

Margot Gerritsen

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Associate Professor of Energy Resources Engineering, Director of the Institute for Computational & Mathematical Engineering, with courtesy appointment in Mechanical Engineering and Civil and Environmental Engineering



Contact Information

Email: margot.gerritsen@stanford.edu

Phone: (650) 725-3542, (650) 725-2727

Fax: (650) 725-2099

Office: GESB 088, M10 Huang

Internet Links:

- [Computational and Mathematical Engineering](#)
- [Computational Approaches to Digital Stewardship](#)
- [Personal Website](#)

Bio	Research & Scholarship	Teaching	Publications
<ul style="list-style-type: none"> ■ Professor, Energy Resources Engineering ■ Senior Fellow, Precourt Institute for Energy ■ Professor (By courtesy), Civil and Environmental Engineering ■ Member, Bio-X ■ Member, Maternal & Child Health Research Institute (MCHRI) <p>I was born and raised in the Netherlands. After receiving my MS degree in Applied Mathematics at the University of Delft, I moved to the U.S. in search of hillier and sunnier places. In 1996 I received my Ph.D. in Scientific Computing and Computational Mathematics at Stanford University. Before returning to Stanford in 2001, I spent nearly five years in Auckland, New Zealand as a faculty member in the Department of Engineering Science.</p> <p>I'm a professor in the Department of Energy Resources Engineering at Stanford, interested in computer simulation and mathematical analysis of engineering processes. From 2010 to 2018, I directed the Institute for Computational and Mathematical Engineering (http://icme.stanford.edu). Since 2015, I'm the Senior Associate Dean for Educational Affairs in the School of Earth, Energy and Environmental Sciences.</p> <p>I specialize in renewable and fossil energy production. I am also active in coastal ocean dynamics and yacht design, as well as several areas in computational mathematics including search algorithm design and matrix computations.</p> <h3>Administrative Appointments</h3> <ul style="list-style-type: none"> ■ Senior Associate Dean, School of Earth, Energy and Environmental Sciences (2015 - Present) ■ Visiting Professor, Institut de Mechanique des Fluides, Toulouse, France (2013 - 2013) ■ Visiting Professor, Institut National Polytechnique de Toulouse, France (2012 - 2013) ■ Director, Institute for Computational & Mathematical Engineering, Stanford (2010 - 2018) ■ Adjunct Professor, Applied and Computational Mathematics, University of Bergen, Norway (2010 - 2016) ■ Visiting Professor, Department of Scientific Computing, Uppsala University, Sweden (2008 - 2012) ■ Visiting Professor, Applied Earth Sciences, Delft University of Technology (2008 - 2010) ■ Professor by courtesy, Mechanical Engineering, Stanford (2004 - Present) ■ Steering committee, Institute for Computational Mathematics in Engineering, Stanford (2004 - 2005) ■ Associate Professor, Department of Energy Resources Engineering, Stanford University (2001 - Present) ■ Adjunct Professor, Civil & Environmental Engineering, Stanford (2000 - Present) 			

- Lecturer, Department of Engineering Science, University of Auckland, New Zealand (1997 - 2001)
- Lecturer, University of Colorado, Denver (1991 - 1991)
- Research Associate, Delft University of Technology (1990 - 1990)
- Research Assistant, Shell Laboratories, Rijswijk (1987 - 1987)
- Lecturer, Summer school, Delft University of Technology (1985 - 1989)

Honors and Awards

- Fellow, Society for Industrial & Applied Mathematics (SIAM) (2018)
- Teaching Honor Roll, Tau Beta Pi (2018)
- Oswald G. Villard University Fellow in Undergraduate Education, VPUE Stanford (2014)
- Richard W. Lyman Award, Stanford Alumni Association (2014)
- SWE Professor of the Year, Society for Women Engineers, Stanford (2014)
- 2011 Magne Espedal Professor II, University of Bergen, Norway (2011)
- School of Earth Sciences Award for Excellence in Teaching, Stanford University (2011)
- Stanford Fellow, Stanford University (2010-2012)
- Fellow, Leopold Leadership Program (2009)
- Faculty Research Fellow, Clayman Institute (2008 - 2010)
- Frederick E. Terman Fellow, Stanford University (2002 - 2004)
- Top 20 teacher, School of Engineering, Auckland University (1997-2001)
- International Rotary Award, Rotary (1990)

University Service and Professional Activities

- Co-chair, Global Women in Data Science Conference, Stanford, widsconference.org (2016 - Present)
- Elected member, Board of Trustees, Society for Industrial & Applied Mathematics (2016 - Present)
- Member, 49th Faculty Senate, Stanford (2016 - Present)
- Member, Faculty Search Committee, Aeronautics & Astronautics, Stanford (2016 - Present)
- Member, Faculty Advisory Board, Knight-Hennessy Scholarship Program (2016 - Present)
- Member, Organizing Committee SPE Reservoir Simulation Symposium, Houston, February 2017 (2016 - Present)
- Member, Steering Committee of the Faculty Senate, Stanford (2016 - Present)
- Member, Organizing Committee, Reactive Flows in Deformable Complex Media, 2nd Oberwolfach Conference, Germany, 2018 (2016 - Present)
- Member, Faculty Search Committee, Geological Sciences, Stanford (2016 - Present)
- Member, SIAM Geosciences Prize Committee (2016 - Present)
- Member, Organizing Committee, Geilo Winter School, Norway (2016 - Present)
- Member, Faculty Search Committee, Math+X, Stanford (2016 - Present)
- Co-chair, Bay Area Scientific Computing Day (2016 - 2016)
- Member, Presidential Search Committee, Stanford (2015 - 2016)
- Co-chair, local organizer, SIAM Geosciences Conference, Stanford, June 2015 (2015 - 2015)
- Co-initiator and co-chair, 1st Women in Data Science Conference, Stanford, widsconference.org (2015 - 2015)
- Member, Breadth Governance Board, Stanford (2014 - Present)
- Member, Undergraduate Advisory Council, Stanford (2014 - Present)
- Chair, Taskforce on Women in Leadership, Stanford (2014 - 2016)
- Member, SoE Future Committee (2014 - 2015)
- Member, 47th Faculty Senate, Stanford (2014 - 2015)
- Co-chair, Bay Area Scientific Computing Day (2014 - 2014)
- Co-chair, CUDA on Campus Conference, Stanford (2014 - 2014)
- Member, Organizing Committee, Reactive Flows in Deformable Complex Media, Oberwolfach Conference, Germany (2014 - 2014)
- Member, Faculty Search Committee, Management Science & Engineering, Stanford (2014 - 2014)
- Member, Faculty Search Committee, Math+X, Stanford (2014 - 2014)
- Associate Editor, Transport in Porous Media (Springer) (2013 - Present)
- Member, Editorial Board, Survey & Review, SIAM (2013 - Present)
- Member, SoE Dean Search Committee, Stanford (2013 - Present)
- Member, University Course Evaluation Committee (2013 - 2015)
- Co-Chair, SIAM Annual Conference, Chicago, July 2014 (2013 - 2014)
- Member, 46th Faculty Senate, Stanford (2013 - 2014)
- Member, Advisory Board, University College Dublin (2013 - 2014)
- Co-chair, CUDA on Campus Conference, Stanford (2013 - 2013)
- Member, Faculty Search Committee, Aeronautics & Astronautics (2013 - 2013)
- Member, LLNL Computational Directorate Review Committee (2013 - 2013)

- Member, Faculty Advisory Group for Research Computing, Stanford (2012 - 2014)
- Member, 45th Faculty Senate, Stanford (2012 - 2013)
- Chair, Review Committee Computational Sciences, KAUST, February 2012 (2012 - 2012)
- Co-chair, CUDA on Campus Conference, Stanford (2012 - 2012)
- Co-chair, Bay Area Scientific Computing Day (2012 - 2012)
- Member, 44th Faculty Senate, Stanford (2011 - 2012)
- Co-chair, IMA Workshop on Societally Relevant Computing, Minneapolis, April 2011 (2011 - 2011)
- Member, Senate Committee on Committees, Stanford (2010 - 2012)
- Member (re-elected), Council of the Society of Industrial and Applied Mathematics (SIAM) (2010 - 2012)
- Member, 43rd Faculty Senate, Stanford (2010 - 2011)
- Member, Integrated Assessments, Powell Center working group USGS (2010 - 2011)
- Co-chair, Bay Area Scientific Computing Day (2010 - 2010)
- Member, Organizing Committee, Gordon Research Conference on Flow & Transport in Permeable Media (2010 - 2010)
- Chair (re-elected), SIAM Activity Group Geosciences (2009 - 2011)
- Chair, Woods and Precourt Large Scale Solar Technology & Policy Forum (2009 - 2010)
- Associate Editor, Journal of Sailboat Technology (2008 - Present)
- Member, Special Series Committee, Journal of Petroleum Technology, Society of Petroleum Engineers (2008 - 2010)
- Member, Council of InterPore, International Society for Porous Media (2008 - 2010)
- Member, Council of the Society for Industrial and Applied Mathematics (SIAM) (2008 - 2010)
- Co-producer, Smart Energy podcast www.smartenergyshow.com (2007 - 2014)
- Co-director, Center of Excellence for Computational Approaches to Digital Stewardship (CADS) (2007 - 2011)
- Chair, SIAM Activity Group on Geosciences (2007 - 2009)
- Member, Council of the Society of Industrial and Applied Mathematics (SIAM) (2007 - 2009)
- Consultant, Library of Congress, World Digital Library development (2007 - 2007)
- Member, Diversity Committee Mechanical Engineering, Stanford (2005 - 2007)
- Member, Advisory Board, School of Earth Sciences, Stanford (2004 - 2007)
- Director, Stanford-National Geographic Pterosaur Replica Project (2004 - 2006)
- Member, Steering Committee, Institute for Computational & Mathematical Engineering, Stanford (2004 - 2006)
- Associate Editor, International Journal of Small Craft Technology (2003 - 2005)
- Member, Faculty search committee, Geological Sciences, Stanford (2003 - 2003)
- Reviewer, Journal of Computational Physics, Journal of Fluid Mechanics, Transport in Porous Media, Society of Petroleum Engineers, Department of Energy, US Civilian Research and Development Foundation (2003 - 2003)
- Advisor, Pre-major advisor, Stanford (on and off) (2002 - Present)
- Faculty advisor, Stanford SIAM Student Chapter (2002 - Present)
- Director, Stanford Yacht Research Unit (2002 - 2010)
- Member, SPE, AGU, SIAM, KIVI, AWIS, SWE (2001 - Present)
- Member, Organizing Committee, Waitangi Conference, University of Auckland (2000 - 2000)
- Chair, Student Affairs Committee, School of Engineering, University of Auckland (1999 - 2001)
- Patron, Engineering Postgraduate Society, University of Auckland (1999 - 2000)
- Member, School Policy Team, School of Engineering, University of Auckland (1998 - 2000)
- Member, Equal Education Committee, School of Engineering, University of Auckland (1997 - 2001)
- Patron, Auckland University Engineering Society (1997 - 2000)
- Founder, SCCM, ICME Computational Consulting Group, Stanford (1995 - Present)
- Teacher, Upward Bound Program, Palo Alto (1995 - 1995)

Education

- PhD, Stanford University, Scientific Computing and Computational Mathematics (1997)
- MSc, Delft University of Technology, Applied Mathematics (1990)

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