

# Curriculum Vitae

Huajian Gao

Xinghua University Professor  
Tsinghua University, China

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<http://www.researcherid.com/rid/F-9360-2010>

<http://scholar.google.com/citations?user=RyUTlccAAAAJ&hl=en>

<https://sites.brown.edu/gao-group-nanomechanics-engineering-biological-systems/>

## EDUCATION

|       |                     |                           |      |
|-------|---------------------|---------------------------|------|
| Ph.D. | Engineering Science | Harvard University        | 1988 |
| M.S.  | Engineering Science | Harvard University        | 1984 |
| B.S.  | Solid Mechanics     | Xi'an Jiaotong University | 1982 |

## EXPERIENCES

1/2024-present           Xinghua University Professor  
Department of Engineering Mechanics  
**Tsinghua University**

6/2019-2/2024           Distinguished University Professor  
College of Engineering  
College of Science  
**Nanyang Technological University**

6/2019-2/2024           Scientific Director  
**Institute of High Performance Computing**  
Agency for Science, Technology and Research (A\*Star), Singapore

6/2019-present           Walter H. Annenberg Professor Emeritus of Engineering  
7/2006-5/2019           Walter H. Annenberg Professor of Engineering  
1/2006-5/2019           Professor of Engineering  
9/2005-12/2005          Visiting Professor  
School of Engineering  
**Brown University**

1/2001-6/2006           Director and Scientific Member of Max Planck Society  
**Max Planck Institute for Metals Research**

1/2002-6/2006           Honorary Professor  
Faculty of Chemistry  
**University of Stuttgart**

9/2002-8/2004 Visiting Professor  
9/2000-8/2002 Professor  
1/1995-8/2000 Associate Professor  
9/1988-12/1994 Assistant Professor  
Department of Mechanical Engineering  
Department of Materials Science and Engineering (by courtesy)  
**Stanford University**

4/1988-8/1988 Postdoctoral Research Fellow (w/ Prof. James R. Rice)  
Division of Applied Science  
**Harvard University**

6/1985-3/1988 Research Assistant (w/ Prof. James R. Rice)  
Division of Applied Science  
**Harvard University**

8/1982-8/1983 Lecturer  
Department of Engineering Mechanics  
**Xi'an Jiaotong University**

## **VISITING POSITIONS**

1/2017-12/2019 Hagler Institute for Advanced Study Faculty Fellow  
Department of Mechanical Engineering  
**Texas A&M University**

1/2016-11/2017 Distinguished Visiting Chair Professor  
Department of Mechanical Engineering  
**Hong Kong Polytechnic University**

12/2014-12/2014 Visiting Professor  
**Soochow University**

6/2012-2022 Distinguished Visiting Professor  
Center for Advanced Mechanics and Materials  
**Tsinghua University**

2/2012-1/2017 Visiting Professor  
International Center of Applied Mechanics (ICAM)  
**Xi'an Jiaotong University**

1/2012-12/2013 Distinguished Visiting Professor  
Department of Mechanical Engineering  
**The University of Hong Kong**

10/2012-11/2012 Simpson Faculty Fellow  
Department of Mechanical Engineering  
**Northwestern University**

7/2012-12/2012 Timoshenko Visiting Professor  
Department of Mechanical Engineering  
**Stanford University**

1/2012-6/2012 Alexander von Humboldt Visiting Professor  
Department of Biophysical Chemistry  
**University of Heidelberg**

12/2011-12/2014 Kuang-piu Visiting Professor  
Department of Engineering Mechanics  
**Zhejiang University**

4/2007-4/2012 VIP Visiting Professor  
Institute of High Performance Computing  
**Agency for Science, Technology and Research of Singapore**

12/2002-12/2005 Visiting Scientist  
Institute of Metals Research  
**Chinese Academy of Sciences**

8/2000-8/2005 Chang Jiang Visiting Professor  
Department of Engineering Mechanics  
**Tsinghua University**

3/1998-8/1998 Alexander von Humboldt Visiting Scientist  
**Max Planck Institute for Metals Research**

4/1996-6/1996 Visiting Professor  
Department of Mechanical Engineering  
**Hong Kong University of Science and Technology**

2/1996-4/1996 Visiting Professor  
Department of Mechanical Engineering  
**University of Paderborn**

6/1995-1/1996 Senior Visiting Scientist  
Department of Applied Mathematics and Theoretical Physics  
**University of Cambridge**

## **ACADEMY MEMBERSHIPS**

**Fellow of the Royal Society (FRS)**

**National Academy of Sciences of USA (NAS)**

**National Academy of Engineering of USA (NAE)**

**American Academy of Arts and Sciences (AAAS)**

**German National Academy of Sciences Leopoldina (GAS)**

**Chinese Academy of Sciences (CAS)**

**Academia Europaea (MAE)**

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

**Honorary Fellow**, International Congress on Fracture (ICF)

**Honorary Fellow**, International Association of Applied Mechanics (IAAM)

**Fellow and Life Member**, American Society of Mechanical Engineers (ASME)

**Fellow**, Institute of Physics, Great Britain (IoP)

**Life Member**, Society of Engineering Science (SES)

**Life Member**, The Minerals, Metals & Materials Society (TMS)

**Life Member**, American Geophysical Union (AGU)

**Member**, Materials Research Society (MRS)

**Member**, Engineering Mechanics Institute, American Society of Civil Engineers (ASCE)

## **MAJOR SOCIETY RECOGNITIONS**

**ASME Medal** (highest honor of the society), **American Society of Mechanical Engineers (ASME)**, 2023

**ICF George Irwin Gold Medal** (highest award of ICF), **The International Congress on Fracture (ICF)**, 2023

**Inaugural Michael P. Païdoussis Medal** (highest award of RSC in applied mechanics), **Royal Society of Canada (RSC)**, 2022

**Zdenek P. Bazant Medal** (highest award of ASCE in failure and damage; only one award every two years), **Engineering Mechanics Institute, American Society of Civil Engineers (ASCE)**, 2022

**William D. Nix Award** (highest award of TMS in mechanical behavior of materials), **The Minerals, Metals, and Materials Society (TMS)**, 2022

**Timoshenko Medal** (highest medal of ASME in applied mechanics and highest lifetime achievement international award in the field of applied mechanics), **American Society of Mechanical Engineers (ASME)**, 2021

**Senior Distinguished Research Achievement Award**, **Brown University** (only one award in physical sciences per year for the whole university), 2018

**Theodore von Karman Medal** (highest medal of ASCE in engineering mechanics), **Engineering Mechanics Institute, American Society of Civil Engineers (ASCE)**, 2017

**Nadai Medal** (highest medal of ASME in engineering materials), **American Society of Mechanical Engineers (ASME)**, 2015

**William Prager Medal** (highest medal of SES), **Society of Engineering Science (SES)**, 2015

**Rodney Hill Prize in Solid Mechanics** (highest international award in solid mechanics; only one awardee every four years), **International Union of Theoretical and Applied Mechanics**, 2012

**Alexander von Humboldt Research Award** (highest German award for international scientists), **Alexander von Humboldt Foundation, Germany**, 2012

**Charles Russ Richards Memorial Award** (highest joint award of Pi Tau Sigma National Mechanical Engineering Honor Society and ASME), **Pi Tau Sigma and ASME**, 2011

**Guggenheim Fellowship** (for exceptional scholarship or creativity; only 1-2 awards in engineering per year), **John Simon Guggenheim Memorial Foundation**, 1995

## **RESEARCH INTERESTS**

Solid Mechanics, Nanomechanics, Biomechanics, Fracture Mechanics, Thin film Mechanics

Mechanics of Novel Structural and Functional Materials

Mechanics of Healthcare Materials

Mechanics of Energy Materials

## **PUBLICATIONS & IMPACT**

**Publication:** >600 papers in refereed journals, including Nature and Nature family journals, Science, PNAS, Physical Review Letters, Nano Letters, and Proceedings of the Royal Society, as well as important journals in my field (e.g., JMPS, IJSS, JAM).

**H-index:** >130 Google Scholar, >100 ISI Web of Science

**Total number of citations:** >60K (Google Scholar), >40K (ISI Web of Science)

**ISI Highly Cited Researcher, Institute for Scientific Information (ISI)**, 2015, 2018 (<http://hcr.stateofinnovation.thomsonreuters.com/>)

## **EDITORSHIPS**

**Editor-in-Chief, Journal of the Mechanics and Physics of Solids** (co-editor 2006-2015), 2006-present

**Special Invited Editor, PNAS** (Proceedings of the National Academy of Sciences of USA), 2014

**Editor, International Journal of Applied Mechanics**, 2009-

**Regional Editor, International Journal of Fracture**, 2004-2014

**Editorial Board, National Science Review** (a topmost journal in China aimed at reviewing cutting-edge developments across science and technology in China and around the world under the auspices of the Chinese Academy of Sciences), 2013-present

**Advisory Board, Science China Technological Sciences**, 2018-

**Advisory Board, Computational Materials Science and Engineering**, 2012-

**Advisory Board, Acta Mechanica Sinica**, 2011-

**Editorial Board, Acta Metallurgica Sinica**, 2003-

**Editorial Board, Acta Mechanica**, 2014-

**Editorial Board, Modeling and Simulation in Materials Science and Engineering**, 1998-2019

**Editorial Board, Molecular & Cellular Biomechanics, Editorial Board**, 2004-

**Editorial Board, Journal of Computational & Theoretical Nanoscience**, 2004-2012

**Editorial Board, Journal of Nanoengineering and Nanosystems**, 2004-2011

**Editorial Board, International Journal of Solids and Structures**, 2005-2011

**Editor-in-Chief, Acta Mechanica Sinica**, 2001-2011

**Board of Associate Editors, Cellular and Molecular Bioengineering, Biomedical Engineering Society**, 2008-2013

**Chief Editor, Continuum Mechanics and Thermodynamics**, 2004-2006

**Associate Editor, Journal of Applied Mechanics**, 2000-2006

**Associate Editor, Communications in Computational Physics**, 2006-2007

**Acting Editor-in-Chief, International Journal of Solids and Structures**, 1997

## **HONORS AND AWARDS**

**Naming of Huajian Gao Young Investigator Medal, Society of Engineering Science**, 2024

**Westlake Master Forum, Westlake University**, 4 December 2023

**Outstanding Scientist Award** (highest award if CAST-USA; in recognition of accomplishments in innovative research in the field of Mechanics and Materials, and

contributions to the scientific community), **Chinese Association for Science and Technology USA (CAST-USA)**, 2023

**Ranked #9 in the world among the top scientists in mechanical engineering**, Elsevier October 2023 data-update for "Updated science-wide author databases of standardized citation indicators", 2023

**Paper ("Achieving the theoretical limit of strength in shell-based carbon nanolattices," PNAS, 2022, 119(34), e2119536119) identified as one of the most impressive discoveries in fundamental research over the past 2 years**, Nanyang Technological University, 2023

**The Huber and Helen Croft Lectureship in Engineering**, University of Missouri, June 21, 2023

**Plenary Lecture, Nanoenergy and Nanosystems 2023 conference (NENS2023)**, Beijing, June 17, 2023

**Plenary Lecture, 93rd Annual Meeting, International Association of Applied Mathematics and Mechanics (GAMM)**, Dresden, Germany, May 31, 2023.

**ASME Medal, American Society of Mechanical Engineers (ASME)**, 2023

**Election to Fellow of the Royal Society (FRS)**, 2023

**Plenary Lecture, IEEE International Conference on Soft Robotics (RoboSoft 2023)**, Singapore, April 5, 2023.

**ICF George Irwin Gold Medal, The International Congress on Fracture (ICF)**, 2023

**Outstanding Contribution Award, Journal of Materials Informatics**, 2022

**Plenary Lecture, Indian Structural Integrity Society**, Structural Integrity Conference and Exhibition, December 16, 2022

**Lloyd Hamilton Donnell Applied Mechanics Reviews Paper Award, Applied Mechanics Division, American Society of Mechanical Engineers**, 2022

**Inaugural Michael P. Païdoussis Medal, Royal Society of Canada**, 2022

**Plenary Lecture, International Symposium on Structural Integrity (ISSI2022)**, Changsha, China, October 14-17, 2022

**Opening Plenary Lecture, First International Conference on Heterostructured Materials (HSM-I), Hong Kong**, July 12-14, 2022

**Zdenek P. Bazant Medal, Engineering Mechanics Institute, American Society of Civil Engineers (ASCE)**, 2022

**William D. Nix Award, The Minerals, Metals, and Materials Society (TMS)**, 2022

**Distinguished Fellow, Institute of Advanced Studies (IAS)**, Nanyang Technological University, 2022

**Opening Plenary Lecture**, Inaugural Workshop on Micro-Nano Characterization and Testing Technologies, **Chinese Society of Micro-Nano Technology, Chengdu, China**, July 30-August 1, 2021

**Honorary Fellow, International Association of Applied Mechanics (IAAM)**, 2021.

**Opening Plenary Lecture**, The 6th Cross-Strait Symposium on Dynamics, Vibration and Control (SDVC), Hohhot, Inner Mongolia, China, July 17-21, 2021

**Opening Plenary Lecture**, International Conference on Materials for Humanity 2021 (MH21), **Singapore Materials Research Society**, July 6-9, 2021

**Timoshenko Medal** (for distinguished contributions to the field of applied mechanics), **American Society of Mechanical Engineers**, 2021

**Plenary Lecture, Indian Structural Integrity Society**, Structural Integrity Conference and Exhibition, December 13, 2020

**Plenary Lecture, American Society of Mechanical Engineers**, International Mechanical Engineering Congress & Exposition, Mechanics of Solids, Structures and Fluids Track, November 18, 2020

**Plenary Lecture, Nanomedicine, Nanomaterials and Nanotechnology** (Webinar), September 17, 2020

**Guo Yonghuai Lecture on Advances in Mechanics, Chinese Academy of Science**, Institute of Mechanics, April 16, 2020

**Plenary Lecture (Opening), The Adhesion Society**, 43rd Annual Meeting, February 24, 2020

**Outstanding Reviewer Award, Scripta Materialia**, 2019

**Closing Plenary Lecture**, 56th Annual Technical Meeting, **Society of Engineering Science**, 2019

**Distinguished University Professor** (only 6 DUPs in the entire university), **Nanyang Technological University, Singapore**, 2019

**James K. Knowles Lecture, California Institute of Technology**, 2019

**Elected Fellow of American Academy of Arts and Sciences**, 2019

**Elected Member of Academia Europae**, 2018

**The Dan and Carole Burack President's Distinguished Lecture Series**, Department of Civil & Environmental Engineering, **University of Vermont**, 2018

**Elected Member of National Academy of Sciences**, 2018

**The Raymond D. Mindlin Lecture**, Department of Civil Engineering & Engineering Mechanics, **Columbia University & ASCE Metropolitan Section**, Engineering Mechanics Institute, **American Society of Civil Engineering**, 2018

**Senior Distinguished Research Achievement Award, Brown University** (only one award in physical sciences per year for the whole university), 2018



**Honorary Professorship, Nanjing University of Aeronautics and Astronautics, 2018**

**Martin Weiner Lecture Series, Physics Department Colloquium, Brandeis University, 2017**

**Elected as Honorary Fellow, International Congress on Fracture (ICF), 2017**

**Theodore von Karman Medal (highest medal of ASCE in engineering mechanics), Engineering Mechanics Institute, American Society of Civil Engineers (ASCE), 2017**

**Elected Member of German National Academy of Sciences Leopoldina, 2017**

**Faculty Fellow, Hagler Institute for Advanced Study (TIAS) at Texas A&M University, 2017**

**Southwest Mechanics Lecture Series (invited lecture tour of universities in the Southwestern region of USA), 2017**

**Wang Ren Lecture on Mechanics, Department of Mechanics and Engineering Science, Peking University, 2016**

**Fran and Eric Gebhardt Distinguished Lecture, Daniel Guggenheim School of Aerospace Engineering, Georgia Institute of Technology, 2016**

**Rockwell Distinguished Lecture, University of Houston, 2016**

**Fowler Distinguished Lecture, Texas A&M University, 2016**

**CU-Boulder Aerospace Engineering Distinguished Lecture Series, Department of Aerospace Engineering Sciences, University of Colorado Boulder, 2016**

**C.C. Mei Distinguished Speaker Seminar (DSS) Series, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, 2016**

**Distinguished Visiting Chair Professor Scheme (DCPS), Department of Mechanical Engineering, Hong Kong Polytechnic University, 2016-2017**

**Elected Foreign Member of Chinese Academy of Sciences, 2015**

**Distinguished Lecture Series, Department of Mechanical Engineering, Boston University, 2015**

**Nadai Medal (for distinguished contributions and outstanding achievements which broaden the field of materials engineering), American Society of Mechanical Engineers, 2015**

**Opening Plenary Lecture**, Engineering Mechanics Institute (EMI) Conference, **American Society of Civil Engineers (ASCE)**, Stanford University, June 17-19, 2015

**William Prager Medal** (for outstanding research contributions in theoretical solid mechanics), **Society of Engineering Science**, 2015

**James F. Bell Memorial Lecture in Continuum Mechanics**, Johns Hopkins University, 2015

**Martin & Lucinda Glicksman Seminar Series**, Mechanical & Aerospace Engineering Department, Florida Institute of Technology, 2015

**ISI Highly Cited Researcher**, **Institute for Scientific Information (ISI)**, 2015

**Winston Chen Distinguished Lecture**, School of Engineering and Applied Sciences, Harvard University, 2014

**Yunchuan Aisinjiro-Soo Distinguished Lecture**, Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, 2014

**Inaugural Distinguished Lecturer**, Department of Mechanical and Industrial Engineering, **Northeastern University**, 2014

**The 33rd Master Forum Lecturer**, **Shanghai Jiaotong University**, 2014

**Honorary Professorship**, **Shanghai Jiaotong University**, 2013

**Founding co-Director**, Center for Advanced Mechanics and Materials, **Tsinghua University**, 2013

**Van C. Mow Distinguished Lecture in Applied Mechanics**, Department of Mechanical, Aerospace and Nuclear Engineering, **Rensselaer Polytechnic Institute**, 2013.

**Lee Hsun Lecture**, Institute of Metals Research, **Chinese Academy of Sciences**, 2012

**Inaugural Simpson Faculty Fellow**, Department of Mechanical Engineering **Northwestern University**, 2012

**Distinguished Visiting Scholars Scheme (DVSS)**, Department of Mechanical Engineering, **University of Hong Kong**, 2012-2013

**Timoshenko Distinguished Visitor**, Mechanics and Computation Group, Department of Mechanical Engineering, **Stanford University**, 2012

**Engineering Distinguished Lecture**, **University of Hong Kong**, 2012

**Institute of Advanced Study Distinguished Lecture, Hong Kong University of Science and Technology, 2012**

**Elected Member of National Academy of Engineering, 2012**

**Rodney Hill Prize in Solid Mechanics** (awarded to a single individual every 4 years in recognition of outstanding research in the field of solid mechanics), **International Union of Theoretical and Applied Mechanics, 2012**

**Founding Member and Deputy Director, International Center for Applied Mechanics, Xi'an Jiaotong University, 2012**

**Alexander von Humboldt Research Award** (in recognition of a researcher's entire achievements to date to academics whose fundamental discoveries, new theories, or insights have had a significant impact on their own discipline), **Germany, 2012**

**Honorary Professorship, Shanghai University, 2011**

**ASME Charles Russ Richards Memorial Award** (in recognition of outstanding achievements in mechanical engineering for twenty years or more following graduation), **American Society of Mechanical Engineers, 2011**

**Stanford S. and Beverley P. Penner Distinguished Lecture in the Mechanical & Aerospace Engineering, University of California, San Diego, 2011**

**Y.C. Fung Lecture, California Institute of Technology, 2011**

**Honorary Professorship, Xi'an Jiaotong University, 2009**

**William Mong Distinguished Lectures, University of Hong Kong, 2009**

**ASME Robert Henry Thurston Lecture Award** (awarded to an outstanding leader in pure or applied science or engineering with the honor of presenting to the Society a lecture that encourages stimulating thinking on a subject of broad technical interest to engineers), **American Society of Mechanical Engineers, 2009**

**Distinguished Scholars and Artists Advisor** (Reader of Guggenheim Fellowship applications in Engineering), **John S. Guggenheim Foundation, 2008-2011**

**The Visiting Investigator Programme (VIP) Award** (a prestigious award aimed to strengthen interdisciplinary research in Singapore by tapping on world renowned experts as Visiting Investigators to develop capabilities and groom local talents in key strategic areas; only one award in the mechanics of materials area), **A\*STAR** (Agency for Science, Technology and Research), **Singapore, 2007-2012**

**The Jerzy Nowinski Lecture, University of Delaware, 2007**

**Distinguished Scholar Lecture, Arizona State University, 2007**

**Co-Editor-in-Chief of Journal of Mechanics and Physics of Solids** (the flagship journal of my field), 2006

**Midwestern Mechanics Lecture Series** (invited lecture tour of 10 universities in the Midwestern region of USA), 2005-2006

**Science Prize of the Donors' Association for German Science** (Wissenschaftspreis des Stifterverbands für die Deutsche Wissenschaft), **Max Planck Society, Germany, 2005**

**Board of Directors, Society of Engineering Science, 2004-2012**

**Young Investigator Award** (awarded to a single individual per year), **Society of Engineering Science, 2005**

**Elected to Fellow of Institute of Physics** (Great Britain), 2004

**ASME Melville Medal** (the highest ASME honor for the best original paper which has been published in the ASME Transactions during the two calendar years immediately preceding the year of award), **American Society of Mechanical Engineers, 2004**

**Elected to Fellow of American Society of Mechanical Engineers, 2003**

**Oversea Director, Shenyang Center for Interfacial Materials, Chinese Academy of Sciences, 2003-2005**

**Scientific Member** (a prestigious title reserved to the 200+ scientific directors in the Max Planck Society), **Max Planck Society, 2001-2006**

**Outstanding Oversea Young Investigator Award, National Science Foundation of China, 2000**

**Chang Jiang Chair Visiting Professor at Tsinghua University, Chinese Ministry of Education, 2000-2005**

**ASME/AMD Young Investigator Award** (renamed in 2008 as the Thomas J.R. Hughes Young Investigators Award - special achievement award for young investigators in Applied Mechanics under the age of 40), Applied Mechanics Division, **American Society of Mechanical Engineers, 1999**

**Alexander von Humboldt Research Fellowship for Experienced Researchers, Germany, 1998**

**Alcoa Science Award, Alcoa Inc, 1996**

**Guggenheim Fellowship** (awarded to those "who have demonstrated exceptional capacity for productive scholarship or exceptional creative ability in the arts", only 1-2 awards in engineering per year), **John Simon Guggenheim Memorial Foundation**, 1995

**NSF Young Investigator Award, National Science Foundation**, 1993-1998

**IBM Faculty Development Award, IBM Inc**, 1992-1993

**Schlumberger Research Fellowship, Schlumberger Inc**, 1988

**Harvard Graduate Fellowship, Harvard University**, 1984

"**SAN HAO XUE SHENG**" medals, **Xi'an Jiaotong University**, 1979-1982

## **SOCIETY LEADERSHIP/COMMITTEE MEMBERSHIPS**

**Member, Nanyang Assistant Professor Evaluation Committee, School of Mechanical and Aerospace Engineering, Nanyang Technological University**, 2023-

**Member, Nanomechanics Foundational Research Capabilities (FRC) Team, National Research Foundation, Prime Minister's Office, Singapore**, 2021-2022

**Member, NTU 2025 Steering Committee** (top university committee to track and ensure resourcing and execution of the university's 5-year strategic plan), **Nanyang Technological University**, 2020-2022

**Member, the Research Grants Council (RGC), Hong Kong**, 2022-present

**Member, Engineering Panel, the Research Grants Council (RGC), Hong Kong**, 2020-present

**Chair, NRC liaison Committee for Section 10, National Academy of Engineering**, 2018-2021

**Member, NTU 2025 Task Force, Nanyang Technological University**, 2020

**Member, NTU Research Council (NTURC), Nanyang Technological University**, 2020-2023

**Mechanics Engineering Advisory Committee for Curriculum Development and Industrial Liaison, The University of Hong Kong**, 2019-2022

**Scientific Evaluation Committee of the Helmholtz Society Research Programs in Materials Science, Karlsruhe Institute of Technology**, 2017

**Engineering Executive Committee** (representing the Solid Mechanics Faculty Group on all matters related to teaching, research and administration in the Brown School of Engineering), **Brown University**, 2008-2012, 2013-2014, 2015-2019

**Advisory Committee co-Chair, Tsien Elite Class Program, Tsinghua University**, 2016-present

**Academic Research Fund (AcRF) Tier 2 Expert Panel for the Physics and Engineering Discipline Cluster, Singapore Ministry of Education**, 2017-2018

**Drucker Medal Selection Committee, American Society of Mechanical Engineers**, 2015-2020

**Koiter Medal Selection Committee, American Society of Mechanical Engineers**, 2015-2020

**Timoshenko Medal Selection Committee, American Society of Mechanical Engineers**, 2015-2020

**Advisory Committee, the State Key Laboratory of Structural Analysis for Industrial Equipment, Dalian University of Technology**, 2015-present

**Nadai Medal Selection Committee, American Society of Mechanical Engineers**, 2015-2018

**Academic Committee Chair, Department of Instrument Science and Engineering, School of Electronical Information and Electric Engineering, Shanghai Jiaotong University**, 2014-2017.

**Rodney Hill Prize Committee, International Union of Theoretical and Applied Mechanics**, 2014-2015

**US Representative to IUTAM General Assembly, International Union of Theoretical and Applied Mechanics**, 2014

**Journal of Applied Mechanics Paper Award Committee, Chair**, 2014

**Community and Program Committee, School of Engineering, Brown University**, 2014-2017

**Faculty Grievance Committee, Brown University**, 2014-2017

**International Advisory Committee, Suzhou Institute of Nano-Tech and Nanobionics (SINANO), Chinese Academy of Sciences**, 2013-2017

**Founding co-Director, Center for Advanced Mechanics and Materials, Tsinghua University**, 2012-present

**University Resources Committee** (responsible for recommending the annual operating and capital budget of the whole university to the President), **Brown University**, 2013-2016

**Mechanical Engineering Peer Committee** (Member 2013, Vice Chair 2014, Chair 2015), **National Academy of Engineering**, 2013-2015

**Selection Committee on Eshelby Mechanics Award for Young Faculty**, (Member 2013-present, Chair 2015), 2013-present.

**DOE/BES Review Committee, Materials Science Program, Sandia National Laboratories**, 2013

**IUTAM Congress Committee, International Union of Theoretical and Applied Mechanics**, 2012-2020

**Director of Materials Research Science and Engineering Center (MRSEC), Brown University**, 2012-2014

**Founding Deputy Director**, International Center for Applied Mechanics, **Xi'an Jiaotong University**, 2012-present

**German Excellence Initiative Evaluation Committee, University of Freiburg**, 2012

**Applied Mechanics Division Executive Committee, American Society of Mechanical Engineers** (Program Chair 2013, Vice Chair 2014, Chair 2015, Past Chair 2016-2020), 2010-2020

**Solid Mechanics Faculty Search Committees** (Chair 2010 & 2016), **Brown University**, 2008-2017

**DOE/NNSA PSAAP Review Committee**, Center for Prediction of Reliability, Integrity and Survivability of Microsystems (PRISM), **Purdue University**, 2009

**US National Committee on Theoretical and Applied Mechanics**, 2008-2020

**Advisor of Guggenheim Fellowships in Engineering, John S. Guggenheim Foundation**, 2008-2012

**IUTAM Solids Symposium Committee, International Union of Theoretical and Applied Mechanics**, (Member 2008-2016, Chair 2016- ), 2008-

**Committee on Diversity and Hiring, Brown University**, 2007-2008

**University Re-accreditation Steering Committee** (preparing the re-accreditation of Brown University with the New England Association of Schools and Colleges), **Brown University**, 2007-2009

**Board of Directors (Member 2004-2009, Vice President 2010, President 2011, Past President 2012), Society of Engineering Science, 2004-2012**

**DOE/BES Review Committee, Materials Science Program, Sandia National Laboratories, 2006**

**Senior Advisory Board, Garching Supercomputer Center, Max Planck Society, 2001-2006**

**International Scientific Advisory Board, Shenyang National Laboratory for Materials Science (SYNL), Chinese Academy of Sciences, 2002-2014**

**Scientific Advisory Board, Failure Mechanics Laboratory, Tsinghua University, Beijing, 2002-2012**

**International Scientific Advisory Board, Laboratory for Nonlinear Mechanics, Institute of Mechanics, Chinese Academy of Sciences, 2001-2011**

**Scientific Advisory Board, Department of Mechanical Engineering, University of Wyoming, 2001-2005**

**DOE/BES Review Committee, Materials Science Program, Sandia National Laboratories, 2003**

**DOE/BES Review Committee, Materials Science Program, Los Alamos National Laboratories, 2001**

## **LIST OF PAST PHD AND POSTDOCTORAL ADVISEE**

**Former PhD Advisee (current position and affiliation; \*woman)**

- (1) Tanmay Bhandakkar (Professor, IIT Bombay, India)
- (2) Markus Buehler (NAE; McAfee Professor of Engineering and former Head, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, USA)
- (3) Cheng-Hsin Chiu (Senior Lecturer, National University of Singapore, Singapore)
- (4) Bin Ding\* (Associate Professor, Beihang University, China)
- (5) Chandler Fulton (Morgan Stanley Inc, New York, USA)
- (6) Hamed Haftbaradaran (Associate Professor, Department of Civil Engineering, Faculty of Engineering, University of Isfahan, Iran)
- (7) Ruirui Huang\* (Research Scientist, Schlumberger Technologies (Beijing) Ltd., China)



- (8) Kai Guo (Research Scientist, Institute of High Performance Computing, A\*STAR, Singapore)
- (9) Patrick A. Klein (Franklin Templeton Investments, California, USA)
- (10) Kristina Langer\* (Aerospace Systems Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base, USA)
- (11) Jin Lee (President, LS Silicon Valley, California, USA)
- (12) Xiaoyan Li (Professor, Tsinghua University, China)
- (13) Dong Li (Research Associate, Nanyang Technological University, Singapore)
- (14) Zhi Li (Research Scientist, Institute of High Performance Computing, A\*STAR, Singapore)
- (15) Xing Liu (Postdoctoral Fellow, Brown University, USA)
- (16) Yue Liu (Postdoctoral Fellow, University of Michigan, USA)
- (17) Thao D. Nguyen\* (Professor and Marlin U. Zimmerman, Jr. Faculty Scholar, Department of Mechanical Engineering, Johns Hopkins University, USA)
- (18) Bo Ni (Postdoc Fellow, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, USA)
- (19) Cengiz S. Ozkan, (Professor, University of California at Riverside, USA)
- (20) Jin Qian (Professor, Zhejiang University, China)
- (21) Xuliang Qian (Research Associate, Nanyang Technological University, Singapore)
- (22) Wendong Shi (Professor, Renmin University of China, China)
- (23) Xinghua Shi (Professor, National Center for Nanoscience and Technology, Chinese Academy of Sciences, China)
- (24) Haotian Wang (Research Scientist, Chinese Academy of Launch Vehicle Technology, China)
- (25) Haimin Yao (Associate Professor, Hong Kong Polytechnic University, Hong Kong, China)
- (26) Yujia Wang (Research Scientist, Institute of High Performance Computing, A\*STAR, Singapore)
- (27) Xin Yi (Assistant Professor, Peking University, China)
- (28) Sheng Yin (Postdoc Fellow, UC Berkeley)
- (29) Lin Zhang (Synopsys Inc, California, USA)
- (30) Teng Zhang (Associate Professor, Syracuse University, USA)

- (31) Qian Zhang\* (Assistant Professor, Institute of Applied Physics and Computational Mathematics, China)
- (32) Xuan Zhang\* (Group Leader, Leibnitz Institute of New Materials, Saarbruecken, Germany)
- (33) Lei Zhong (Research Scientist, Midea Group Co., Ltd, China)
- (34) Jonathan A. Zimmerman (Principal Member of Technical Staff, Sandia National Laboratories, USA)
- (35) Guijin Zou (Research Scientist, Institute of High Performance Computing, A\*STAR, Singapore)

**Former Postdoctoral advisee (current position and affiliation; \*woman)**

- (36) Fatemeh Ahmadpoor\* (Assistant Professor, New Jersey Institute of Technology)
- (37) Andrea Cavicchi (Professor, Università degli Studi di Genova, Italy)
- (38) Bin Chen (Professor, Zhejiang University, China)
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  - (58) Hui Pan (Professor, University of Macau, Macau, China)
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- (72) Wenpeng Zhu (Professor, Sun Yat-sen University, China)

## LIST OF PUBLICATIONS OF HUAJIAN GAO

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