Xin Tang

Curriculum Vitae

Assistant Professor
Department of Mechanical and Aerospace Engineering
University of Florida
Gainesville, FL, 32611

Phone: 352-294-1194 (office)
Email: xin.tang@ufl.edu

EDUCATION

University of Illinois at Urbana-Champaign
Ph. D., Mechanical and Science Engineering — Dec. 2013

Case Western Reserve University
M. S., Mechanical and Aerospace Engineering — July 2006

University of Science and Technology of China
B.S. (w/ honor), Theoretical & Applied Mechanics — July 2003

POSITIONS & EMPLOYMENT

University of Florida — 2018 – now
Assistant Professor

Harvard University — 2013 – 2017
Post-doctoral fellow

Howard Hughes Medical Institute (HHMI) — 2014 – 2017
Post-doctoral fellow

FELLOWSHIPS & GRANTS

UF Cancer Center University Scholar Program — Feb. 2021
UF University Scholar Program — Feb. 2019
UF Health Cancer Center Pilot — Sep. 2018 – Dec. 2019
Gatorade Award for Assistant Professor — Sep. 2018 – now
NSF IGERT Fellowship — Sep. 2010 – Nov. 2013
Mavis Future Faculty Fellowship — Sep. 2010 – Sep. 2012
NSF Travel Grant to ASME — Oct. 2011
NSF Fellowship for Cancer Nanotech Institute — May 2011
NSF Fellowship for Cancer Nanotech Institute — May 2010
NSF Fellowship for Nano-manufacture Institute — May 2011
Case Prime Dean's Fellowship — Sep. 2003 – Sep.2006

HONORS & AWARDS

2nd Place Poster & Presentation Award — Oct. 2012
Outstanding Overseas Students Award — Sep. 2012
Best Nanoscale Science Poster Award — Nov. 2011
Featured Image of the Week — Aug. 2011
Poster Award in Regenerative Biology — March 2011
Conference Travel Grant — Oct. 2007 & 2008
Outstanding Undergraduate Thesis — July 2003
Outstanding Undergraduate Scholarship — Sep. 2001

RESEARCH INTERESTS

Functional *in vivo* imaging (light-sheet, confocal, super-resolution, 2-photon), Neuroscience, Mechanobiology, CRISPR/Cas9 Genome editing, Bio-nanotechnology, and Theory

RESEARCH & PROFESSIONAL EXPERIENCE

Ralph E. Powe Junior Faculty Award 2020 & 2021
Ad Hoc reviewer

Soft Matter Symposium, University of Florida 2018 & 2019
Co-organizer

National Institute of Health (NIH) 2018 – now
Panel reviewer

National Science Foundation (NSF) 2018 – now
Panel and *ad hoc* reviewer

Neuroscience Journal Club, Harvard University 2014 – 2018
Co-organizer at Cohen lab

Technische Universit ät München, Germany 2012
Visiting scholar

NSF CMMB IGERT Student Leadership Council 2011– 2013
Co-organizer

ASME IMECE Conference 2011– 2012
Session co-chairs

Center for Cellular Mechanics (CCM) 2008– 2011
Graduate Student Leader and Organizer

JOURNAL PUBLICATIONS

1. Liang C, Tanaka M, Lepler S, Zheng, B, Siemann D, **Tang X. "**Decoding intra- and extracellular Ca^{2+} dynamics with all-optical sensing, control, and modeling". 2021, (in submission to bioRxiv).

2. Luo Q, Zhang J, Lin G, Huang M, Tanaka M, Lepler S, Guan, J, Siemann D, **Tang X.** "Automatic multi-functional integration program (AMFIP) for all-optical electro-mechanobiology interrogation". 2021, (bioRxiv DOI: 10.1101/2021.03.31.437936; https://biorxiv.org/cgi/content/short/2021.03.31.437936v1)

3. **Tang X**, Rossmann M, Zon L, Engert F, Cohen A. "All-optical interrogation of the neuro-vascular systems in larval zebrafish". 2021, (in submission to bioRxiv).

4. Li K, Yin X, Huang M, Liang C, Tan Y, **Tang X.** "Biophysics of tumor growth and progression". 2021, (in submission to bioRxiv).

5. Zhang Y, Shi X, Zhao T, Huang C, Wei Q, **Tang X**, Santy LC, Saif MTA, Zhang S. "A traction force threshold signifies metastatic phenotypic change in multicellular epithelia". Soft Matter. 2019 Sep 18;15(36):7203-7210.

6. Lee J, Abdeen AA, **Tang X**, Saif TA, Kilian KA. “Matrix directed adipogenesis and neurogenesis of mesenchymal stem cells derived from adipose tissue and bone marrow”. Acta Biomater. 2016 Sep 15; 42:46-55.

7. Lee J, Abdeen AA, **Tang X**, Saif TA, Kilian KA. “Geometric guidance of integrin mediated traction stress during stem cell differentiation”. Biomaterials. 2015 Nov; 69:174-83.

8. **Tang X**, Tofangchi A, Anand SV, Saif TA. “A novel cell traction force microscopy to study multi-cellular system”. PLoS Comput Biol. 2014 Jun;10(6):e1003631.

9. **Tang X**, Kuhlenschmidt TB, Li Q, Ali S, Lezmi S, Chen H, Pires-Alves M, Laegreid WW, Saif TA, Kuhlenschmidt MS. “A mechanically-induced colon cancer cell population shows increased metastatic potential”. Mol Cancer. 2014 May 29; 13:131.

10. **Tang X**, Saif T. “Adhesivity of Colon Cancer Cells during in vitro Metastasis”. International journal of applied mechanics. 2013; 05(03).

11. **Tang X**, Wen Q, Kuhlenschmidt TB, Kuhlenschmidt MS, Janmey PA, Saif TA. “Attenuation of cell mechanosensitivity in colon cancer cells during in vitro metastasis”. PLoS One. 2012;7(11): e50443.

12. **Tang X**, Ali MY, Saif MT. “A Novel Technique for Micro-patterning Proteins and Cells on Polyacrylamide Gels”. Soft Matter. 2012 Jul 21;8(27):7197-7206.

13. Cha C, Jeong JH, **Tang X**, Zill AT, Prakash YS, Zimmerman SC, Saif TA, Kong H. “Top-down synthesis of versatile polyaspartamide linkers for single-step protein conjugation to materials”. Bioconjug Chem. 2011 Dec 21;22(12):2377-82.

14. **Tang X**, Cappa T, Kuhlenschmidt T, Kuhlenschmidt M, Saif T. “Specific and Non-Specific Adhesion in Cancer Cells with Various Metastatic Potentials”. In: Mechanobiology of Cell-Cell and Cell-Matrix Interactions. New York: Springer Science; 2011.

15. **Tang X**, Li D, Lewandowski J, Prakash V. “Effects of Microstructure on High Strain Rate Deformation and Flow Behavior of Al–Mg–Si Alloy (AA 6061) under Uniaxial Compression and Combined Compression and Shear Loading”. Materials Science and Technology. 2011; 27(1):13.

16. **Tang X**, Bajaj P, Bashir R, Saif T. “How Far Cardiac Cells Can See Each Other Mechanically”. Soft matter. 2011; 7:6151.

17. Bajaj P, **Tang X**, Saif TA, Bashir R. “Stiffness of the substrate influences the phenotype of embryonic chicken cardiac myocytes”. J Biomed Mater Res A. 2010 Dec 15;95(4):1261-9.

18. **Tang X**, Kuhlenschmidt TB, Zhou J, Bell P, Wang F, Kuhlenschmidt MS, Saif TA. “Mechanical force affects expression of an in vitro metastasis-like phenotype in HCT-8 cells”. Biophys J. 2010 Oct 20;99(8):2460-9.

19. **Tang X**, Lewandowski J, Prakash V, Kooistra G, Wadley H. “Inertial Stabilization of Buckling at High Rates of Loading and Low Test Temperatures: Implications for Dynamic Crush Resistance of Aluminum-alloy-based Sandwich Plates with Lattice Core”. Acta materialia. 2007; 55(8):2829.

20. **Tang X**, Prakash V, Lewandowski J. “Dynamic Tensile Deformation of Aluminum Alloy 6061-T6 and 6061-OA”. Journal of Experimental Mechanics. 2007; 22(3):305.

21. Wang R, **Tang X**, Wang D, He S. “Measurement of Varied-line-space Grating Line Frequency by Phase-shift Moiré Interferometry”. Journal of University of Science and Technology of China. 2004; 34(5).

22. Wang R, **Tang X**, Cao Y, He S. “Measurement of Two-dimensional Varied-linespace Gratings”. Journal of Experimental Mechanics. 2004; 19(3):324.

SERVICE & LEADERSHIP

University of Florida: Dept. of MAE

Member, Graduate Recruitment & Admission	2019– now
Member, PhD Qualifying Exam (Continuum Mech.)	2018– now
Committee, PhD defense of four PhD students	2018– now
Participant, Faculty Search & Interview	2018– now

UF Health Cancer Center (UFHCC)

Reviewer, Symposium Posters	2020– now

REVIEWER

Journals: Advanced Materials; Advanced Materials Technology; Applied Physics Letter; Biofabrication; Biomaterials; Biomedical Optics Express; Biomedical Physics & Engineering Express; Chemical Society Reviews; Extreme Mechanics Letter; Journal of Applied Physics; Journal of Materials Chemistry; Journal of Physics: Condensed Matter; Lab on a Chip; Materials Horizons; Nanotechnology; Optics Express; Optics Letter; Physical Biology; Physics of Fluids; Physics Review E; Physical Review Letters;

Review of Scientific Instruments; RSC Advances; Small; Soft Matter.

Conference Abstract: Biomedical Engineering Society; American Society of Mechanical Engineering; IEEE.