

Jianliang Xiao

Associate Professor
Department of Mechanical Engineering
427 UCB
University of Colorado
Boulder, CO 80309-0427
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EDUCATION

- Ph.D., Mechanical Engineering, Northwestern University, 12/2009
Advisor: Yonggang Huang
- Ph.D. candidate, Mechanical Engineering, University of Illinois at Urbana-Champaign, 08/2006 – 08/2007
Advisor: Yonggang Huang
- M.S., Solid Mechanics, Tsinghua University, China, Jul 2006
Advisor: Keh-Chih Hwang
- B.S., Engineering Mechanics, Tsinghua University, China, Jul 2003

PROFESSIONAL EXPERIENCE

- 2019 – present, *Associate Professor*, Mechanical Engineering, University of Colorado Boulder
- 08/2011 – 2019, *Assistant Professor*, Mechanical Engineering, University of Colorado Boulder
- 01/2010 – 07/2011, *Postdoctoral Research Associate*, Materials Science and Engineering, University of Illinois at Urbana-Champaign
Advisor: John A. Rogers
- 08/2007 – 12/2009, *Graduate Research Assistant*, Mechanical Engineering, Northwestern University
- 01/2009 – 03/2009, *Teaching Assistant*, Mechanical Engineering, Northwestern University
- 08/2006 – 08/2007, *Graduate Research Assistant*, Mechanical Science and Engineering, University of Illinois at Urbana-Champaign
- 09/2003 – 07/2006, *Graduate Research Assistant*, Engineering Mechanics, Tsinghua University

AWARDS & HONORS

- Best Paper Award, ACM MobiCom '19: The 25th Annual International Conference on Mobile Computing and Networking, 2019
- Best Paper Award, Theoretical & Applied Mechanics Letters, 2018

- College Outstanding Dissertation Award (only 1 awarded in the College of Engineering and Applied Science each year) and ME Steven M. Woodward Outstanding Dissertation Award, 2017
- ACS PRF Doctoral New Investigator award, 2013
- Best Poster award in Colorado Photonics Industry Association Annual Meeting, 2013
- NSF Fellowship for Summer Institute on Additive Manufacturing, 2013
- ASME Haythornthwaite Research Initiation Award, 2012
- NSF Fellowship for Summer Institute on Mechanics of Soft Materials, 2010
- Haythornthwaite travel grant for ASME IMECE, 2009
- NSF travel grant for the Humboldt Kolleg, Nano-Bio: The Next Transformative Convergence, 2009
- Cabell Fellowship, Northwestern University, 2009
- NSF travel grant for NSF CMMI Research and Innovation Conference, 2009
- Chinese Government Award for Outstanding Self-financed Students Abroad, 2008
- The Graduate School Conference Travel Grant, Northwestern University, 2008, 2009
- NSF Fellowship for Summer Institute on Energy Challenge and Nanotechnology, 2008
- Walter P. Murphy Fellowship, Northwestern University, 2007
- NSF Fellowship for Summer Institute on Nano Mechanics and Materials, 2007
- Tsinghua University Distinguished Leadership Award, 2001, 2002
- Academic Excellence Scholarship, Tsinghua University, 2000-2004

ACADEMIC SERVICE & ACTIVITIES

ACADEMIC SOCIETY SERVICE

Editorial Board, NPJ Flexible Electronics (10/2016 – Present), Science China Technological Sciences (10/2017 – Present), Micromachines (11/2018 – Present), Frontiers in Electronics (07/2020 – Present)

ASME Applied Mechanics Division (AMD) Newsletter editor (11/2019 – Present)

Chair (11/2017 – 11/2019), Elasticity Technical Committee, Applied Mechanics Division, ASME

Chair (11/2015 – 11/2017), Electronic Materials Technical Committee, Materials Division, ASME

Associate Chair (2014 – 2017), Elasticity Technical Committee, Applied Mechanics Division, ASME

Associate Chair (2014 – 11/2015), Electronic Materials Technical Committee, Materials Division, ASME

CONFERENCE ORGANIZATION

[1] Topic Organizer, “Material Processing of Flexible/Emerging Electronics, Sensors, and Devices”, *ASME International Mechanical Engineering Congress & Exposition 2020*, November 16-19, 2020, Virtual conference

[2] Topic Organizer, “Mechanics and Materials of Soft Electronics”, *ASME International Mechanical Engineering Congress & Exposition 2020*, November 16-19, 2020, Virtual conference

- [3] Topic Organizer, “Mechanics of Thin-Film and Multi-Layer Structures”, *ASME International Mechanical Engineering Congress & Exposition 2020*, November 16-19, 2020, Virtual conference
- [4] Topic Organizer, “Mechanics of adhesion and friction”, *ASME International Mechanical Engineering Congress & Exposition 2020*, November 16-19, 2020, Virtual conference
- [5] Topic Organizer, “Mechanics and Materials of Soft Electronics”, *ASME International Mechanical Engineering Congress & Exposition 2019*, November 11-14, 2019, Salt Lake City, Utah
- [6] Topic Organizer, “Material Processing of Flexible Electronics, Sensors, and Devices”, *ASME International Mechanical Engineering Congress & Exposition 2019*, Salt Lake City, Utah
- [7] Topic Organizer, “Mechanics of adhesion and friction”, *ASME International Mechanical Engineering Congress & Exposition 2019*, November 11-14, 2019, Salt Lake City, Utah
- [8] Topic Organizer, “Mechanics of Thin-Film and Multi-Layer Structures”, *ASME International Mechanical Engineering Congress & Exposition 2019*, Salt Lake City, Utah
- [9] Topic Organizer, “Mechanics of adhesion and friction”, *ASME International Mechanical Engineering Congress & Exposition 2018*, November 11-14, 2018, Pittsburgh, PA
- [10] Topic Organizer, “Material Processing of Flexible Electronics, Sensors, and Devices”, *ASME International Mechanical Engineering Congress & Exposition 2018*, November 11-14, 2018, Pittsburgh, PA
- [11] Topic Organizer, “Mechanics and Materials of Flexible, Stretchable, and Bio-Electronics”, *ASME International Mechanical Engineering Congress & Exposition 2018*, November 11-14, 2018, Pittsburgh, PA
- [12] Topic Organizer, “Mechanics of Thin-Film and Multi-Layer Structures”, *ASME International Mechanical Engineering Congress & Exposition 2018*, November 11-14, 2018, Pittsburgh, PA
- [13] Topic Organizer, “Flexible and Stretchable Electronics: Mechanics, Materials, and Manufacture”, *55th Annual Technical Meeting of Society of Engineering Science*, October 10-12, 2018, Madrid, Spain
- [14] Topic Organizer, “Mechanics of adhesion and friction”, *ASME International Mechanical Engineering Congress & Exposition 2017*, November 3-9, 2017, Tampa, FL
- [15] Topic Organizer, “Material Processing of Flexible Electronics, Sensors, and Devices”, *ASME International Mechanical Engineering Congress & Exposition 2017*, November 3-9, 2017, Tampa, FL
- [16] Topic Organizer, “Mechanics and Materials of Flexible, Stretchable, and Bio-Electronics”, *ASME International Mechanical Engineering Congress & Exposition 2017*, November 3-9, 2017, Tampa, FL
- [17] Topic Organizer, “Material Processing of Flexible Electronics, Sensors, and Devices”, *ASME International Mechanical Engineering Congress & Exposition 2016*, November 11-17, 2016, Phoenix, AZ
- [18] Topic Organizer, “Mechanics of adhesion and friction”, *ASME International Mechanical Engineering Congress & Exposition 2016*, November 11-17, 2016, Phoenix, AZ
- [19] Topic Organizer, “Mechanics and engineering processes in heterogeneous structures”, *ASME International Mechanical Engineering Congress & Exposition 2016*, November 11-17, 2016, Phoenix, AZ

- [20] Topic Organizer, “Mechanics and Materials of Soft Electronics and Structures”, *ASME International Mechanical Engineering Congress & Exposition 2016*, November 11-17, 2016, Phoenix, AZ
- [21] Topic Organizer and Session Chair, “Material Processing of Flexible Electronics, Sensors, and Devices”, *ASME International Mechanical Engineering Congress & Exposition 2015*, November 13-19, 2015, Houston, TX
- [22] Topic Organizer and Session Chair, “Mechanics of Adhesion and Friction”, *ASME International Mechanical Engineering Congress & Exposition 2015*, November 13-19, 2015, Houston, TX
- [23] Topic Organizer and Session Chair, “Mechanics and Materials of Soft Electronics and Structures”, *ASME International Mechanical Engineering Congress & Exposition 2015*, November 13-19, 2015, Houston, TX
- [24] Topic Organizer and Session Chair, “Instabilities”, *ASME International Mechanical Engineering Congress & Exposition 2015*, November 13-19, 2015, Houston, TX
- [25] Topic Organizer, “Mechanics of Instability and Interfacial Adhesion in Bio-Compatible Electronics”, *52nd Annual Technical Conference of Society of Engineering Science*, October 26-28, 2015, Texas A&M University, College Station, Texas
- [26] Topic Organizer, “Mechanics and Materials for Flexible, Stretchable, and Bio-Integrated Soft Electronics”, *ASME 2015 Applied Mechanics and Materials Conference (McMAT2015)*, June 29-July 1, 2015, Seattle, WA
- [27] Topic Organizer and session chair, “Mechanics of Adhesion and Friction”, *ASME International Mechanical Engineering Congress & Exposition 2014*, November 14-20, 2014, Montreal, Canada
- [28] Topic Organizer and session chair, “Hybridization of Materials for Functional Structures, Devices and Systems: Mechanics, Materials, and Manufacturing”, *ASME International Mechanical Engineering Congress & Exposition 2014*, November 14-20, 2014, Montreal, Canada
- [29] Topic Organizer and session chair, “Mechanics of Adhesion and Friction”, *ASME International Mechanical Engineering Congress & Exposition 2013*, November 15-21, 2013, San Diego, CA
- [30] Session Chair, “Synthesis, Characterization, and Modeling of Low-Dimensional Nanomaterials”, *50th Annual Technical Conference of Society of Engineering Science*, July 28-31, 2013, Brown University, Providence, RI
- [31] Topic Organizer and session chair, “Mechanics of Adhesion”, *ASME International Mechanical Engineering Congress & Exposition 2012*, November 9-15, 2012, Houston, TX
- [32] Topic Organizer and session chair, “Mechanics of Thin Film and Multilayer Structures”, *49th Annual Technical Conference of Society of Engineering Science*, October 10-12, 2012, Georgia Tech, Atlanta, GA
- [33] Topic Organizer and session chair, “Mechanics of Adhesion”, *48th Annual Technical Conference of Society of Engineering Science*, October 12-14, 2011, Northwestern University, Evanston, IL
- [34] Session Chair, “Stress and Deformation of Thin Film and Multi-layer Materials III”, *ASME International Mechanical Engineering Congress & Exposition 2009*, November 13-19, 2009, Lake Buena Vista, FL

MEMBERSHIP

American Society of Mechanical Engineers
Society of Engineering Science
Materials Research Society
American Physical Society
SPIE

JOURNAL REVIEW (31)

Nature Nanotechnology, Nature Electronics, Science Advances, Nature Communications, Proceedings of the National Academy of Sciences, Advanced Materials, Research, Materials Today, Scientific Reports, Advanced Functional Materials, Physical Review Letters, Journal of the Mechanics and Physics of Solids, Carbon, Nanotechnology, Physical Review B, Applied Physics Letters, International Journal of Fracture, Journal of Physics D: Applied Physics, Journal of Physics: Condensed Matter, Journal of Applied Mechanics, Computational Mechanics, Journal of Engineering Materials and Technology, Computational Materials Science, Mechanics Research Communications, Thin Solid Films, Reports on Progress in Physics, Proceedings of the Royal Society A, Acta Mechanica, Journal of Nanomechanics and Micromechanics, Nanoscale, Mechanics of Materials, Extreme Mechanics Letters, International Journal of Solids and Structures, Advanced Theory and Simulations, Sensors & Actuators: A. Physical, Smart Materials and Structures, ACS Applied Materials & Interfaces, NPJ Flexible Electronics

GRANT PROPOSAL REVIEW

NSF (2012, 2013, 2014, 2015, 2016, 2018, 2020), ACS PRF (2014, 2017), Research Grants Council (RGC) of Hong Kong, Natural Sciences and Engineering Research Council of Canada (NSERC) (2019), KAUST OSR (2020)

UNIVERSITY OF COLORADO BOULDER SERVICE

Department of Mechanical Engineering

Personnel Committee (2020-present)
Infrastructure Committee (2016-2018)
Instructor Search Committee (2015, 2016)
Department Undergraduate Committee (2014-2016)
Tenure Track Faculty Search Committee (2013-2014)
Department Seminar Coordinator (2012)
Solid Mechanics Prelim Exam Coordinator (2011-2014)
Department Graduate Committee (2011-2013, 2018-2019, 2019)

College of Engineering & Applied Science

Tenure Track Faculty Special Hire Committee in Civil Engineering (2014)

TEACHING & STUDENT GUIDANCE ACTIVITIES

STUDENT SUPERVISION

Postdoc Scholars

Andres Villada, Mechanical Engineering (9/2020 – present)

Yu Wang, Mechanical Engineering (5/2016 – 4/2017), now Postdoc at Houston Methodist Research Institute

PhD Students

Xudong Yang, Mechanical Engineering (2020 – Present)

Ali Nematollahisarvestani, Mechanical Engineering (co-advising with YC Lee) (??? – Present)

Andres Villada, Mechanical Engineering (2015 – 2020)

Zhanan Zou, Mechanical Engineering (2014 – 2019)

Jose Antonio Rodriguez Lopez, Mechanical Engineering (2014 – 2015) (quitted PhD program in September 2015 due to family reasons)

Zhengwei Li, Mechanical Engineering (Fall 2012 – 2/2017), College Outstanding Dissertation Award (only 1 awarded in the College of Engineering and Applied Science each year) and ME Steven M. Woodward Outstanding Dissertation Award, now postdoc at UIUC

Yu Wang, Mechanical Engineering (Spring 2012 – 5/2016)

Narasimha Boddeti, Mechanical Engineering (co-supervised with Martin Dunn, 2011 – 2014)

MS Students

Jinyue Dai, Mechanical Engineering (9/2019 – 2020)

Yimeng Liu, Mechanical Engineering (8/2018 – 12/2019)

Qingyang Sun, Mechanical Engineering (9/2016 – 5/2018)

Sichong Li, Mechanical Engineering (8/2016 – 12/2017)

Yinding Chi, Mechanical Engineering (8/2016 – 12/2017), now PhD student at Temple University

Yan Li, Mechanical Engineering (1/2016 – 12/2017)

Zenan Wu, Mechanical Engineering (2014 – 2016)

Wangyang Wang, Mechanical Engineering (2014 – 2015)

Hailong Ji, Mechanical Engineering (2012 – 2013)

Vibin Mahadev Sankaranarayanan, Mechanical Engineering (2012 – 2013)

BS Students

Dana Francesca Stamo, Chemical and Biological Engineering (8/2017 – 8/2019)

Roy Powell, Mechanical Engineering (8/2016 – 5/2017)

Samatha Preston, Mechanical Engineering (8/2015 – 5/2016), “People’s Choice Award” in Discovery Learning Research Symposium (Multifunctional Artificial Compound Eyes) (one out of over 90 projects/DLA students)

Jacob Carson, Mechanical Engineering (8/2015 – 5/2016)

Griffith Michael Wendland, Mechanical Engineering (5/2015 – 8/2015)

Blake Wiehe, Mechanical Engineering (2014 – 2015)

Krishan Patel, Mechanical Engineering (2012 – 2013)

Da Zhou, Mechanical Engineering (2012 – 2013)

Visiting Scholars & Students

Mr. Shun Zhang, Phd Student, Institute of Applied Mechanics, Zhejiang University (10/2019 – 10/2020)

Mr. Pengcheng Zhu, PhD student, College of Material Science and Engineering, Beihang University (10/2019 – 9/2020)

Dr. Si Chen, Assistant Professor, Jiangsu University (8/2019 – 8/2021)

Dr. Seoung Yoon Ryu, Associate Professor, Korea University (Sejong Campus) (1/2019 – 8/2019)

Mr. Wei Ren, PhD student, School of Materials Science and Engineering, Harbin Institute of Technology (11/2018 – 10/2019)

Ms. Yan Sun, PhD student, School of Materials Science and Engineering, Harbin Institute of Technology (11/2018 – 10/2019)

Ms. Ye Qiu, PhD student, School of Mechanical Engineering, Zhejiang University of Technology (11/2018 – 5/2019)

Mr. Yucheng Huo, UG student, Solid Mechanics, Beihang University (8/2018 – 10/2018)

Mr. Zhengwei Liu, UG student, Mechanical Engineering, Donghua University (7/2018 – 9/2018)

Dr. Haiqing Lu, Senior Lecturer, School of Mechanical-electronic and Vehicle Engineering, Weifang University (4/2018 – 6/2019)

Ms. Xingli Wu, PhD student, Department of Mechanical Engineering, Shenyang University of Technology (4/2018 – 6/2019)

Ms. Chuanqian Shi, PhD student, School of Aerospace Engineering and Applied Mechanics, Tongji University, China (10/2017 – 9/2019)

Mr. Diego Monserrat Lopez, UG student, Universitat Politecnica de Catalunya, Spain (Balsells International Mobility Program, 2/2016 – 7/2016)

High School Students

Matthew Chen, Monarch High School (9/2019 – present)

Zach Chen, Monarch High School (7/2017 – 2019)

Laura Macdonald & Perrin Ruth, Monarch High School (9/2016 – 5/2017)

PhD THESIS COMMITTEES

Qingcong Hu (Electrical, Computer, and Energy Engineering, 2011), Yushan Li (Electrical, Computer, and Energy Engineering, 2012), Feng Miao (Mechanical Engineering, 2012), Qi Ge (Mechanical Engineering, 2012), Binglian Wang (Mechanical Engineering, 2012) Nathan Sutton (Electrical, Computer, and Energy Engineering, 2013), Steven Koenig (Mechanical Engineering, 2013), Xinghui Liu (Mechanical Engineering, 2014), Narasimha Boddeti (Mechanical Engineering, 2014), Jacob Dove (Mechanical Engineering, 2014), Alexander Watson (Mechanical Engineering, 2015), Lewis Cox (Mechanical Engineering, 2015), Jamie Williamson (Electrical, Computer, and

Energy Engineering, 2016), David Stobbe (Mechanical Engineering, 2018), Raza Qazi (ECEE, 2019), Yuan Qi (Mechanical Engineering, 2020), Jacob Hutfles (ME, 2021)

PhD COMPS COMMITTEES

David Stobbe (Mechanical Engineering, 2017), Masoud Aghajani (Mechanical Engineering, 2018) Raza Qazi (ECEE, 2018), Jacob Hutflex (Mechanical Engineering, 2019), Yuan Qi (Mechanical Engineering, 2019), Luxia Yu (Mechanical Engineering, 2019), Ali Nematollahisarvestani (Mechanical Engineering, 2019),

PhD PRELIM COMMITTEES

Masoud Aghajani (2017), Andres Villada (2017), Jacob Hutfles (2017), Emanuele Sortino (Materials Science, 2018), Marco A. Inzunza (Mechanical Engineering, 2018), Yinan Lu (Mechanical Engineering, 2018), Ali Nematollahisarvestani (Mechanical Engineering, 2018)

MS THESIS COMMITTEES

John D Sweetser (Mechanical Engineering, 2012), Chengpu Zhu (Chemistry and Biochemistry, 2017), Jian Kan (Mechanical Engineering, 2018), Simon Hafner (Mechanical Engineering, 2019),

COURSES TAUGHT

MCEN 2063, Mechanics of Solids, Spring 2014, Spring 2016, Fall 2020

MCEN 4173/5173, Finite Element Analysis, Fall 2011, Fall 2012, Fall 2015, Fall 2016, Spring 2018, Spring 2019

MCEN 4228/5228, Thin Film Materials, Spring 2012, 2013, 2015, 2016, 2017, 2019

MCEN 5023/ASEN 5012, Solid Mechanics 1, Fall 2014, Fall 2016, Fall 2019

MCEN 5228, Flexible Electronics, Spring 2018

MCEN 4085, Senior Design, 2018-2019

Patent

[P5] J. Xiao, W. Zhang, C. Shi, Z. Zou, “SELF-HEALABLE, RECYCLABLE, AND RECONFIGURABLE WEARABLE ELECTRONICS DEVICE”, U.S. Provisional Patent Application No. 63/110,043, filed November 5, 2020.

[P4] J. Xiao, Z. Zou, “SYSTEMS AND METHOD OF SOFT ROBOTIC ACTUATION WITH A LIQUID METAL ACTUATOR”, U.S. Provisional Patent Application No. 62/935,509, filed November 14, 2019.

[P3] A. Villada, D. Stamo, Z. Zou, J. Xiao, “Shape-Memory In-Ear Biosensor For Monitoring Physiological Signals”, U.S. Provisional Patent Application No. 62/911,826, filed October 7, 2019.

[P2] J. Xiao, W. Zhang, Z. Zou, and C. Zhu, “Dynamic Covalent Thermoset Nanocomposites and Uses Thereof”, PCT International Patent Application No. PCT/US2018/062083, filed November 20,

2018, which claims priority to U.S. Provisional Patent Application No. 62/588,814, filed November 20, 2017.

- [P1] J. Xiao, and Y. Wang, “Programmable, reversible and repeatable wrinkling of shape memory polymer thin films on elastomeric substrates for smart adhesion”, U.S. Provisional Patent Application No. 62/692,258, filed June 29, 2018

BOOK CHAPTERS

- [B4] S. Wang, J. Xiao, J. Song, Y. Huang, and J. A. Rogers, “Mechanics of Curvilinear Electronics”, in *Nano and Cell Mechanics: Fundamentals and Frontiers* (eds. Horacio D. Espinosa, and Gang Bao), Wiley, Hoboken, NJ, Chapter 13 (2013).
- [B3] J. Xiao, W. Zhou, Y. Huang, J.M. Zuo, and K.C. Hwang, “Potentials For van der Waals Interaction in Nano-scale Computation”, in *Trends in Computational Nanomechanics: Transcending Length and Time Scales* (ed. Traian Dumitrica), Springer, New York, Chapter 12 (2010).
- [B2] J. Xiao, H. Jiang, Y. Huang, and J. A. Rogers, “Mechanics of stiff thin films of controlled wavy geometry on compliant substrates for stretchable electronics”, in *Semiconductor Nanomaterials for Flexible Technologies: From Photovoltaics and Electronics to Sensors and Energy Storage* (eds. Yugang Sun, and John A. Rogers), William Andrew, Chapter 10 (2010).
- [B1] J. Xiao, D.-Y. Khang, Y. Huang, and J. A. Rogers, “Buckling Mechanics of Carbon Nanotubes on Elastomeric Substrates”, in *Recent developments in modeling and applications of Carbon Nanotubes* (eds. Q. Wang, B.I. Yakobson, and K.M. Liew), Research Signpost/Transworld Research Network, Kerala, India, pp 49-70 (2009).

REFEREED JOURNAL PUBLICATIONS (* as corresponding author)

- [J85] C. Shi, Y. Zhao, P. Zhu, J. Xiao, and G. Nie, Rehealable and Highly Stretchable Strain Sensing System Enabled by Dynamic Covalent Thermoset, *Advanced Materials Technologies*, submitted
- [J84] C. Shi, Z. Zou, Z. Lei, P. Zhu, G. Nie, W. Zhang, and J. Xiao, Stretchable, Rehealable, Recyclable and Reconfigurable Integrated Strain Sensor for Joint Motion and Respiration Monitoring, *Research*, submitted
- [J83] H. Lu, Z. Zou, X. Wu, and J. Xiao, Biomimetic prosthetic hand enabled by liquid crystal elastomer tendons, *Micromachines*, submitted
- [J82] H. Lu, Z. Zou, X. Wu, C. Shi, and J. Xiao, Fabrication and characterization of highly deformable artificial muscle fibers based on liquid crystal elastomers, *J. Appl. Mech.*, in press
- [J81] Z. Rao, Y. Lu, Z. Li, K. Sim, Z. Ma, J. Xiao, and C. Yu, Curvy, Shape Adaptive Imager Based on Conformal Additive Stamp Printed Ultrathin Optoelectronic Pixels with Kirigami Designs, *Nature Electronics*, submitted
- [J80] W. Ren, Y. Sun, D. Zhao, A. Aili, S. Zhang, C. Shi, J. Zhang, H. Geng, J. Feng, J. Zhang, L. Zhang*, J. Xiao*, and R. Yang*, High-performance Wearable Thermoelectric Generator with Self-healing, Recycling and Lego-like Reconfiguring Capabilities, *Science Advances*, accepted

- [J79] J. Lee, K.E. Parker, C. Kawakami, J.R. Kim, R. Qazi, J. Yea, S. Zhang, C.Y. Kim, J. Bilbily, J. Xiao, K.-I. Jang, J.G. McCall, and J.-W. Jeong, Rapidly-customizable, scalable 3D-printed wireless optogenetic probes for versatile applications in neuroscience, *Advanced Functional Materials*, 2004285 (2020)
- [J78] C. Shi, Z. Zou, Z. Lei, P. Zhu, W. Zhang, and J. Xiao, Heterogeneous Integration of Rigid, Soft and Liquid Materials for Self-healable, Recyclable, and Reconfigurable Wearable Electronics, *Science Advances* 6, eabd0202 (2020).
 ----- reported by UPI, Science Daily, EurekAlert!, MSN, Science News, Phys.org, CNET, TechXplore, Daily Camera, CU Boulder Today, Daily Mail (UK), The Independent (UK), The Telegraph (UK), BBC Science Focus (UK), Polymer-China, the Irish News (Ireland), alkhaleej today(UAE), East Coast Daily (IN), the News (PK), etc.
- [J77] Y.-S. Guan, A. Thukral, S. Zhang, K. Sim, X. Wang, Y. Zhang, F. Ershad, Z. Rao, F. Pan, P. Wang, J. Xiao, and C. Yu, Air/water interfacial assembled rubbery semiconducting nanofilm for fully rubbery integrated electronics, *Science Advances* 6, eabb3656 (2020).
- [J76] N. Bui, N. Pham, J.J. Barnitz, Z. Zou, P. Nguyen, H. Truong, T. Kim, N. Farrow, A. Nguyen, J. Xiao, R. Deterding, T. Dinh and T. Vu, eBP: A Wearable System For Frequent and Comfortable Blood Pressure Monitoring From User's Ear, *MobiCom'19*, October 21–25, 2019, Los Cabos, Mexico, <https://doi.org/10.1145/3300061.3345454>.
 ----- Best Paper Award
- [J75] K. Sim, S. Chen, Z. Li, Z. Rao, J. Liu, Y. Lu, S. Jang, F. Ershad, J. Chen, J. Xiao, and C. Yu, Three-Dimensional Curvy Electronics Created Using Conformal Additive Stamp Printing, *Nature Electronics* 2, 471–479 (2019)
 ----- highlighted in *Nature*.
 ----- reported by Science Daily, Tech Xplore, Nanowerk, PV Magazine, 7th Space Family Portal, UH News, EurekAlert!, Photonics Online, Mirage News, etc.
- [J74] C. Shi, Z. Zou, Z. Lei, X. Wu, Z. Liu, H. Lu, W. Zhang, and J. Xiao, Investigating the self-healing of dynamic covalent thermoset polyimine and its nanocomposites, *Journal of Applied Mechanics* 86, 101005 (2019)
- [J73] S.-H. Byun, J. Y. Sim, Z. Zhou, J. Lee, R. Qazi, M. C. Walicki, K. E. Parker, M. P. Haney, S. H. Choi, A. Shon, G. B. Gereau, J. Bilbily, S. Li, Y. Liu, W.-H. Yeo, J. G. McCall, J. Xiao, and J.-W. Jeong, Mechanically transformative electronics, sensors, and implantable devices, *Science Advances* 5, eaay0418 (2019)
- [J72] Y. Wang, A. Villada, Y. Zhai, Z. Zou, Y. Chen, X. Yin, and J. Xiao, Tunable Surface Wrinkling on Shape Memory Polymers with Application in Smart Micromirror, *Applied Physics Letters* 114, 193701 (2019)
- [J71] H. Hafeez, C. Shi, C. M. Lee, J. J. Periyannayagam, D.H. Kim, M. Song, C.-S. Kim, Z. Zou, J. Xiao, S.Y. Ryu, Improved Design of Highly Efficient Microsized Lithium-Ion Batteries for Stretchable Electronics, *Journal of Micromechanics and Microengineering* 29, 075008 (2019)
- [J70] R. Qazi, A.M. Gomez, D.C. Castro, Z. Zou, J.Y. Sim, Y. Xiong, J. Abdo, C.Y. Kim, A. Anderson, F. Lohner, S.-H. Byun, B.C. Lee, K.-I. Jang, J. Xiao, M.R. Bruchas and J.-W. Jeong, Wireless

- optofluidic brain probes for chronic neuropharmacology and photostimulation. *Nature Biomedical Engineering* 3, 655-669 (2019)
- *highlighted in the News & Views of Nature Biomedical Engineering*
- *reported by the Scientist, Medical News Today, Science Daily, New York Post, EE News Europe, YTN News, Xinhua News, and many others*
- [J69] K. Sim, Z. Rao, Z. Zou, F. Ershad, J. Lei, A. Thukral, J. Chen, Q.-A. Huang, J. Xiao, C. Yu, Metal Oxide Semiconductor Nanomembrane-based Soft Unnoticeable Multifunctional Electronics for Wearable Human-Machine Interfaces, *Science Advances* 5, eaav9653 (2019)
- *featured on the cover of August 2nd, 2019 issue of Science Advances.*
- [J68] S. Zhang, C. Wang, S. Nie, J. Xiao, and J. Song, Wrinkling of silicon nanoribbons on shape memory polymers, *Journal of Physics D: Applied Physics* 52, 265101 (2019)
- [J67] Y. Qi, Z. Zou, J. Xiao, and R. Long, Mapping the nonlinear crack tip deformation field in soft elastomer with a particle tracking method, *J. Mech. Phys. Solids* 125, 326-346 (2019)
- [J66] P.J. Jesuraj, C. Shi, D.H. Kim, H. Hafeez, J.C. Lee, W.H. Lee, D.K. Choi, Z. Zou, J. Xiao, J. Min, M. Song, C. Kim, S.Y. Ryu, Direction-dependent stretchability of AgNW electrodes on microprism-mediated elastomeric substrates, *AIP Advances* 8, 065227 (2018)
- [J65] Y. Wang, Q. Sun, and J. Xiao, Simultaneous Formation of Multiscale Hierarchical Surface Morphologies through Sequential Wrinkling and Folding, *Applied Physics Letters* 112, 081602 (2018)
- [J64] Y. Wang, Y. Zhai, A. Villada, S.N. David, X. Yin, and J. Xiao, Programmable localized wrinkling of thin films on shape memory polymers with application in nonuniform optical gratings, *Applied Physics Letters* 112, 251603 (2018)
- [J63] Z. Zou, C. Zhu, Y. Li, X. Lei, W. Zhang, J. Xiao, Rehealable, fully recyclable, and malleable electronic skin enabled by dynamic covalent thermoset nanocomposite. *Science Advances* 4, eaaq0508 (2018).
- reported by Newsweek, Science Daily, Smithsonian, Forbes, NSF, MRS Bulletin, EurekAlert, New Atlas, Live Science, the Verge, CU Boulder Today, the Mirror (UK), Express (UK), CCTV (China), Xinhua (China), the Hindu (India), India.com, Radio Sputnik (Russia), Channel NewsAsia (Singapore), La Vanguardia (Spain), ANSA (Italy), and Sveriges Television AB (Sweden)...*
- *selected to participate in the Beazley Designs of the Year exhibition (~80 projects selected from more than 500 nominations worldwide), and exhibited in The Design Museum in London between September 12, 2018 and January 6, 2019, together with selected projects such as*
- *featured in the "IN:BODIED The Augmented Self" exhibition, the Arnold and Sheila Aronson Gallery at Parsons School of Design, New York, March 5-31, 2019*
- *to be featured in the "Designs for Different Futures" exhibition series, Philadelphia Museum of Art, October 17, 2019 - March 1, 2020; Walker Art Center, Minneapolis, September 13, 2020 - January 3, 2021, Art Institute of Chicago: January 23, 2021 - May 2, 2021*
- [J62] K.N. Noh, S.I. Park, R. Qazi, Z. Zou, A.D. Mickle, J.G. Grajales-Reyes, K.-I. Jang, R.W. Gereau IV, J. Xiao, J.A. Rogers, and J.-W. Jeong, Miniaturized, Battery-Free Optofluidic Systems with Potential for Wireless Pharmacology and Optogenetics, *Small* 14, 1702479 (2018).

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INVITED TALKS AND SEMINARS

- [I48] Keynote, Rehealable, Recyclable and Reconfigurable Electronics Based on Dynamic Covalent Thermoset, 2020 Virtual MRS Spring Meeting & Exhibit, November 27-December 4, 2020

- [I48] Invited virtual seminar, Self-healable, Recyclable and Reconfigurable Electronics and Thermoelectrics for Wearable Applications, Department of Mechanical Engineering, Binghamton University, October 16, 2020
- [I47] Invited talk, Rehealable, Recyclable and Reconfigurable (3R) Electronics, *TMS 2020 Annual Meeting & Exhibition*, San Diego, CA, February 23-27, 2020
- [I46] Invited seminar, Self-healable, recyclable and reconfigurable electronics, *ATLAS Seminar*, University of Colorado Boulder, October 8, 2019
- [I45] Invited talk, Rehealable, Fully Recyclable and Malleable Electronic Skin, *Chinese Congress of Theoretical and Applied Mechanics*, August 25-28, 2019, Hangzhou, China
- [I44] Invited talk, Mechanics of Conformal Additive Stamp Printing, *Chinese Congress of Theoretical and Applied Mechanics*, August 25-28, 2019, Hangzhou, China
- [I43] Invited talk, Mechanics and applications of thin film wrinkling on shape memory polymers, *2019 Asian Workshop on Theoretical and Applied Mechanics*, August 24-27, 2019, Hangzhou, China
- [I42] School of Materials Science and Engineering, Xiangtan University, August 23, 2019
- [I41] School of Aeronautic Science and Engineering, Beihang University, June 27, 2019
- [I40] School of Mechanical Engineering, Shanghai Jiao Tong University, July 27, 2018
- [I39] Invited talk, International Conference on Flexible Electronics, July 16-17, 2018, Hangzhou, China
- [I38] Center for Data Science in Health and Medicine, Peking University, June 7, 2018, China
- [I37] School of Aerospace Engineering, Tsinghua University, June 6, 2018, China
- [I36] Aeronautics, Astronautics and Mechanics Forum, May 25, 2018, Jiaxing, Zhejiang, China
- [I35] College of School of Aeronautics and Astronautics, Zhejiang University, May 24, 2018, China
- [I34] College of Electronic Science and Engineering, Shenzhen University, March 30, 2018, China
- [I33] Invited talk, Nadai Medal Symposium in Honor of Prof. John Rogers, *The ASME International Mechanical Engineering Congress & Exposition 2017*, Nov 3-9, 2017, Tampa, FL
- [I32] Invited talk, W. Prager Medal Symposium in Honor of Prof. Yonggang Huang, The Society of Engineering Science (SES) Technical Meeting, July 25-28, 2017, Northeastern University, Boston, MA
- [I31] Invited talk, IUTAM Symposium on Mechanics of Stretchable Electronics, March 17-18, 2016, Hangzhou, China
- [I30] ASME Students in Industry Day 2016, Denver, February 25, 2016
- [I29] Department of Mechanical Engineering Mechanics, Stony Brook University, September 2015
- [I28] Department of Engineering Mechanics, Dalian University of Technology, June 2015
- [I27] Invited talk, Eringen Medal Symposium in honor of Prof. John A. Rogers, 51st Annual Technical Conference of Society of Engineering Science, October 1-3, 2014, Purdue University, West Lafayette, IN
- [I26] Keynote talk, Symposium on Mechanics of Thin Films and Multi-layer Materials, 51st Annual Technical Conference of Society of Engineering Science, October 1-3, 2014, Purdue University, West Lafayette, IN

- [I25] Invited talk, Symposium on Future Smartphones and Killer Apps, University of Colorado Boulder, June 2014
- [I24] School of Aeronautic Science and Engineering, Beihang University, China, May 2014
- [I23] Invited talk, Flexible Electronics: Multifaceted Evolutions and Applications, Micro- and Nanotechnology Sensors, Systems, and Applications VI, SPIE Defense + Security, Baltimore, May 5-9, 2014
- [I22] Department of Mechanical Engineering, University of Colorado Boulder, February 2014
- [I21] Invited talk, Bioinspired, Biointegrated, Bioengineered Photonic Devices II, BIOS, SPIE Photonics West, San Francisco, February 1-6, 2014
- [I20] Invited talk, Advanced Study Institute: Printed Electronics, Chinese University of Hong Kong, December 2013
- [I19] Department of Applied Physics, Hong Kong Polytechnic University, September 2013
- [I18] School of Aeronautics and Astronautics, Zhejiang University, China, June 2013
- [I17] School of Electronic Science and Engineering, Nanjing University, China, June 2013
- [I16] School of Aerospace, Tsinghua University, China, June 2013
- [I15] Institute of Mechanics, Chinese Academy of Sciences, China, June 2013
- [I14] Institute of Microelectronics, Tsinghua University, China, June 2013
- [I13] School of Aeronautics and Astronautics, Zhejiang University, China, August 2012
- [I12] Department of Engineering Mechanics, Tsinghua University, China, November 2011
- [I11] School of Aeronautic Science and Engineering, Beihang University, China, November 2011
- [I10] OEQS Seminar, Department of Electrical, Computer, and Energy Engineering, University of Colorado Boulder, October 2011.
- [I9] Mechanical Engineering Seminar, Department of Mechanical Engineering, University of Colorado Boulder, September 2011.
- [I8] Department of Mechanical Engineering, Temple University, March 2011
- [I7] Department of Industrial Engineering, University of Pittsburgh, February 2011.
- [I6] Department of Mechanical Engineering, University of Texas at Dallas, February 2011.
- [I5] Department of Mechanical Engineering, University of Colorado Boulder, February 2011.
- [I4] Department of Mechanical Engineering, Carnegie Mellon University, January 2011.
- [I3] Department of Civil and Environmental Engineering, University of Southern California, January 2011.
- [I2] iOptics Seminar, University of Illinois at Urbana-Champaign, October 18, 2010.
- [I1] Nanoelectronics and Photonics Seminar, University of Illinois at Urbana-Champaign, March 29, 2010.

CONFERENCE PRESENTATIONS

- [C46] J. Xiao, Stretchable, Self-healable, Recyclable, and Lego-like Reconfigurable Thermoelectric Generator for Wearable Energy Harvesting, Society of Engineering Science Annual Meeting 2020 (virtual), Sep 29-Oct 1, 2020
- [C45] J. Xiao, Multifunctional wearable electronics with superior stretching, self-healing, recycling and reconfiguring capabilities, Society of Engineering Science Annual Meeting 2020 (virtual), Sep 29-Oct 1, 2020
- [C44] J. Xiao, C. Shi, Rehealable, Recyclable and Reconfigurable (3R) Electronics, *The ASME International Mechanical Engineering Congress & Exposition 2019*, Nov 11-14, 2019, Salt Lake City, UT
- [C43] J. Xiao, Z. Zou, Programmable Self-sensing Camouflaging Soft Robot, *The ASME International Mechanical Engineering Congress & Exposition 2019*, Nov 11-14, 2019, Salt Lake City, UT
- [C42] J. Xiao, Mechanics of thin film wrinkling on shape memory polymers, *The ASME International Mechanical Engineering Congress & Exposition 2019*, Nov 11-14, 2019, Salt Lake City, UT
- [C41] J. Xiao, Rehealable, fully recyclable and malleable electronic skin, *The ASME International Mechanical Engineering Congress & Exposition 2018*, Nov 9-15, 2018, Pittsburgh, PA
- [C40] J. Xiao, Wrinkling and cracking/folding for multiscale hierarchical surface morphologies, *The ASME International Mechanical Engineering Congress & Exposition 2018*, Nov 9-15, 2018, Pittsburgh, PA
- [C39] J. Xiao, Programmable wrinkling of shape memory polymers with applications in tunable adhesion and nonuniform optical gratings, *The ASME International Mechanical Engineering Congress & Exposition 2018*, Nov 9-15, 2018, Pittsburgh, PA
- [C38] J. Xiao, Rehealable, fully recyclable and malleable electronic skin enabled by dynamic covalent thermoset nanocomposite, 256th ACS National Meeting, Aug 19-23, 2018, Boston, MA
- [C37] J. Xiao, Rehealable, fully recyclable and malleable electronic skin enabled by dynamic covalent thermoset nanocomposite, *GRC Multifunctional Materials and Structures*, Jan 14-19, 2018, Ventura, CA
- [C36] J. Xiao, Rehealable, fully recyclable and malleable electronic skin enabled by dynamic covalent thermoset nanocomposite, *Symposium of Materials and Mechanics in the Midwest*, Dec 1-2, 2017, Northwestern University, Evanston, IL
- [C35] J. Xiao, Multiscale Wrinkling of Shape Memory Polymers, *The ASME International Mechanical Engineering Congress & Exposition 2017*, Nov 3-9, 2017, Tampa, FL
- [C34] J. Xiao, Third-Order Polynomials Model for Analyzing Multilayer Hard/Soft Materials in Flexible Electronics, *The ASME International Mechanical Engineering Congress & Exposition 2016*, Nov 11-17, 2016, Phoenix, AZ
- [C33] J. Xiao, Programmable Localized Wrinkling of Thin Films on Shape Memory Polymer Substrates, *AmeriMech Symposium: Mechanical Behavior of 2D Materials Graphene and Beyond*, April 4-6, 2016, University of Texas at Austin
- [C32] Z. Li, J. Xiao, Mechanics and Optics of Stretchable Elastomeric Microlens Array for Artificial Compound Eye Camera, *The ASME International Mechanical Engineering Congress & Exposition 2015*, Nov 13-19, 2015, Houston, TX

- [C31] Z. Li, J. Rodriguez, G. Wendland, Y. Wang, J. Xiao, Tunable Adhesion Enabled by Hierarchical Surface Morphologies, ASME 2015 Applied Mechanics and Materials Conference (McMAT2015), June 29-July 1, 2015, Seattle, WA
- [C30] J. Xiao, Unique wrinkling behavior of stiff thin films on shape memory polymers, International Workshop on Pattern Formation in Soft Materials, June 1-4, 2015, Tianjin, China
- [C29] Y. Wang, K. Yu, H. Qi, X. Yin, J. Xiao, Surface wrinkling of shape memory polymers, 2014 *Energy Materials Nanotechnology (EMN) Fall Meeting*, Nov 22-25, 2014, Orlando, Florida
- [C28] Y. Wang, K. Yu, J. Xiao, H. Qi, Unique wrinkling behavior of stiff thin films on shape memory polymers, *The ASME International Mechanical Engineering Congress & Exposition 2014*, Nov 14-20, 2014, Montreal, Canada
- [C27] J. Xiao, Y. Huang, J.A. Rogers, Artificial Compound Eye Camera Inspired by The Arthropod Eye, *The ASME International Mechanical Engineering Congress & Exposition 2014*, Nov 14-20, 2014, Montreal, Canada
- [C26] J. Xiao, Y.M. Song, Y. Xie, V. Malyarchuk, Y. Huang, J.A. Rogers, Bio-inspired Artificial Apposition Compound Eye, *APS March Meeting 2014*, March 3-7, 2014, Denver, Colorado
- [C25] J. Xiao, H. Qi, Y. Wang, K. Yu, Time and temperature dependent wrinkling of stiff thin films on shape memory polymers, *The ASME International Mechanical Engineering Congress & Exposition 2013*, Nov 15-21, 2013, San Diego, California
- [C24] J. Xiao, M. Li, X. Meng, Mechanics of Self-Folding of Graphene, *The ASME International Mechanical Engineering Congress & Exposition 2013*, Nov 15-21, 2013, San Diego, California
- [C23] J. Xiao, Y. Wang, J. Song, Surface effects on in-plane buckling of nanowires on elastomeric substrates, *The ASME International Mechanical Engineering Congress & Exposition 2013*, Nov 15-21, 2013, San Diego, California
- [C22] J. Xiao, C. Lu, M. Li, Y. Huang, J. Rogers, Mechanics of tunable hemispherical electronic eye camera systems that combine rigid device elements with soft elastomers, *The ASME International Mechanical Engineering Congress & Exposition 2013*, Nov 15-21, 2013, San Diego, California
- [C21] J. Xiao, Y. M. Song, Y. Xie, V. Malyarchuk, K. B. Crozier, Y. Huang, and J. A. Rogers, Bio-inspired Artificial Apposition Compound Eye, *The ASME International Mechanical Engineering Congress & Exposition 2013*, Nov 15-21, 2013, San Diego, California
- [C20] J. Xiao, H. Qi, Y. Wang, K. Yu, Time and temperature dependent wrinkling of stiff thin films on shape memory polymers, *50th Annual Technical Conference of Society of Engineering Science*, July 28-31, 2013, Brown University, Providence, RI
- [C19] J. Xiao, M. Li, X. Meng, Mechanics of Self-Folding of Single-layer Graphene, *50th Annual Technical Conference of Society of Engineering Science*, July 28-31, 2013, Brown University, Providence, RI
- [C18] J. Xiao, I. Jung, Y. Huang, J. Rogers, Mechanics of dynamically tunable electronic eye camera, *The ASME International Mechanical Engineering Congress & Exposition 2012*, Nov 9-15, 2012, Houston, Texas

- [C17] J. Xiao, Y. Zhang, Y. Huang, J. Rogers, Alignment Controlled Growth of Single-Walled Carbon Nanotubes on Quartz Substrates, *The ASME International Mechanical Engineering Congress & Exposition 2012*, Nov 9-15, 2012, Houston, Texas
- [C16] J. Xiao, Y. Huang, J. Rogers, U. Paik, and H. Jiang, Buckling mechanics of one-dimensional nanomaterials on elastomeric substrates, *The ASME International Mechanical Engineering Congress & Exposition 2012*, Nov 9-15, 2012, Houston, Texas
- [C15] J. Xiao, C. Lu, Z. Liu, I. Jung, Y. Huang, and J. A. Rogers, Mechanics of dynamically tunable electronic eye camera, *49th Annual Technical Conference of Society of Engineering Science*, October 10-12, 2012, Georgia Tech, Atlanta, GA
- [C14] J. Xiao, S. Y. Ryu, Y. Huang, K.-C. Hwang, U. Paik, J. A. Rogers, Mechanics of nanowire/nanotube in-surface buckling on elastomeric substrates, *The 23rd International Congress of Theoretical and Applied Mechanics*, August 19 -24, 2012, Beijing, China
- [C13] J. Xiao, S. Dunham, P. Liu, Y. Zhang, Y. Huang, and J. A. Rogers, Alignment Controlled Growth of Single Walled Carbon Nanotubes on Quartz, 2012 MRS Spring Meeting & Exhibit, April 9-13, 2012, San Francisco, CA
- [C12] J. Xiao, Y. Huang, J. A. Rogers, Buckling mechanics of one-dimensional nanomaterials on elastomeric substrates, *48th Annual Technical Conference of Society of Engineering Science*, October 12-14, 2011, Northwestern University, Evanston, IL
- [C11] Y. Huang, J. Xiao, J. A. Rogers, Alignment Controlled Growth of Single-Walled Carbon Nanotubes on Quartz Substrates, *48th Annual Technical Conference of Society of Engineering Science*, October 12-14, 2011, Northwestern University, Evanston, IL
- [C10] J. Xiao, S. Dunham, P. Liu, Y. Zhang, C. Kocabas, L. Moh, Y. Huang, K.-C. Hwang, C. Lu, W. Huang and J. A. Rogers, Alignment of single-wall carbon nanotubes grown on quartz. *The ASME International Mechanical Engineering Congress & Exposition 2009*, Nov 13-19, 2009, Lake Buena Vista, Florida.
- [C9] J. Xiao, S.Y. Ryu, Y. Huang, K.-C. Hwang, U. Paik and J.A. Rogers, Mechanics of In-surface Buckling of Silicon Nanowires on Elastomeric Substrates. *The ASME International Mechanical Engineering Congress & Exposition 2009*, Nov 13-19, 2009, Lake Buena Vista, Florida.
- [C8] J. Xiao, A. Carlson, Z.J. Liu, Y. Huang, H. Jiang, and J.A. Rogers, Stretchable and Compressible Thin Films of Stiff Materials on Compliant Wavy Substrates. *The ASME International Mechanical Engineering Congress & Exposition 2009*, Nov 13-19, 2009, Lake Buena Vista, Florida.
- [C7] J. Xiao, B. Liu, Y. Huang, J. Zuo, K.-C. Hwang, and M.-F. Yu, Collapse and Stability of Single- and Multi-wall Carbon Nanotubes. *The ASME International Mechanical Engineering Congress & Exposition 2009*, Nov 13-19, 2009, Lake Buena Vista, Florida.
- [C6] J. Xiao, Y. Huang, J. A. Rogers, and H. Jiang, Stretchable nanoelectronics with applications in biomedical devices (poster). *The Humboldt Kolleg, Nano-Bio: The Next Transformative Convergence*, Oct 14-15, 2009, Roanoke, Virginia.
- [C5] J. Xiao, H. Jiang, D.-Y. Khang, J. Wu, Y. Huang, and J.A. Rogers, Mechanics of buckled carbon nanotubes on elastomeric substrates. *The ASME International Mechanical Engineering Congress & Exposition 2008*, Oct 31-Nov 6, 2008, Boston, Massachusetts.

- [C4] J. Xiao, J. Qin, Y. Huang, and K. C. Hwang, The Equivalence of Axisymmetric Indentation Model for Three-Dimensional Indentation Hardness. *The ASME International Mechanical Engineering Congress & Exposition 2008*, Oct 31-Nov 6, 2008, Boston, Massachusetts.
- [C3] J. Xiao, H. Jiang, D.-Y. Khang, Y. Y. Huang, and J. A. Rogers, Molecular Scale Buckling Mechanics in Aligned Single-Wall Carbon Nanotubes on Elastomeric Substrates. *The 8th International Conference on Fundamentals of Fracture*, Jan 3-7, 2008, Hong Kong.
- [C2] J. Xiao, Y. Huang, and G. Paulino, Mechanism-Based Cohesive Failure Model for Functionally Graded Aircraft Components and Structures. *Air Force Research Laboratory-University of Illinois Technical Interchange Meeting*, Aug 27-29, 2007, Urbana, Illinois.
- [C1] Xiao JL, Liu B, Huang Y, Hwang KC, and Yu MF, Stability and charality effect on twist formation of collapsed double wall carbon nanotubes. *The 5th International Forum on Advanced Material Science and Technology*, Jun 11-14, 2006, Xiangtan, Hunan, China.

WORK PRESENTED BY STUDENTS AND COLLABORATORS

- [A25] Z. Zou, J. Xiao, Rehealable, fully recyclable and malleable electronic skin enabled by dynamic covalent thermoset nanocomposite, *The ASME International Mechanical Engineering Congress & Exposition 2018*, Nov 9-15, 2018, Pittsburgh, PA
- [A24] Z. Zou, J. Xiao, Programmable Multi-functional Soft Robot blends into the background, *The ASME International Mechanical Engineering Congress & Exposition 2018*, Nov 9-15, 2018, Pittsburgh, PA
- [A23] Z. Zou, C. Zhu, Y. Li, X. Lei, W. Zhang, and J. Xiao, Rehealable, fully recyclable and malleable electronic skin enabled by dynamic covalent thermoset, *ASME International Mechanical Engineering Congress & Exposition 2017*, Nov 3-9, 2017, Tampa, FL
- [A22] Z. Zou, Y. Liu, J.-W. Jeong, J.A. Rogers, J. Xiao, Epidermal mechano-acoustic sensing electronics for cardiovascular diagnostics and human-machine interfaces, *ASME International Mechanical Engineering Congress & Exposition 2017*, Nov 3-9, 2017, Tampa, FL
- [A21] Z. Li, J. Xiao, Harnessing Surface Wrinkling-Cracking Patterns for Optical Applications, *ASME International Mechanical Engineering Congress & Exposition 2016*, Nov 11-17, 2016, Phoenix, AZ
- [A20] Lewis Cox, Jason Killgore, Zhengwei Li, Rong Long, Jianliang Xiao, Yifu Ding, Influences of Substrate Adhesion and Particle Size on the Shape Memory Effect of Polystyrene Particles, *ASME International Mechanical Engineering Congress & Exposition 2016*, Nov 11-17, 2016, Phoenix, AZ
- [A19] Lewis Cox, Chen Wang, Zhengwei Li, Xiaohao Sun, Nancy Sowan, Jianliang Xiao, Jason Killgore, Rong Long, Christopher Bowman, Yifu Ding, Reconfigurable Polymer Surfaces, *The ASME International Mechanical Engineering Congress & Exposition 2016*, Nov 11-17, 2016, Phoenix, AZ
- [A18] Z. Li, J. Xiao, Mechanics and Optics of Artificial Compound Eye Camera, *24th International Congress of Theoretical and Applied Mechanics*, Aug 21-26, 2016, Montreal, Canada

- [A17] Y. Wang, J. Xiao, Programmable Localized Wrinkling of Thin Films on Shape Memory Polymer Substrate, *The ASME International Mechanical Engineering Congress & Exposition 2015*, Nov 13-19, 2015, Houston, TX
- [A16] Z. Li, J. Xiao, Strain Tunable Optics of Elastomeric Microlens Array (Poster), ASME 2015 Applied Mechanics and Materials Conference (McMAT2015), June 29-July 1, 2015, Seattle, WA
- [A15] Z. Li, J. Xiao, Mechanics and Optics of Stretchable Elastomeric Microlens Array, ASME 2015 Applied Mechanics and Materials Conference (McMAT2015), June 29-July 1, 2015, Seattle, WA
- [A14] C. Yu, J. Xiao, S. Chen, Balloon Transfer Printing for 3D electronics manufacturing, *The ASME International Mechanical Engineering Congress & Exposition 2014*, Nov 14-20, 2014, Montreal, Canada
- [A13] L. Cox, J.P. Killgore, Z. Li, Z. Zhang, M. Stoykovich, D.C. Hurley, J. Xiao, Y. Ding, Shape Memory Behavior of Polymer Micro- and Nano-particles, *The ASME International Mechanical Engineering Congress & Exposition 2014*, Nov 14-20, 2014, Montreal, Canada
- [A12] Z. Li, J. Xiao, Mechanics and optics of stretchable microlenses for artificial compound eye camera, *APS March Meeting 2014*, March 3-7, 2014, Denver, Colorado
- [A11] X. Liu, N. Boddeti, M. Szpunar, L. Wang, M. Rodriguze, R. Long, J. Xiao, M. Dunn, S. Bunch, Observation of Pull-in Instability in Graphene Membranes under Interfacial Forces, *APS March Meeting 2014*, March 3-7, 2014, Denver, Colorado
- [A10] L. Cox, J. Killgore, Z. Li, Z. Zhang, D. Hurley, J. Xiao, Y. Ding, Shape Memory Behaviors of Micro- and Nano-Particles, *APS March Meeting 2014*, March 3-7, 2014, Denver, Colorado
- [A9] Y. Wang, K. Yu, H. Qi, J. Xiao, Time and temperature dependent wrinkling of stiff thin films on shape memory polymers, *APS March Meeting 2014*, March 3-7, 2014, Denver, Colorado
- [A8] C. Lu, J. Xiao, Y. Huang, and J. A. Rogers, Operation mechanism for tunable hemispherical eyeball cameras, *The 23rd International Congress of Theoretical and Applied Mechanics*, August 19 - 24, 2012, Beijing, China
- [A7] C. Lu, J. Xiao, M. Li, I. Jung, V. Malyarchuk, Y. Huang, and J. A. Rogers, Mechanics of dynamically tunable eyeball cameras, *48th Annual Technical Conference of Society of Engineering Science*, October 12-14, 2011, Northwestern University, Evanston, IL
- [A6] S. Wang, J. Xiao, and Y. Huang, Mechanics of Curvilinear Electronics, *48th Annual Technical Conference of Society of Engineering Science*, October 12-14, 2011, Northwestern University, Evanston, IL
- [A5] Y. Huang, J. Xiao, and J. Rogers, Alignment Controlled Growth of Single-Walled Carbon Nanotubes on Quartz Substrates. *The ASME International Mechanical Engineering Congress & Exposition 2010*, Nov 12-18, 2010, Vancouver, British Columbia, Canada.
- [A4] Y. Huang, J. Xiao, and J. Rogers, Mechanics of nanowire/nanotube in-surface buckling on elastomeric substrates. *The ASME International Mechanical Engineering Congress & Exposition 2010*, Nov 12-18, 2010, Vancouver, British Columbia, Canada.

- [A3] Jiong Zhang, Jianliang Xiao, Xianhong Meng, Carolyn Monroe, Yonggang Huang and Jianmin Zuo, Quantitative Analysis of Graphene Folded Edges Using Electron Diffraction, Microscopy & Microanalysis 2010, Aug 1-5, 2010, Portland, OR.
- [A2] Jiong Zhang, Jianliang Xiao, Xianhong Meng, Carolyn Monroe, Yonggang Huang and Jianmin Zuo, Folding of Suspended Graphene Sheets, APS March Meeting 2010, Mar 15-19, 2010, Portland, OR.
- [A1] J. Xiao, S. Dunham, P. Liu, Y. Zhang, C. Kocabas, Y. Huang, and J. A. Rogers, Alignment Controlled Growth of Single Walled Carbon Nanotubes on Quartz Substrates. *2009 MRS Fall Meeting*, Nov 30-Dec 4, 2009, Boston, MA.