715–726, 1997.
62. Cheng, A.H.-D., "Material coefficients of anisotropic poroelasticity," *INTERNATIONAL JOURNAL OF ROCK MECHANICS AND MINING SCIENCES*, Vol. 34, No. 2, pp. 199–205, 1997.
63. Abousleiman, Y., Cui, L., Ekbote, S., Zaman, M., Roegiers, J.-C., and Cheng, A.H.-D., "Applications of time-dependent pseudo-3D stress analysis in evaluating wellbore stability," *INTERNATIONAL JOURNAL FOR ROCK MECHANICS AND MINING SCIENCES*, Vol. 34, No. 3-4, paper no. 1, 1997.
64. Cui, L., Kaliakin, V.N., Abousleiman, Y., and Cheng, A.H.-D., "Finite element formulation and application of poroelastic generalized plane strain problems," *INTERNATIONAL JOURNAL FOR ROCK MECHANICS AND MINING SCIENCES*, Vol. 34, No. 6, pp. 953–962, 1997.
65. Ling, H.I. and Cheng, A.H.-D., "Rock mass sliding induced by seismic force," *INTERNATIONAL JOURNAL FOR ROCK MECHANICS AND MINING SCIENCES*, Vol. 34, No. 6, pp. 1021–1029, 1997.
66. Cheng, A.H.-D., "On generalized plane strain poroelasticity" *INTERNATIONAL JOURNAL FOR ROCK MECHANICS AND MINING SCIENCES*, Vol. 35, No. 2, pp. 183–193, 1998.
67. Wiercigroch, M., Cheng, A.H.-D., Simmen, J., and Badiy, M., "Nonlinear behavior of acoustic rays in underwater sound channels," *CHAOS, SOLITONS AND FRACTALS*, Vol. 9, No. 1/2, pp. 193–207, 1998.
68. Sidauruk, P., Cheng, A.H.-D., and Ouazar, D., "Ground water contaminant source and transport parameter identification by correlation coefficient optimization," *GROUND WATER*, Vol. 36, No. 2, pp. 208–214, 1998.
69. Naji, A., Ouazar, D., and Cheng, A.H.-D., "Locating the saltwater-freshwater interface using nonlinear programming and *b*-adaptive BEM," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 21, No. 3, pp. 253–259, 1998.
70. Cheng, A.H.-D. and Detournay, E., "On singular integral equations and fundamental solutions of poroelasticity," *INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES*, Vol. 35, No. 34/35, pp. 4521–4555, 1998.
71. Lopatnikov, S. and Cheng, A.H.-D., "A thermodynamically consistent formulation of magnetoporoelasticity," *INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES*, Vol. 35, No. 34/35, pp. 4637–4657, 1998.
72. Naji, A., Cheng, A.H.-D., and Ouazar, D., "Analytical stochastic solutions of saltwater/freshwater interface in coastal aquifers," *STOCHASTIC HYDROLOGY AND HYDRAULICS*, Vol. 12, No. 6, pp. 413–430, 1998.
73. Badiy, M., Cheng, A.H.-D., and Mu, Y., "From geology to geoacoustics—Evaluation of Biot-Stoll sound speed and attenuation for shallow water acoustics," *JOURNAL OF ACOUSTICAL SOCIETY OF AMERICA*, Vol. 103, No. 1, pp. 309–320, 1998.

74. Mu, Y., Badiy, M., and Cheng, A.H.-D., "Parameter uncertainty analysis on acoustic response in fluid filled poroelastic media," *JOURNAL OF ACOUSTICAL SOCIETY OF AMERICA*, Vol. 106, No. 1, pp. 151–163, 1999.
75. Ling, H.I., Cheng, A.H.-D., Mohri, Y., and Kawabata, T., "Permanent displacement of composite breakwaters subject to wave impact," *JOURNAL OF WATERWAY, PORT, COASTAL AND OCEAN ENGINEERING, ASCE*, Vol. 125, No. 1, pp. 1–8, 1999.
76. Wiercigroch, M., Badiy, M., Simmen, J., and Cheng, A.H.-D., "Non-linear dynamics of underwater acoustics," *JOURNAL OF SOUND AND VIBRATION*, Vol. 220, No. 5, pp. 771–786, 1999.
77. Cui, L., Abousleiman, Y., Cheng, A.H.-D., and Roegiers, J.-C., "Time-dependent failure analysis of inclined boreholes in fluid saturated formations," *JOURNAL OF ENERGY RESOURCES TECHNOLOGY, ASME*, Vol. 121, No. 1, pp. 31–39, 1999.
78. Naji, A., Cheng, A.H.-D., and Ouazar, D., "BEM solution of stochastic seawater intrusion problems," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 23, No. 7, pp. 529–537, 1999.
79. Mu, Y., Cheng, A.H.-D., Badiy, M., and Bennett, R., "Water wave driven seepage in sediment and parameter inversion based on pore pressure data," *INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS*, Vol. 23, No. 13, pp. 1655–1674, 1999.
80. Cheng, A.H.-D., Halhal, D., Naji, A., and Ouazar, D., "Pumping optimization in saltwater-intruded coastal aquifers," *WATER RESOURCES RESEARCH*, Vol. 36, No. 8, pp. 2155–2166, 2000.
81. Schanz, M. and Cheng, A.H.-D., "Transient wave propagation in a one-dimensional poroelastic column," *ACTA MECHANICA*, Vol. 145, No. 1–4, pp. 1–18, 2000.
82. Cheng, A.H.-D., "Particular solutions of Laplacian, Helmholtz-type, and polyharmonic operators involving higher order radial basis functions," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 24, No. 7–8, pp. 531–538, 2000.
83. Cheng, A.H.-D., Young, D.-L., and Tsai, C.-C., "Solution of Poisson's equation by iterative DRBEM using compactly-supported, positive-definite radial basis function," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 24, No. 7–8, pp. 549–557, 2000.
84. Ghassemi, A., Cheng, A.H.-D., Diek, A., and Roegiers, J.-C., "A complete plane strain fictitious stress boundary element method for poroelastic media," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 25, No. 1, pp. 41–48, 2001.
85. Cheng, A.H.-D., Chen, C.S., Golberg, M.A., and Rashed, Y.F., "BEM for thermoelasticity and elasticity with body force—A revisit," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 25, No. 4–5, pp. 377–387, 2001.
86. Chen, B., Cheng, A.H.-D., and Chou, T.-W., "A nonlinear compaction model for fibrous preforms," *COMPOSITES, PART A: APPLIED SCIENCE AND MANUFACTURING*, Vol. 32, No. 5, pp. 701–707, 2001.
87. Schanz, M. and Cheng, A.H.-D., "Dynamic analysis of a one-dimensional poroviscoelastic column," *JOURNAL OF APPLIED MECHANICS, ASME*, Vol. 68, No. 2, pp. 192–198, 2001.
88. Elansari, M., Ouazar, D., and Cheng, A.H.-D., "Boundary solution of Poisson's equation using radial basis function deployed on Gaussian quadrature nodes," *COMMUNICATIONS FOR NUMERICAL METHODS IN ENGINEERING*, Vol. 17, No. 7, pp. 455–464, 2001.

89. Cheng, A.H.-D., Ghassemi, A., and Detournay, E., "Integral equation solution of heat extraction from a fracture in hot dry rock," *INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS*, Vol. 25, No. 13, pp. 1327–1338, 2001.
90. Schanz, M. and Cheng, A.H.-D., "Wave propagation in a one-dimensional poroelastic column," *ZEITSCHRIFT FUR ANGEWANDTE MATHEMATIK UND MECHANIK (ZAMM)*, Vol. 81, No. S3, pp. S591–S592, 2001.
91. Chen, C.S., Ganesh, M., Golberg, M.A., and Cheng, A.H.-D., "Multilevel compact radial functions based computational schemes for some elliptic problems," *COMPUTERS AND MATHEMATICS WITH APPLICATIONS*, VOL. 43, No. 3-5, pp. 359–378, 2002.
92. Young, D.L., Tsai, C.C., Eldho, T.I., and Cheng, A.H.-D., "Solution of Stokes flow using an iterative DRBEM based on compactly-supported, positive-definite radial basis function," *COMPUTERS AND MATHEMATICS WITH APPLICATIONS*, VOL. 43, No. 3-5, pp. 607–619, 2002.
93. Tsai, C.C., Young, D.-L., and Cheng, A.H.-D., "Meshless BEM for steady three-dimensional Stokes flows," *COMPUTER MODELLING IN ENGINEERING AND SCIENCES*, Vol. 3, No. 1, pp. 117–128, 2002.
94. Bonk, R.J., Imhoff, P.T., and Cheng, A.H.-D., "Integrating written communication within engineering curricula," *JOURNAL OF PROFESSIONAL ISSUES IN ENGINEERING EDUCATION AND PRACTICE*, ASCE, Vol. 128, No. 4, pp. 152–159, 2002.
95. Cheng, A.H.-D., Liu, C.C.K., Shen, H., Teng, M.H., and Wang, K.-H., "Fluid mechanics—An essential part of an environmental engineering curriculum," *JOURNAL OF PROFESSIONAL ISSUES IN ENGINEERING EDUCATION AND PRACTICE*, ASCE, Vol. 128, No. 4, pp. 201–205, 2002.
96. Lopatnikov, S.L. and Cheng, A.H.-D., "Variational formulation of fluid infiltrated porous material in thermal and mechanical equilibrium," *MECHANICS OF MATERIALS*, Vol. 34, No. 11, pp. 685–704, 2002.
97. Kattis, S.E., Beskos, D.E., and Cheng, A.H.-D., "2-D dynamic response of unlined and lined tunnels in poroelastic soil to harmonic body waves," *EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS*, Vol. 32, No. 1, pp. 97–110, 2003.
98. Golberg, M.A., Muleshkov, A.S., Chen, C.S., and Cheng, A.H.-D., "Polynomial particular solutions for certain partial differential operators," *NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS*, Vol. 19, No. 1, pp. 112–133, 2003.
99. Cheng, A.H.-D., Golberg, M.A., Kansa, E.J., and Zammito, G., "Exponential convergence and h-c multiquadric collocation method for partial differential equations," *NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS*, Vol. 19, No. 5, pp. 571-594, 2003.
100. Li, J., Cheng, A.H.-D., and Chen, C.S., "A comparison of efficiency and error convergence of multiquadric collocation method and finite element method," *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, Vol. 27, No. 3, pp. 251–257, 2003.
101. Ghassemi, A., Tarasovs, S., and Cheng, A. H.-D., "An integral equation solution for three-dimensional heat extraction from planar fracture in hot dry rock," *INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS*, Vol. 27, No. 12, pp. 989–1004, 2003.
102. Lopatnikov, S.L. and Cheng, A.H.-D., "Macroscopic Lagrangian formulation of poroelasticity with porosity dynamics," *JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS*, Vol. 52, No. 12, pp. 2801–2839, 2004.

103. Li, Z.-C., Lu, T.-T., Hu, H.-Y. and Cheng, A.H.-D., "Particular solutions of Laplace's equations on polygons and new models involving mild singularities," ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 29, No. 1, pp. 59–75, 2005.
104. Cheng, A.H.-D. and Cheng, D.T., "Heritage and early history of the boundary element method," ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 29, No. 3, pp. 268–302, 2005.
105. Qahman, K., Larabi, A., Ouazar, D., Naji, A., and Cheng, A.H.-D., "Optimal and sustainable extraction of groundwater in coastal aquifers," STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT, Vol. 19, No. 2, pp. 99–110, 2005.
106. Ghassemi, A., Tarasovs, S., and Cheng, A. H.-D., "Integral equation solution of heat extraction-induced thermal stress in enhanced geothermal reservoirs," INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, Vol. 29, No. 8, pp. 829–844, 2005.
107. Amaziane, B., Naji, A., Ouazar, D., and Cheng, A.H.-D., "Chance-constrained optimization of pumping in coastal aquifers by stochastic boundary element method and genetic algorithm," COMPUTERS, MATERIALS & CONTINUA, Vol. 2, No. 1, pp. 85–96, 2005.
108. Lopatnikov, S.L. and Cheng, A. H.-D., "If you ask a physicist from any country: A tribute to Yacov Il'ich Frenkel," JOURNAL OF ENGINEERING MECHANICS, ASCE, Vol. 131, No. 9, pp. 875–879, 2005.
109. Cheng, A.H.-D. and Cabral, J.J.S.P., "Direct solution of ill-posed boundary value problems by radial basis function collocation method," INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, Vol. 64, No. 1, pp. 45–64, 2005.
110. Hu, H.-Y., Li, Z.-C., and Cheng, A.H.-D., "Radial basis collocation methods for elliptic boundary value problems," COMPUTERS AND MATHEMATICS WITH APPLICATIONS, Vol. 50, No. 1-2, pp. 289–320, 2005.
111. Li, Z.-C., Lu, T.-T., Tsai, H.-S., and Cheng, A.H.-D., "The Trefftz method for solving Laplace eigenvalue problems," ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 30, No. 4, pp. 292–308, 2006.
112. Li, Z.-C., Lu, T.-T., Huang, H.-T., and Cheng, A.H.-D., "Trefftz, collocation and other boundary methods—A comparison," NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, Vol. 23, No. 1, pp. 93–144, 2007.
113. Huang, C.S., Lee, C.-F., and Cheng, A.H.-D., "Error estimate, optimal shape factor, and high precision computation of multiquadric collocation method," ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, Vol. 31, No. 7, pp. 614–623, 2007.
114. Cheng, A.H.-D. and Abousleiman, Y., "Intrinsic poroelastic constants and a semilinear model," to appear in INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS.
115. Al-Ostaz, A., Pal, G., Mantena, P.R., and Cheng, A.H.-D., "Molecular dynamics simulation of SWCNT-polymer nanocomposite and its constituents," to appear in JOURNAL OF MATERIAL SCIENCE.
116. Ghassemi, A., Tarasovs, S., and Cheng, A. H.-D., "A three-dimensional study of the effects of thermo-mechanical loads on fracture slip in enhanced geothermal reservoirs," submitted to INTERNATIONAL JOURNAL OF ROCK MECHANICS AND MINING SCIENCES AND GEOMECHANICS ABSTRACTS.

117. Song, C.R., Cho, H., Jung, Y.-H., Cheng, A.H.-D., and Al-Ostaz, A., "Bridging molecular, particulate and continuum mechanics for geomechanics application," submitted to INTERNATIONAL JOURNAL OF GEOMECHANICS, ASCE.
118. Song, C.R., Kim, J.-W., and Cheng, A.H.-D., "Estimation of soil permeability using an acoustic technique," submitted to JOURNAL OF GEOTECHNICAL & GEOENVIRONMENTAL ENGINEERING, ASCE.
119. Huang, J., Li, Z.-C., Chen, I.-L., and Cheng, A. H.-D., "Splitting extrapolation algorithms for first kind boundary integral equations with singularities by advanced quadrature methods," submitted to ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS.
120. Li, Z.-C., Lu, T.T., and Cheng, A.H.-D., "Error analysis of Trefftz methods for Laplace's equations with singularities," submitted to NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS.
121. Mantena, P.R., Al-Ostaz, A. and Cheng, A.H.-D., "Dynamic response and simulations of nanoparticle-enhanced composites," submitted to COMPOSITE SCIENCE AND TECHNOLOGY.

PAPERS IN CONFERENCE PROCEEDINGS

1. Lafe, O.E., Montes, J.S., Cheng, A.H.-D., Liggett, J.A., and Liu, P.L-F., "Singularities in Darcy flow through porous media," Proceedings of the 3rd ASCE/EMD Specialty Conference, 1979.
2. Liu, P.L-F. and Cheng, A.H.-D., "Boundary integral equation solutions for fluid-structure interaction due to earthquakes," Proceedings of the 3rd International Symposium on Numerical Methods in Engineering, Paris, ed. P. Lascaux, pp. 363–371, March 14–16, 1983.
3. Cheng, A.H.-D., "Boundary integral solution for Darcy's flow with variable permeability," Finite Elements in Water- Resources, Proceedings of the 5th International Conference, Burlington, Vermont, eds. J.P. Liable, C.A. Brebbia, W. Gray, and G. Pinder, Springer-Verlag, pp. 737–746, June 18–22, 1984.
4. Cheng, A.H.-D., Skalak, R., Weinbaum, S., and Ni, J.C-Y., "Consolidation of poroelastic arterial tissue," Engineering Mechanics in Civil Engineering, Proceedings of the 5th ASCE/EMD Specialty Conference, University of Wyoming, eds. A.P. Boresi and K.P. Chong, pp. 891–894, August 1–3, 1984.
5. Cheng, A.H.-D., "Boundary element technique for poroelasticity," BETECH 86, Proceedings of the 2nd Boundary Element Technology Conference, eds. J.J. Connor and C.A. Brebbia, MIT, Boston, pp. 743–755, Computational Mechanics Publications, June 17–19, 1986.
6. Cheng, A.H.-D. and Predeleanu, M., "Boundary element method for visco-poroelasticity applied to soil consolidation," Advanced Boundary Element Methods, IUTAM Symposium, San Antonio, ed. T.A. Cruse, Springer-Verlag, pp. 109–115, April 13–16, 1987.
7. Detournay, E., Roegiers, J.-C., and Cheng, A.H.-D., "Some new examples of poroelastic effects in rock mechanics," Rock Mechanics: Proceedings of the 28th U.S. Symposium, University of Arizona, eds. I.W. Farmer, J.J.K. Daemen, C.S. Desai, C.E. Glass, and S.P. Neuman, Balkema, pp. 575–584, June 29–July 1, 1987.
8. Cheng, A.H.-D., Detournay, E., and Vandamme, L., "An integral equation technique for vertical hydraulic fracture in a porous formation," Development in Mechanics, Proceedings of 20th Midwestern Mechanics Conference, Vol. 14(b), Purdue University, pp. 591–596, August 31–September 2, 1987.

9. Detournay, E., Vandamme, L., and Cheng, A.H.-D., "An integral equation technique for the propagation of a vertical hydraulic fracture in a poroelastic formation," 6th International Conference on Numerical Methods in Geomechanics, Innsbruck, Austria, ed. G.A. Swoboda, Balkema, pp. 777–784, April 11–15, 1988.
10. Lafe, O.E., Owoputi, O., and Cheng, A.H.-D., "Two perturbation boundary element codes for steady groundwater flow in heterogeneous aquifers," Computational Methods in Water Resources, Vol. 1 Modeling Surface and Sub-Surface Flows, Proceedings of the 7th International Conference, MIT, eds. M.A. Celia, et al., CMP/Elsevier, pp. 83–88, June 13–17, 1988.
11. Detournay, E., Cheng, A.H.-D., Roegiers, J.-C., and McLennan, J.D., "Poroelastic considerations in *in situ* stress determination by hydraulic fracturing," Proceedings of the 2nd International Workshop on Hydraulic Fracturing Stress Measurements, University of Minnesota, eds. B.C. Haimson, J.-C. Roegiers, and M.D. Zoback, Vol. 1, pp. 410–424, June 15–18, 1988.
12. Cheng, A.H.-D., Badmus, T., and Detournay, E., "Singular integral equation method for cracks embedded in poroelastic space," Boundary Elements X, Vol. 3 Stress Analysis, Southampton, U.K., ed. C.A. Brebbia, Springer-Verlag, pp. 265–278, September 6–9, 1988.
13. Lafe, O.E. and Cheng, A.H.-D., "A stochastic boundary element method for groundwater flow with random boundary conditions and recharge," Boundary Element Techniques: Applications in Engineering, Proceedings of BETECH89 Conference, Windsor, Canada, eds. C.A. Brebbia and N.G. Zamani, pp. 271–280, June 6–8, 1989.
14. Cheng, A.H.-D., Hsieh, K.-H., and Huang, C.-P., "An interactive microcomputer program for one-dimensional solute transport in saturated soil-water systems," National Water Conference, ASCE, University of Delaware, ed. T.A. Austin, pp. 350–357, July 17–20, 1989.
15. Cheng, A.H.-D., Abousleiman, Y., and Badmus, T., "A Laplace transform boundary element method for axisymmetric diffusion problems," Boundary Element Methods in Engineering, Proceedings of the International Symposium on Boundary Element Methods, East Hartford, Connecticut, eds. B.S. Annigeri and K. Tseng, pp. 576–583, October 2–4, 1989.
16. Yang, C.Y., Cheng, A. H.-D., and Roy, R.V., "Chaotic and stochastic dynamics for inelastic systems with hysteresis and degradation," Stochastic Structure Dynamics, 1. New Theoretical Developments, 2nd International Conference on Stochastic Structure Dynamics, Boca Raton, Florida, eds. Y.K. L in and I. Elishakoff, pp. 267–284, May 9–11, 1990.
17. Cheng, A.H.-D., Yang, C.Y., and Niu, T.-P., "Earthquake reliability analysis of dam-reservoir-foundation system using boundary element method," Proceedings of 4th U.S. National Conference on Earthquake Engineering, Vol. 3, Palm Springs, California, pp. 85–94, May 20–24, 1990.
18. Yang, C.Y., Debessay, M., and Cheng, A.H.-D., "Probability based seismic reliability assessment of concrete arch dam reservoir systems including structure-fluid interaction," Proceedings of 4th U.S. National Conference on Earthquake Engineering, Vol. 3, Palm Springs, California, pp. 145–154, May 20–24, 1990.
19. Cheng, A.H.-D. and Morohunfola, O., "Boundary element formulation for multi-aquifer systems," Computational Engineering with Boundary Elements, Vol. 1: Fluid and Potential Problems, BETECH90, University of Delaware, eds. S. Grilli, C.A. Brebbia, and A.H.-D. Cheng, Computational Mechanics Publications, pp. 145–156, July 10–12, 1990.
20. Cheng, A.H.-D., Abousleiman, Y., and Lafe, O.E., "Stochastic BEM for transient groundwater flow with stationary random boundary condition," Computational Engineering with Boundary Elements, Vol. 1: Fluid and Potential Problems, BETECH90, University of Delaware, eds. S. Grilli, C.A. Brebbia, and A.H.-D. Cheng, Computational Mechanics Publications, pp. 157–165, July 10–12, 1990.

21. Cheng, A.H.-D., Carvalho, J., and Detournay, E., "Equivalence between direct and indirect boundary integral equations for linear poroelasticity," *Computational Engineering with Boundary Elements*, Vol. 2: Solid and Computational Problems, BETECH90, University of Delaware, eds. A.H.-D. Cheng, C.A. Brebbia, and S. Grilli, Computational Mechanics Publications, pp. 199–209, July 10–12, 1990.
22. Badmus, T., Cheng, A.H.-D., and Grilli, S., "A three-dimensional Laplace transform BEM for poroelasticity," *Computational Engineering with Boundary Elements*, Vol. 2: Solid and Computational Problems, BETECH90, University of Delaware, eds. A.H.-D. Cheng, C.A. Brebbia, and S. Grilli, Computational Mechanics Publications, pp. 211–222, July 10–12, 1990.
23. Cheng, A.H.-D. and Lafe, O.E., "Stochastic boundary elements for groundwater flow with random hydraulic conductivity," *Boundary Integral Methods, Theory, and Applications*, Proceedings of the IABEM Symposium, Università di Roma "La Sapienza," Rome, eds. L. Morino and R. Piva, Springer-Verlag, pp. 152–161, October 15–19, 1990.
24. Yang, C.Y. and Cheng, A.H.-D., "Chaotic dynamics and structural control," *Proceedings of the U.S. National Workshop on Structural Control Research*, eds., G.W. Housner and S.F. Masri, University of Southern California, pp. 236–240, October 25–26, 1990.
25. Badiy, M., Cheng, A.H.-D., Jaya, I., and Schulkin, M., "Stochastic analysis of acoustic plane wave reflection from inhomogeneous porous media," *Geo-Coast '91*, International Conference on Geotechnical Engineering for Coastal Development, Yokohama, Japan, pp. 11–16, September 3–6, 1991.
26. Yang, C.Y., Hackl, K., and Cheng, A.H.-D., "Chaos, stochasticity and stability of a nonlinear oscillator with control, Part I: Analysis," *Computational Stochastic Mechanics*, 1st International Conference on Computational Stochastic Methods, Corfu, Greece, eds. P.D. Spanos and C.A. Brebbia, Computational Mechanics Publications/Elsevier Applied Science, pp. 223–237, September 17–19, 1991.
27. Cheng, A.H.-D., Hackl, K., and Yang, C.Y., "Chaos, stochasticity and stability of a nonlinear oscillator with control, Part II: Simulation," *Computational Stochastic Mechanics*, 1st International Conference on Computational Stochastic Methods, Corfu, Greece, eds. P.D. Spanos and C.A. Brebbia, Computational Mechanics Publications/Elsevier Applied Science, pp. 239–252, September 17–19, 1991.
28. Cheng, A.H.-D. and Lafe, O.E., "Recent development of leaky aquifer theories," *Computational Water Resource*, Tutorial at the 2nd International Conference on Computer Methods and Water Resources, Rabat, Morocco, eds. D. Bensari, C.A. Brebbia, and D. Ouazar, Computational Mechanics Publications, pp. 279–299, October 7–11, 1991.
29. Lafe, O.E. and Cheng, A.H.-D., "Stochastic analysis of groundwater flow," *Computational Water Resource*, Tutorial at the 2nd International Conference on Computer Methods and Water Resources, Rabat, Morocco, eds. D. Bensari, C.A. Brebbia, and D. Ouazar, Computational Mechanics Publications, pp. 301–322, October 7–11, 1991.
30. Cheng, A.H.-D. and Antes, H., "On free space Green's function for high order Helmholtz equations," *Boundary Element Methods: Fundamentals and Applications*, Proceedings of the IABEM Symposium, Kyoto, Japan, eds. S. Kobayashi and N. Nishimura, Springer-Verlag, pp. 67–71, October 14–17, 1991.
31. Yang, C.Y., Cheng, A.H.-D., Chajes, M.J., and Zhang, L., "Transient response of nonlinear structures with feedback control," *Proceedings, 62nd Shock and Vibration Symposium*, Vol. 1, pp. 140–149, October 29–31, 1991.

32. Hackl, K., Cheng, A.H.-D., Yang, C.Y., and Chajes, M., "Bifurcations and chaos in structural control," *Engineering Mechanics, Proceedings of the 9th Conference*, College Station, Texas, eds. L.D. Lutes and J.M. Niedzwecki, pp. 664–667, May 24–27, 1992.
33. Cheng, A.H.-D. and Cui, L., "Green's function for axisymmetric poroelasticity and coupled thermoelasticity," *Boundary Element Technology VII*, Albuquerque, eds. C.A. Brebbia and M.S. Ingber, CMP/Elsevier, pp. 91–104, June 3–5, 1992.
34. Abousleiman, Y., Cheng, A.H.-D., and Roegiers, J.-C., "Boundary element method for viscoporoelasticity with rock mechanics applications," *Boundary Element Technology VII*, Albuquerque, eds. C.A. Brebbia and M.S. Ingber, CMP/Elsevier, pp. 173–183, June 3–5, 1992.
35. Detournay, E. and Cheng, A.H.-D., "Influence of pressurization rate on the magnitude of the breakdown pressure," *Proceedings of the 33rd U.S. Symposium on Rock Mechanics*, Santa Fe, eds. J.R. Tillerson and W.R. Wawersik, Balkema, pp. 325–333, June 8–10, 1992.
36. Cheng, A.H.-D., Yang, C.Y., and Hackl, K., "Probabilistic order of chaotic dynamics," *Probabilistic Mechanics and Structural and Geotechnical Reliability, Proceedings of the 6th Specialty Conference*, Denver, ed. Y.K. Lin, ASCE, pp. 420–423, July 8–10, 1992.
37. Cheng, A.H.-D., Abousleiman, Y., Detournay, C., and Roegiers, J.-C., "Source solution for a generalized dual porosity model," *Structure et Comportement Mécanique des Géomatériaux—Colloque René Houpert*, Nancy, France, eds. F. Homand, F. Masrouri, and J.-P. Tisot, pp. 109–116, September 10–11, 1992.
38. Gu, H., Elbel, J.L., Nolte, K.G., Cheng, A.H.-D., and Abousleiman, Y., "Formation permeability determination using impulse-fracture injection," *SPE Production Operations Symposium*, SPE 25425, Oklahoma City, pp. 189–201, March 22–23, 1993.
39. EL Harrouni, K., Ouazar, D., Cheng, A.H.-D., and Wrobel, L.C., "Stochastic parameter estimation in groundwater flow," *Advances in Hydro-Science and Engineering*, Vol. 1, Pt. B, *Proceedings of International Conference on Hydrosience and Engineering*, ed. S.S.Y. Wang, Washington, D.C., pp. 1787–1794, June 7–11, 1993.
40. Lafe, O. and Cheng, A.H.-D., "Aquifer parameter identification using stochastic indirect boundary element method," *Boundary Elements XV*, Vol. 1: Fluid Flow and Computational Aspects, Worcester, Massachusetts, eds. C.A. Brebbia and J.J. Rencis, CMP/Elsevier, pp. 131–144, August 10–13, 1993.
41. Cheng, A.H.-D., Grilli, S., and Lafe, O., "Dual reciprocity boundary element based on complete set global shape functions," *Boundary Elements XV*, Vol. 1: Fluid Flow and Computational Aspects, Worcester, Massachusetts, eds. C.A. Brebbia and J.J. Rencis, CMP/Elsevier, pp. 343–357, August 10–13, 1993.
42. Weng, C.H., Huang, C.P., Allen, H.E., Cheng, A.H.-D., and Sanders, P.F., "Leaching of specific metals from chromium-contaminated soil," *Proceedings of International Conference for Heavy Metals in Environment*, Vol. 2, eds. R.J. Allan and J.O. Nriagu, pp. 492–495, Toronto, September 12–17, 1993.
43. Cui, L., Cheng, A.H.-D., Kaliakin, V., Abousleiman, Y., and Roegiers, J.-C., "Finite element analyses of anisotropic poroelastic problems," *Computer Methods and Advances in Geomechanics*, Vol. 2, *Proceedings of 8th International Conference*, eds. H.J. Siriwardane and M.M. Zaman, Balkema, pp. 1567–1572, Morgantown, West Virginia, May 22–28, 1994.
44. Badiéy, M., Cheng, A.H.-D., and Jaya, I., "The effect of anisotropy of layered porous sediments on the plane wave reflection coefficient," *Proceedings, Oceans '94, IEEE*, Vol. II, pp. 220–222, Brest, France, September 13–16, 1994.

45. Cheng, A.H.-D. and Detournay, E., "On singular integral equations of poroelasticity," *Mechanics of Poroelastic Media, Symposium on Recent Developments in Poroelasticity Dynamics of Poroelastic Media*, ASME Winter Meeting, ed. A.P.S. Selvadurai, Kluwer, pp. 93–108, Chicago, November 6–11, 1994.
46. Cui, L., Cheng, A.H.-D., Leshchinsky, D., Abousleiman, Y., and Roegiers, J.-C., "Stability analysis of an inclined borehole in an isotropic poroelastic medium," *Proceedings of 35th U.S. Symposium on Rock Mechanics*, eds. J.J.K. Daemen and R.A. Schultz, Balkema, pp. 307–312, Lake Tahoe, June 4–7, 1995.
47. Abousleiman, Y., Roegiers, J.-C., Cui, L., and Cheng, A.H.-D., "Poroelastic solution of an inclined borehole in a transversely isotropic medium," *Proceedings of 35th U.S. Symposium on Rock Mechanics*, eds. J.J.K. Daemen and R.A. Schultz, Balkema, pp. 313–318, Lake Tahoe, June 4–7, 1995.
48. Lafe, O., Reddy, D.R., and Cheng, A.H.-D., "A global interpolation function (GIF) boundary element code for viscous flows," *31st AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit*, AIAA 95–2339, San Diego, July 10–12, 1995.
49. Cheng, A.H.-D., Rencis, J.J., and Abousleiman, Y., "On generalized plane strain elasticity problems," *Boundary Elements XVII*, eds. C.A. Brebbia, S. Kim, T.A. Osswald, and H. Power, CMP, pp. 167–174, Madison, Wisconsin, July 17–19, 1995.
50. EL Harrouni, K., Ouazar, D., Cheng, A.H.-D., and Walters, G.A., "Optimum aquifer management by genetic algorithm and boundary element method," *Boundary Elements XVII*, eds. C.A. Brebbia, S. Kim, T.A. Osswald, and H. Power, CMP, pp. 471–478, Madison, Wisconsin, July 17–19, 1995.
51. Lafe, O. and Cheng, A.H.-D., "A GIF-based stochastic boundary element method for random porous media," *Computational Mechanics '95, Proceedings of International Conference on Computational Engineering Science*, Vol. 2, eds. A.N. Atluri, G. Yagawa, and T.A. Cruse, Springer-Verlag, pp. 3,000–3,005, Hawaii, July 30–August 3, 1995.
52. Wiercigroch, M., Badiy, M., Simmen, J., and Cheng, A.H.-D., "Bifurcation and stability analysis of parabolic ray equations for acoustic wave propagation in an underwater sound channel," *Acoustics, Vibrations, and Rotating Machines, Proceedings of 1995 Design Engineering Technical Conferences*, ASME, Vol. 3, Pt. B, DE-Vol. 84-2, pp. 355–360, Boston, September 17–21, 1995.
53. EL Harrouni, K., Ouazar, D., and Cheng, A.H.-D., "Boundary and parameter identification using genetic algorithms and boundary element method," *Computer Methods and Water Resources III*, pp. 487–495, Beirut, Lebanon, September 25–28, 1995.
54. Sidauruk, P., Cheng, A.H.-D., Ouazar, D., Hamidi, A., and Chibani, L., "Contaminant source and parameter identification by correlation coefficient optimization," *Computer Methods and Water Resources III*, pp. 237–244, Beirut, Lebanon, September 25–28, 1995.
55. Chen, J. and Cheng, A.H.-D., "Time domain fundamental solution to nonclassical thermoelasticity with one relaxation time, Part I: Three-dimensional solution," *Proceedings of 11th ASCE Engineering Mechanics Conference*, eds. Y.K. Lin and T.C. Su, pp. 80–83, Ft. Lauderdale, Florida, May 19–22, 1996.
56. Chen, J. and Cheng, A.H.-D., "Time domain fundamental solution to nonclassical thermoelasticity with one relaxation time, Part II: Two-dimensional solution," *Proceedings of 11th ASCE Engineering Mechanics Conference*, eds. Y.K. Lin and T.C. Su, pp. 88–91, Ft. Lauderdale, Florida, May 19–22, 1996.

57. Kaliakin, V.N., Cui, L., and Cheng, A.H.-D., "Generalized plane strain finite element analysis: Geomechanical applications," Proceedings of 11th ASCE Engineering Mechanics Conference, eds. Y.K. Lin and T.C. Su, pp. 289–292, Ft. Lauderdale, Florida, May 19–22, 1996.
58. Cui, L., Abousleiman, Y., Cheng, A.H.-D., and Roegiers, J.-C., "Anisotropy effect on one-dimensional consolidation," Proceedings of 11th ASCE Engineering Mechanics Conference, eds. Y.K. Lin and T.C. Su, pp. 471–474, Ft. Lauderdale, Florida, May 19–22, 1996.
59. Badiey, M., Cheng, A.H.-D., and Mu, Y., "Statistical analyses of acoustical wave velocity in porous seafloor," Proceedings of 11th ASCE Engineering Mechanics Conference, eds. Y.K. Lin and T.C. Su, pp. 800–803, Ft. Lauderdale, Florida, May 19–22, 1996.
60. Abousleiman, Y. and Cheng, A.H.-D., "Anelastic strain recovery of deep cores with presence of pore pressure," Proceedings of 11th ASCE Engineering Mechanics Conference, eds. Y.K. Lin and T.C. Su, pp. 935–938, Ft. Lauderdale, Florida, May 19–22, 1996.
61. Cheng, A.H.-D., "Anisotropic coefficients of poroelasticity," Proceedings of 11th ASCE Engineering Mechanics Conference, eds. Y.K. Lin and T.C. Su, pp. 1094–1097, Ft. Lauderdale, Florida, May 19–22, 1996.
62. Abousleiman, Y., Bai, M., and Cheng, A.H.-D., "A PKN model with pressure-dependent leakoff—Part I: Homogeneous poroelastic media," Proceedings 2nd North American Rock Mechanics Symposium, Vol. 1, pp. 1019–1022, Montréal, Québec, Canada, June 19–21, 1996.
63. Ennaciri, B., Ouazar, D., EL Harrouni, K., Cheng, A.H.-D., and Esselaoui, D., "Boundary inverse problem of Helmholtz operator by genetic algorithms and boundary elements," Boundary Element Technology XII, eds. J.I. Frankel, C.A. Brebbia, and M.A.H. Aliabadi, pp. 131–139, Knoxville, Tennessee, April 9–11, 1997.
64. Mu, Y., Cheng, A.H.-D., and M. Badiey, "Water wave driven seepage flux in sea bottom sediment," Computer Methods and Water Resources IV, eds. Y. Abousleiman, C.A. Brebbia, and A.H.-D. Cheng, pp. 79–88, Byblos, Lebanon, June 16–18, 1997.
65. EL Harrouni, K., Ouazar, D., and Cheng, A.H.-D., "Finite elements-sharp interface approach and Gas for parameter estimation," Computer Methods and Water Resources IV, eds. Y. Abousleiman, C.A. Brebbia, and A.H.-D. Cheng, pp. 269–277, Byblos, Lebanon, June 16–18, 1997.
66. Najj, A., Cheng, A.H.-D., and Ouazar, D., "Boundary element solution of stochastic saltwater/freshwater interface problems," Engineering Mechanics: A Force for the 21st Century, 12th Engineering Mechanics Conference, ASCE, eds. H. Murakami and L.E. Luco, pp. 1653–1656, La Jolla, California, May 17–20, 1998.
67. El Harrouni, K., Ouazar, D., and Cheng, A.H.-D., "GAs for parameter estimation in contaminant transport by groundwater," CDROM, ICHE'98, 3rd International Conference on Hydroscience and Engineering, eds. K.P. Holz, W. Bechteler, M. Kawahara, and S.S.Y. Wang, Brandenburg University of Technology, Cottbus, Germany, August 31–September 3, 1998.
68. El Harrouni, K., Ouazar, D., and Cheng, A.H.-D., "Salt/fresh-water interface model and GAs for parameter estimation," Proceedings, 15th Salt Water Intrusion Meeting, W. de Breuck and L. Walschot, L (eds.), Ghent, Belgium, May 1998.
69. Shen, H., Cheng, A.H.-D., Wang, K.-H., and Teng, M., "Issues on teaching environmental fluid mechanics," EM 2000, 14th Engineering Mechanics Conference, ASCE, ed. J.L. Tassoulas, University of Texas at Austin, May 21–24, 2000.

70. Cheng, A.H.-D., Chen, C.-S., Golberg, M.A., and Young, D.-L., "Radial basis functions, polynomial basis functions, particular solutions, and DRBEM," EM2000, 14th Engineering Mechanics Conference, ASCE, ed. J.L. Tassoulas, University of Texas at Austin, May 21–24, 2000.
71. Muleshkov, A.S., Chen, C.S., Golberg, M.A., and Cheng, A.H.-D., "Analytic particular solutions for inhomogeneous Helmholtz-type equations," *Advances in Computational Engineering and Sciences*, Vol. 1, International Conference on Computational Engineering and Sciences, eds. S.N. Atluri and F.W. Brust, Tech Science Press, pp. 27-32, Los Angeles, August 21–25, 2000.
72. Chen, C.S., Golberg, M.A., Ganesh, M., and Cheng, A.H.-D., "The dual reciprocity method using compactly supported radial basis functions with multilevel method," *Boundary Element XXII*, 22nd International Conference on Boundary Element Method, eds. C.A. Brebbia and H. Power, pp. 555-564, Cambridge, UK, September 4–6, 2000.
73. Cheng, A.H.-D., Ghassemi, A., and Detournay, E., "Modeling heat extraction from a fracture in hot dry rock using an integral equation method," 26th Annual Workshop on Geothermal Reservoir Engineering, Palo Alto, California, January 29–31, 2001.
74. Cheng, A.H.-D., Ghassemi, A., and Detournay, E., "Integral equation solution of heat extraction from a fracture in hot dry rock," *Boundary Element Technology XIV*, eds. C.A. Brebbia and A. Kassab, pp. 45-54, Orlando, Florida, March 12–14, 2001.
75. Ghassemi, A. and Cheng, A.H.-D., "Poroelastic analyses near subsurface excavations and underneath a dam," *Boundary Element Technology XIV*, eds. C.A. Brebbia and A. Kassab, pp. 185-193, Orlando, Florida, March 12–14, 2001.
76. Tsai, C.C., Young, D.L., and Cheng, A.H.-D., "An iterative DRBEM for three-dimensional Poisson's equation," *Boundary Element Technology XIV*, eds. C.A. Brebbia and A. Kassab, pp. 323-332, Orlando, Florida, March 12–14, 2001.
77. Benhachmi, M.K., Ouazar, D., Naji, A., Cheng, A.H.-D., and EL Harrouni, K., "Optimal management in saltwater-intruded coastal aquifers by simple genetic algorithm," *Cyber Proceedings*, 1st International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, eds. D. Ouazar and A.H.-D. Cheng, Essaouira, Morocco, April 23–25, 2001.
78. Benhachmi, M.K., Ouazar, D., Naji, A., Cheng, A.H.-D., and EL Harrouni, K., "Chance constrained optimal management in saltwater-intruded coastal aquifers using genetic algorithms," *Cyber Proceedings*, 1st International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, eds. D. Ouazar and A.H.-D. Cheng, Essaouira, Morocco, April 23–25, 2001.
79. Tsai, C.C., Young, D.L., and Cheng, A.H.-D., "Meshless BEM for steady three-dimensional Stokes flows," *International Conference on Computational Engineering Science*, ICES 2001, Puerto Vallarta, Mexico, August 19–24, 2001.
80. Cheng, A.H.-D. and Ghassemi, A., "Effect of fluid leakoff on heat extraction from a fracture in hot dry rock," *Geothermal Resources Council Annual Meeting*, San Diego, California, August 26–29, 2001.
81. Cheng, A.H.-D. and Lopatnikov, S.L., "Variational formulation of poroelasticity with physically based material coefficients," 15th Engineering Mechanics Conference, ASCE, Columbia University, New York, June 2–5, 2002.
82. Muleshkov, A.S., Golberg, M.A., Cheng, A.H.-D., and Chen, C.S., "Polynomial particular solutions for Poisson problems," *Boundary Elements 24*, eds. C.A. Brebbia, A. Tadeu, and V. Popov, pp. 115-124, Sintra, Portugal, June 17–19, 2002.

83. Cheng, A.H.-D. and Lopatnikov, S.L., "Variational formulation of fluid infiltrated porous materials and physically-based micromechanical material constants," *Poromechanics II*, Proceedings of the 2nd Biot Conference on Poromechanics, eds. J.-L. Auriault, C. Geindreau, P. Royer, J.-F. Bloch, C. Boutin, and J. Lewandowska, pp. 385-390, Balkema, Grenoble, France, August 26–28, 2002.
84. Benhachmi, M.K., Ouazar, D., Naji, A., Cheng, A.H.-D., and EL Harrouni, K., "Pumping optimization in saltwater intruded aquifers by simple genetic algorithm—Deterministic model," Proceedings of the 2nd International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, ed. L. Marin, Merida, Mexico, March 30–April 2, 2003.
85. Benhachmi, M.K., Ouazar, D., Naji, A., Cheng, A.H.-D., and EL Harrouni, K., "Chance-constrained pumping optimization in saltwater intruded aquifers by simple genetic algorithm—Stochastic model," Proceedings of the 2nd International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, ed. L. Marin, Merida, Mexico, March 30–April 2, 2003.
86. Benhachmi, M.K., Ouazar, D., Naji, A., Cheng, A.H.-D., and El Harrouni, K., "Pumping optimization in saltwater intruded aquifers by simple genetic algorithm—Deterministic model," Proceedings of Coastal Aquifers Intrusion Technology: Mediterranean Countries International Conference (TIAC'03), Vol. 1, pp. 291-293, Alicante, Spain, 2003.
87. Gaaloul, N. and Cheng, A.H.-D., "Hydrogeological and hydrochemical investigation of coastal aquifers in Tunisia—Crisis in overexploitation and salinization," Proceedings of the 2nd International Conference on Saltwater Intrusion and Coastal Aquifers—Monitoring, Modeling, and Management, ed. L. Marin, Merida, Mexico, March 30–April 2, 2003.
88. Cheng, A.H.-D., Lopatnikov, S.L., and Gillespie, J.W., "Lagrangian formulation of poroelasticity with porosity dynamics," Proceedings, 16th Engineering Mechanics Conference, ASCE, University of Washington, Seattle, July 16–18, 2003.
89. Cheng, A.H.-D., "Acoustics of porous materials," Proceedings, 11th Annual International Conference on Composites/Nano Engineering, ed. D. Hui, pp. 87-88, Hilton-Head, South Carolina, August 8-14, 2004.
90. Cheng, A.H.-D. and Cabral, J.J.S.P., "Direct solution of certain ill-posed boundary value problems by collocation method," *Boundary Element XVII*, eds. A. Kassab, C.A. Brebbia, E. Divo and D. Poljak, pp. 35–45, Orlando, Florida, March 15–17, 2005.
91. Cheng, A.H.-D. and Abousleiman, Y.N., "Porosity equilibrium, strain hardening, and intrinsic micromechanical model of poromechanics," *Poromechanics III*, Biot Centennial (1905-2005), Proceedings, 3rd Biot Conference on Poromechanics, eds. Y.N. Abousleiman, A.H.-D. Cheng and F.-J. Ulm, pp. 155–161, Norman, Oklahoma, May 24–27, 2005.
92. Nygren, A., Ghassemi, A., and Cheng, A.H.-D., "Effects of cold-water injection on fracture aperture and injection pressure," Geothermal Resources Council Annual Meeting, Reno, Nevada, September 25–28, 2005.
93. Qahman, K., Larabi, A., Ouazar, D., Naji, A., and Cheng, A.H.-D., "Optimal and sustainable extraction of groundwater in Gaza coastal aquifer," International Conference on Integrated Water Resources Management and Challenges of the Sustainable Development, Marrakech, Morocco, May 23–25, 2006.
94. Aharmouch, A., Larabi, A., and Cheng, A.H.-D., "Numerical experiments on the convergence of the coupled seawater intrusion model with a centroid-only velocity consistent method," International Conference on Integrated Water Resources Management and Challenges of the Sustainable Development, Marrakech, Morocco, May 23–25, 2006.

95. Gaaloul, N. and Cheng, A.H.-D., "Methodology of the hydraulics and hydrodynamics modeling aquifers-stream interactions," IAHR-GW2006, Groundwater Hydraulics in Complex Environments, Toulouse, France, June 12–14, 2006.
96. Pal, G., Al-Ostaz, A., Mantena, P.R., Cheng, A.H.-D., and Song, C.R., "Molecular dynamics simulation of SWCNT–Polymer nanocomposite and its constituents," 21st Annual Technical Conference of the American Society of Composite Materials, University of Michigan, Dearborn, September 17–26, 2006.
97. Song, C.R., Cho, H., Jung, Y.-H., Cheng, A.H.-D., and Al-Ostaz, A., "Bridging molecular, particulate, and continuum mechanics for geomechanics application," Geo-Denver 2007, February 18–21, 2007.
98. Mantena, P.R., Al-Ostaz, A., and Cheng, A.H.-D., "Dynamic response and molecular simulations of nano-composites," to be presented in 16th International Conference on Composite Materials, Kyoto, Japan, July 8–13, 2007.