**WEINAN E**

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## Education

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| Ph.D. | Mathematics | UCLA | 1989 |
| M.S. | Mathematics | Chinese Academy of Sciences | 1985 |
| B.S. | Mathematics | University of Science and Technology of China | 1982 |

## Positions

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| 9/99- | Professor, Department of Mathematics and PACM, Princeton University |
| 9/00- | Changjiang Professor, Peking University |
| 9/11- | Professor, BICMR and School of Mathematical Sciences, Peking University |
| 9/97-8/99 | Professor, Courant Institute, New York University |
| 9/94-8/97 | Associate Professor, Courant Institute, New York University |
| 9/92-8/94 | Long Term Member, Institute for Advanced Study, Princeton |
| 9/91-8/92 | Member, Institute for Advanced Study, Princeton |
| 9/89-8/91 | Visiting Member, Courant Institute, New York University |

## Awards and Honors

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| 1993 | Alfred P. Sloan Foundation Fellowship |
| 1996 | Presidential Early Career Award in Science and Engineering |
| 1999 | Feng Kang Prize in Scientific Computing |
| 2003 | ICIAM Collatz Prize, awarded at the 5th International Congress of of Industrial & Applied Math. |
| 2005 | Elected Fellow of Institute of Physics |
| 2009 | Elected Fellow of SIAM |
| 2009 | The Ralph E. Kleinman Prize, SIAM |
| 2011 | Elected member of the Chinese Academy of Sciences. |

**Selected Lectures**

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| 12/2000 | Invited Speaker, Current Developments in Mathematics, Harvard University. |
| 6/2001 | Invited Speaker, Annual Meeting of the American Physical Society, Division of Computational Physics, Boston. |
| 8/2002 | Invited Speaker, International Congress of Mathematicians, Beijing. |
| 1/2003 | Invited Hour Speaker, 109th Annual Meeting of the American Mathematical Society, Baltimore. |
| 4/2004 | Class of '27 Lecturer in Applied Mathematics, Rensselaer Polytechnic Institute. |
| 8/2004 | Plenary Speaker, Annual Meeting of the Chinese Society of Industrial and Applied Mathematics, Xiangtan, China. |
| 3/2005 | Speaker, School of Mathematics 75th Anniversary Celebration, Institute for Advanced Study. |
| 7/2005 | Invited Speaker, American Conference of Theoretical Chemistry, Los Angeles. |
| 10/2005 | Plenary Speaker, American Institute of Chemical Engineers Annual Meeting, Topical Conference on Multiscale Modeling, Cincinnati. |
| 7/2006 | Semi-Plenary Speaker, 7th World Congress on Computational Mechanics, Los Angeles. |
| 9/2006 | Invited Speaker, Annual Meeting of the American Chemical Society, Symposium on the Theory of Rare Events and Accelerated Dynamics, San Francisco. |
| 7/2007 | Invited Speaker, International Congress of Industrial and Applied Mathematics, Zurich. |
| 3/2008 | Invited Speaker, Eastern Section of the American Mathematical Society Meeting, New York. |
| 5/2008 | Distinguished Lecturer, University of Wisconsin, Madison. |
| 6/2008 | Goran Gustafsson Lecturer in Mathematics, Royal Institute of Technology, Sweden. |
| 10/2008 | Plenary Speaker, 4th International Conference on Multiscale Modeling of Materials, Tallahassee. |
| 5/2009 | Feng Kang Lecturer, 3rd SciCADE meeting, Beijing. |
| 2/2012 | Invitd Speaker, March meeting of the American Physical Society, Division of computational physics, Boston. |
| | Plenary Speaker for the 1st (Beijing, 1998, declined), 2nd (Taiwan, 2001) and 4th (Hangzhou, 2007) International Congress of Chinese Mathematicians. |

**Selected Synergistic Activities**

**Editorial committee** of the Journal American Mathematical Society.
**Editorial board** of Acta Mathematica Sinica, Acta Mathematicae Applicatae Sinica, Archive of Rational Mechanics and Analysis, Chinese Annals of Mathematics, Communications in Computational Physics, Communications in Contemporary Mathematics, Communications in Mathematical Sciences, Continuum Mechanics and Thermodynamics, Journal of Computational Mathematics, Journal of Mathematical Physics, Journal of Turbulence, etc.
**Past editorial board member** of J. of Statistical Physics, Nonlinearity, SIAM J. Multiscale Modeling and Simulation, etc.

**Co-organizer** (with Luis Caffarelli) of Park City Summer School in Mathematics, 1995.
**Organizer** of the special year on "Stochastic Partial Differential Equations and Turbulence Theory", Institute for Advanced Study, 2002-2003.
**Co-organizer** (with Kaushik Bhattacharya) of the 4th SIAM Meeting on Material Science, Los Angeles, 2004.
**Member** of the Program Committee for the 2nd, 3rd and 5th SIAM Meeting on Material Science.
**Member** of the Organizing Committee, IPAM program on Multiscale Modeling, 2005.
**Member** of the Scientific Committee, 7th World Congress in Computational Mechanics, Los Angeles, 2006.
**Member** of the Organizing Committee, IMA special year on Mathematics and Chemistry, 2008-2009.

**Chairman** of the Scientific Committee, Center for Computational Science and Engineering, Peking University, 2003-.
**Member** of the Scientific Committee, State Key Lab of Nonlinear Science, Institute of Mechanics, The Chinese Academy of Sciences, 2005-.
**Member** of the Scientific Committee, State Key Lab of Scientific and Engineering Computing, Institute of Computational Mathematics, The Chinese Academy of Sciences, 2007-.
**Member** of the Scientific Committee, School of Mathematical Sciences, Peking University, 2008-.
**Member** of the Scientific Advisory Board for Banff International Research Station, 2007-
**Member** of the Scientific Advisory Board for the Berlin Mathematics School , 2009-

**Member** of the committee for selecting the Feng Kang Prize winners, 2005-.
**Member** of the committee for selecting the Collatz Prize winner for the 6th International Congress of Industrial and Applied Mathematics (ICIAM).
**Member** of the Scientific Advisory Committee for the 7th International Congress of Industrial and Applied Mathematics (ICIAM).
**Chairman** of the committee for selecting the Gibbs Lecturer, American Mathematical Society.

**Changjiang Visiting Professor**, 2000-2005, Peking University.
**Hua Loo-Keng Visiting Professor**, University of Science and Technology, China.
**Kuo Yung-Huai Visiting Professor**, Institute of Mechanics, Chinese Academy of Science.

**Associate Faculty Member** of the Department of Operational Research and Financial Engineering, Princeton University.

**Member** of American Mathematical Society, American Physical Society, SIAM.
**Fellow** of Institute of Physics.

**Advisors and Mentors**

Advisor of master degree thesis: Professor Hongci Huang.
Advisor of doctoral degree thesis: Professor Bjorn Engquist.
Post-doctoral mentor: Professor Robert V. Kohn.

**Past Students and Post-docs**

NYU= New York University, PU=Princeton University, CAS = The Chinese Academy of Science, PKU = Peking University.

**Students:** Carlos Garcia (NYU, 1999, now at UCSB), Yuan Lui (NYU, 2000, now at Soloman-Brothers), Xiaoming Wu (NYU, 2000, now at Shephard University), Yang Xiang (NYU, 2001, now at Hong Kong University of Science and Technology), Weiqing Ren (NYU, 2002, now at Courant Institute, New York University), Di Liu (PU, 2003, now at Michigan State University), Jerry Yang (PU, 2006, now at Caltech), Minxin Chen (CAS, 2006, now at Suzhou Univ), Ming-Yih Wu (PU, 2006, now at Thales Hedge Fund), Dong Li (PU, 2006, now at Institute for Advanced Study), Congming Jin (CAS, 2006, now at HKUST), Dongzhuo Zhou (PKU, 2006, now at the Courant Institute), Dan Hu (PKU, 2007, now at the Courant Institute), Xiang Zhou (PU, 2009, now at Princeton), Jianfeng Lu (PU, 2009, now at the Courant Institute), Jingrun Chen (CAS, 2010, now at UCSB), Lin Lin (Princeton, 2011, now at the Lawrence Berkeley Lab).

**Post-docs:** Felix Otto (1996-1997, now at University of Bonn), Cyrill Muratov (1997-1999, now at New Jersey Institute of Technology), Tim Schulze (1997-1999, now at University of Tennessee), Eric Vanden-Eijnden (1998-1999, now at Courant Inst), Zydrunas Gimbutas (1999-2000, now at NYU), Zhongyi Huang (2000-2002, now at Tsinghua University), Xiantao Li (2002-2004, now at Penn State University), Assyr Abdulle (2003-2004, now at EPFL), Jing Shi (2005-2006, now at Wayne State University), Xu Yang (2008-2010, now at Courant Institute), Amit Samanta, Yajun Zhou, Phil Trinh.

**Research Interests**

Kohn-Sham equation and density functional theory, with application to electronic structure analysis
Theory and modeling of rare events with applications in chemistry, fluid mechanics and material sciences
Multiscale modeling
Stochastic partial differential equations
Mathematical theory of solids: from atomic to macroscopic scales