

William C. Tang, Ph.D.
Curriculum Vitae

Education:

12/1990 Ph.D., Electrical Engineering & Computer Sciences, University of California, Berkeley
6/1982 M.S., Electrical Engineering & Computer Sciences, University of California, Berkeley
12/1980 B.S., Electrical Engineering & Computer Sciences, University of California, Berkeley

Research Interests:

Neural science and neural engineering at the micro-scale, platforms for micro- and nano-scales single-cell biomedical diagnosis, micro biomechanics on organisms, tissues, and cells, with emphases on cardiomyocytes, neurons, cancer cells, immune cells, and malaria-infected red blood cells, microfabrication technology, computational science and devices for navigations, microactuators, and microsensors.

Professional Employments & Academic Appointments:

3/23 – present: Professor Emeritus, Biomedical Engineering Department, University of California, Irvine, CA
2/23 – 1/24: Chair Professor, Biomedical Engineering Department, National Taiwan University, Taipei City, Taiwan
7/02 – 2/23: Professor, Biomedical Engineering Department, jointly appointed at Electrical Engineering and Computer Science, University of California, Irvine, CA
7/18 – 2/23: Professor, Materials Science and Engineering, University of California, Irvine, CA
7/18 – 2/23: Professor, Chemical and Biomolecular Engineering, University of California, Irvine, CA
7/21 – 2/23: Director, Bioengineering Innovation & Entrepreneurship (BioENGINE), University of California, Irvine, CA
10/19 – 2/20: Visiting Professor, Institute of Applied Mechanics, National Taiwan University, Taipei City, Taiwan
1/16 – 6/18: Professor, Chemical Engineering and Materials Science, University of California, Irvine, CA
7/15 – 10/15: Visiting Professor, Institute of Applied Mechanics, National Taiwan University, Taipei City, Taiwan
9/13 – 9/14: Visiting Professor, Mechanical and Biomedical Engineering Department, City University of Hong Kong, Hong Kong, SAR.
3/08 – 6/13: Associate Dean for Research, Henry Samueli School of Engineering, University of California, Irvine, CA (except July to December 2010).
7/10 – 12/10: Associate Chair for Undergraduate Education, Biomedical Engineering Department University of California, Irvine, CA
7/09 – 6/10: Interim Chair, Biomedical Engineering Department, University of California, Irvine, CA
7/05 – 6/06: Interim Chair, Biomedical Engineering Department, University of California, Irvine, CA
7/03 – 6/05: Associate Chair for Undergraduate Education, Biomedical Engineering Department, University of California, Irvine, CA
7/99 – 6/02: Program Manager, Microsystems Technology Office, Defense Advanced Research Projects Agency, Arlington, VA
1/96 – 6/99: Supervisor, MEMS Technology Group, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
7/93 – 1/96: Manager, Sensor Research, Ford Microelectronics, Inc., Colorado Springs, CO
9/90 – 6/93: Research Engineer Senior, Ford Research Laboratory, Dearborn, MI
9/85 – 8/90: Postgraduate Researcher, University of California at Berkeley, CA
7/82 – 8/84: Associate Engineer/Scientist, IBM Corp., General Products Division, San Jose, CA
6/81 – 1/82: Member of Technical Staff, TRW, Inc., Redondo Beach, CA

Academic Services

UC System-Wide:

7/10 – 6/13, 7/16 – 2/23: *Member (Chair 7/21-2/23), Subcommittee on International Education*
Examine, investigate, and establish policies and procedures for international education programs with several key overseas institutions. The SCIE is a subcommittee of both the Graduate Council and the Council on Educational Policy. It provides academic policy oversight on all matters concerned with the University of California Education Abroad Program (EAP) and other formal educational activities of UCI students abroad, such as UCI Travel-Study and the International Opportunities Program (IOP); faculty exchanges between UCI and foreign universities; and other academic issues involving international education.

UC Irvine Campus-Wide:

12/21 – 2/23: *Member, International Relations Council*
Provides guidance to the campus community related to UCI international activities; helps minimize institutional legal liability; helps UCI achieve its mission by facilitating engagement in appropriate international activities; reviews international activity proposals that may trigger specific risks; and provides advance consultation and approval for international activities or suggest alternatives.

5/09 – 12/10: *Member, Responsible Conduct of Research (RCR) Task Force*
Developed and deployed the RCR eCourse trainings campus-wide. Plan, coordinate, and implement the Responsible Conduct of Research trainings across UCI campus to meet the new National Science Foundation requirements, similar to those already implemented at the National Institutes of Health.

7/08 – 6/09: *Member, Research Advisory Committee*
Planned, established and promoted the Year of Science in 2009, with month-by-month event activities. Play an advisory role for campus-wide research-related issues.

9/04 – 6/05: *School of Engineering Divisional Senate, University Academic Senate Assembly*
Represented Engineering School in all matters pertaining to Senate Assembly policies, initiatives, and strategies.

School-Wide:

5/16 – 7/18: *Member, UC Irvine-Dalian University of Technology Joint Institute Planning Committee*
Plan, strategize, and recommend structure and process to establish the Joint Institute.

3/08 – 6/13: *Associate Dean for Research*
Served the school by providing leadership and management of the school research enterprise (except a 6-month pause 7/10 – 12/10).

3/06 – 2/08: *Member, School-wide Academic Planning Committee*
Planned, strategized, and recommended 5-year academic plans for the Engineering School.

7/03 – 6/05: *Member, Undergraduate Studies Committee*
Examined, evaluated, and implemented enhancement to undergraduate curricula.

Biomedical Engineering Department:

7/21 – 2/23: *Director, Bioengineering Innovation & Entrepreneurship (BioENGINE)*
Lead, promote, expand, and implement initiatives for innovation and rapid technology transfers, education components in entrepreneurship at both graduate and undergraduate levels.

7/21 – 2/23: *Faculty Director, M.Eng. Program BME Concentration*
Direct and manage the curriculum, instructions, and the entrepreneurial capstone projects for the BME Concentration of the M.Eng. Program.

- 7/20 – 2/23: *Member, Committee on Graduate Education*
Manage admission, develop and implement graduate curriculum and student learning experience.
- 11/17 – 9/18: *Chair, Committee on Faculty Search*
Lead the search for tenure-track faculty on Devices for Precision Medicine.
- 7/14 – 6/20: *Member, Committee on Undergraduate Education*
Develop and implement undergraduate curriculum and student learning experience.
- 7/10 – 12/10: *Associate Chair, Committee on Undergraduate Education*
Developed and implemented undergraduate curriculum and student learning experience.
- 7/09 – 6/10: *Interim Chair, BME Department*
Lead and manage the Biomedical Engineering Department.
- 7/07 – 6/09: *Member, Search Committee for Director of Edwards Lifesciences Center*
Screened, down-selected, and interviewed 9 qualified candidates. Selected the founding director for the center.
- 7/06 – 6/09: *Lead Faculty, ABET Accreditation*
The BME department was accredited for the first time through 2013.
- 7/05 – 6/06: *Interim Chair, BME Department*
Lead and manage the Biomedical Engineering Department.
- 7/03 – 6/05: *Associate Chair, Committee on Undergraduate Education*
Developed and implemented undergraduate curriculum and student learning experience.

Consulting:

- 1/22 – present: Advisor & Consultant, Industrial Technology Research Institute, Hsinchu, Taiwan.
- 12/15 – 12/16: Consultant, Spinal Singularity, Inc., San Clemente, CA.
- 6/05 – 3/10: Member, Scientific Advisory Board, Institute of Microelectronics, Singapore.
- 4/08 – 5/08: Consultant, Primary Insight, Inc., New York, NY.
- 1/04 – 2/04: Member, Science and Engineering Research Council Review Panel, Singapore.
- 11/02 – 12/02: Member, Science and Engineering Research Council Review Panel, Singapore.
- 7/02 – 7/04: Member, Scientific Advisory Board, Institute of Materials Research and Engineering, Singapore.
- 8/02 – 7/04: Member, Scientific Advisory Board, Science and Engineering Research Council, Singapore.
- 8/02 – 10/03: Consultant, Defense Advanced Research Projects Agency, Arlington, VA.
- 8/02 – 7/03: Consultant, Discera, Inc., Ann Arbor, MI.
- 3/97 – 2/98: Consultant, Irvine Sensors Corp., Costa Mesa, CA.

Awards, Honors, and Biographical listings:

NASA Jet Propulsion Laboratory NOVA Award in Recognition of Effective Leadership (1997)
Engineering Faculty of the Year (2005, 2013, and 2019)
Chancellor's Award for Excellence in Undergraduate Research (2006)
Fariborz Maseeh Outstanding Faculty Teaching Award (2010)

Professional Association Memberships:

Senior Member, the Institute of Electrical and Electronics Engineers (IEEE)
Founding Chair, Orange County Chapter, IEEE Engineering in Medicine and Biology Society (EMBS)
Fellow, the Institute of Physics (IOP)
Chartered Physicist, the Institute of Physics (IOP)
Fellow, American Institute for Medical and Biological Engineering (AIMBE)
Member, Biomedical Engineering Society (BMES)

Professional Service and Activities:

- [S71] General Chair, IEEE 4th International Conference on Nanoscience and Technology (IEEE ICNST), Virtual, June 26 – 28, 2021.
- [S70] Member, Technical Program Committee, IEEE Sensors 2019 Conference, Montreal, Canada, October 27 – 30, 2019.
- [S69] Member, Technical Program Committee, IEEE 12th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Los Angeles, CA, USA, April 9 – 12, 2017.
- [S68] Member, Technical Program Committee and Section Chair, IEEE 10th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Xi'an, China, April 7 – 11, 2015.
- [S67] Member, Engineering Panel, Research Assessment Exercise, University Grants Committee, Hong Kong, SAR, China, January – August, 2014.
- [S66] Session Chair and Invited Keynote Speaker, 3rd Annual World Congress of Advanced Materials 2014 (WCAM 2014), Chongqing, China, June 16 – 19, 2014.
- [S65] Member, Technical Program Committee, IEEE 9th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Waikiki, HI, USA, April 13 – 16, 2014.
- [S64] Session Chair and Keynote Speaker, 2013 7th IEEE International Conference on Nano/Molecular Medicine and Engineering (IEEE-NANOMED 2013), Phuket, Thailand, November 10 – 13, 2013.
- [S63] Member, Organizing Committee, IEEE Sensors 2013 Conference, Baltimore, MD, USA, November 3 – 6, 2013.
- [S62] Keynote Speaker and Section Chair, BIT 2nd Annual World Congress on Advanced Materials (WCAM 2013), Suzhou, China, June 5 – 7, 2013.
- [S61] Member, Technical Program Committee, IEEE 8th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Suzhou, China, April 7 – 10, 2013.
- [S60] Member, Organizing Committee, 2012 6th IEEE International Conference on Nano/Molecular Medicine and Engineering (IEEE-NANOMED 2012), Bangkok, Thailand, November 4 – 7, 2012.
- [S59] Co-Chair, Technical Program Committee, 2012 6th International Symposium on Medical Information and Communication Technology (ISMICT 2012), La Jolla, CA, USA, March 26 – 29, 2012.
- [S58] Member, Technical Program Committee, IEEE 7th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Kyoto, Japan, March 5 – 8, 2012.
- [S57] Member, International Advisory Committee, 16th International Conference on Solid-State Sensors, Actuators and Microsystems (Transducers 2011), Beijing, China, June 5 – 9, 2011.
- [S56] Member, Technical Program Committee, IEEE 6th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Kaohsiung, Taiwan, February 20 – 23, 2011.
- [S55] Member, Technical Program Committee, IEEE 5th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Xiamen, China, January 20 – 23, 2010.
- [S54] Member, Technical Program Committee, IEEE 4th International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Shenzhen, China, January 5 – 8, 2009.

- [S53] Session Chair and Invited Speaker, 13th International Conference on Biomedical Engineering (13ICBME), Singapore, December 3 – 6, 2008.
- [S52] Member, Technical Program Committee, ASME 2008 3rd Frontiers in Biomedical Devices Conference, Irvine, CA, USA, June 18 – 20, 2008.
- [S51] General Chair, 3rd IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Sanya, China, January 6 – 9, 2008.
- [S50] Member, Technical Program Committee, SPIE International Symposium on Microelectronics, MEMS, and Nanotechnology, Canberra, Australia, December 4 – 7, 2007.
- [S49] Member, Technical Program Committee, SPIE Photonic Asia Symposium on MEMS/MOEMS, Beijing, China, November 11 – 15, 2007.
- [S48] Program Track Co-Chair, Device Technologies, Annual Biomedical Engineering Society Meet., Los Angeles, CA, September 26 – 29, 2007.
- [S47] Oversea Proposal Reviewer, Canada Natural Sciences and Engineering Research Council, January 2006, June 2006, July 2007.
- [S46] Chair, Best Paper Award Committee, 2nd IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), Bangkok, Thailand, January 16 – 19, 2007.
- [S45] Member, Proposal Review Panel, NSF 05-610 Nanoscale Interdisciplinary Research Teams Program, March 23, 24, 2006.
- [S44] Oversea Proposal Reviewer, Singapore Agency for Science, Technology and Research (A-STAR), March 2006.
- [S43] Member, Technical Program Committee, SPIE International Symposium on MEMS/MOEMS, San Jose, CA, January 21 – 27, 2006.
- [S42] Member, Proposal Review Panel, NSF 05-7564 Integrative, Hybrid, and Complex Systems Program, January 12, 13, 2006.
- [S41] Co-sponsor, 2nd Annual UC Irvine Medical Device Conference, Irvine, CA, November 18, 2005.
- [S40] Chair, Technical Program Committee, 4th IEEE International Conference on Sensors, Irvine, CA, October 31 – November 3, 2005.
- [S39] Member, Technical Program Committee, First International Conference on Complex Medical Engineering (CME 2005), Takamatsu, Japan, May 15 – 18, 2005.
- [S38] Member, Technical Program Committee, SPIE International Symposium Photonics West 2005, San Jose, CA, January 22 – 27, 2005.
- [S37] Member, Executive Committee, CANEUS 2004 Conference on Micro-Nano-Technologies for Aerospace Applications, Monterey, CA, October 30 – November 5, 2004.
- [S36] Co-chair, Technical Program Committee, Third IEEE International Conference on Sensors, Vienna, Austria, October 24 – 27, 2004.
- [S35] Guest Editor, IEEE Sensors Journal, Special Issue on Microsensors and Microactuators: Technology and Applications, Vol. 4, August 2004.
- [S34] Member, Technical Program Committee, IEEE Fourth Symposium on Bioinformatics and Bioengineering (BIBE 2004), Taichung, Taiwan, May 19 – 21, 2004
- [S33] Panel speaker, NSF Workshop on Control and System Integration of Micro-and Nano-Scale Systems, Arlington, VA, March 29, 2004.

- [S32] Member, Technical Program Subcommittee and Session Co-chair, IEEE International Electron Device Meet., Washington, D.C., December 7 – 10, 2003.
- [S31] Member, Technical Program Committee, Second IEEE International Conference on Sensors, Toronto, Canada, October 22 – 24, 2003.
- [S30] Member, Proposal Review Panel, NSF 03-512 Sensors and Sensor Networks Program, May 29 – 30, 2003.
- [S29] Reviewer, IEEE Transactions of Biomedical Engineering: 2003 – present.
- [S28] Member, Technical Program Committee, SPIE International Symposium Smart materials, Nano- and Micro- Smart Systems, Melbourne, Australia, December 16 – 18, 2002.
- [S27] Member, International Advisory Board, International Workshop on Micro Power Generation, Tsukuba, Japan, November 12 – 13, 2002.
- [S26] Co-chair, International Program Committee and Session Chair, International Conference on Micro and Nano Systems, Kunming, China, August 11 – 14, 2002.
- [S25] Co-organizer, Microelectromechanical Systems (MEMS) for Test & Evaluation (T&E) Instrumentation Workshop, Annapolis, MD, June 18 – 20, 2002.
- [S24] Member, Technical Program Committee, First IEEE International Conference on Sensors, Orlando, FL, June 12 – 14, 2002.
- [S23] Member, Scientific Advisory Board, First International Conference on Nanoscale/Molecular Mechanics, Maui, HI, May 12 – 18, 2002.
- [S22] Co-sponsor, Workshop on Frontiers in Electronics, St. Croix, US Virgin Islands, January 6 – 11, 2002.
- [S21] Member, Technical Program Committee, First International Workshop on Space and Microsystems, San Francisco, CA, November 27 – 28, 2001.
- [S20] Session Co-chair, “Fabrication and Testing of MEMS,” 2001 ASME International Mechanical Engineering Congress & Exposition, New York, NY, November 11–16, 2001.
- [S19] Session Co-sponsor, “MEMS Components and Applications for Industry, Automobiles, Aerospace and Communication,” 2001 SPIE International Symposium on Micromachining and Microfabrication, San Francisco, CA, October 22 – 25, 2001.
- [S18] Sponsor and Co-chair, DARPA/NIST Workshop on Chip-Scale Atomic Clock, Boulder, CO, March 22 – 23, 2001.
- [S17] Co-sponsor, DARPA Workshop on Nanotechnology for Biodetection/Bioassay and Delivery of Therapeutics to Individual Cells, Scottsdale, AZ, December 12 – 13, 2000.
- [S16] Co-organizer and co-chair, 2000 NSF Workshop on Manufacturing of Micro-Electro-Mechanical Systems, Orlando, FL, November 7, 2000.
- [S15] Sponsor, DARPA MEMS Reliability Meet., Arlington, VA, October 26–27, 2000.
- [S14] Sponsor and Co-chair, DARPA/NASA/AFRL Workshop on Picosatellites, Pasadena, CA, July 24, 2000.
- [S13] Session Chair, Advanced Technology Workshop on Electronic Parts and Packaging for Space and Aeronautic Applications, International Microelectronics and Packaging Society, Washington, DC, May 22 – 24, 2000.
- [S12] Organizer and Chair, DARPA MEMS Industry Study Team Meet., Chicago, IL, April 19, 2000.
- [S11] Co-sponsor and Co-organizer, NIST Workshop on Nanotribology: Critical Assessment and Research Needs, Gaithersburg, MD, March 13 – 15, 2000.

- [S10] Organizer and Chair, DARPA MEMS Industry Study Team Meet., Chicago, IL, October 21, 1999.
- [S09] Organizer, DARPA Workshop on NEMS for Biotechnology Applications, Chicago, IL, October 19–20, 1999.
- [S08] Member, Scientific Advisory Board, NASA Advanced Environmental Monitoring and Control Program: 1999 – 2001
- [S07] Associate Editor, Micro and Nano Letters, 1/2018 – present
- [S06] Associate Editor and Member of Editorial Board, IEEE Sensors Journal, 5/2006 – present
- [S05] Oversea Reviewer, Research Grants Council, Hong Kong, SAR, China: 1995 – present
- [S04] Reviewer, Sensors and Actuators A: Physical: 1994 – present
- [S03] Reviewer, IEEE Journal of Microelectromechanical Systems: 1994 – present
- [S02] Member, Editorial Board, Journal of Micromechatronics: 1994 – 2006
- [S01] Member, Editorial Board, Journal of Micromechanics and Microengineering: 1994 – present

Publications:

Refereed journal articles:

- [J49] C. Bradley, J. Ly, A. Palma, and W. C. Tang, “Respiratory waveform variability as a predictive biomarker of oral feeding adaptability in preterm infants,” *Int. J. Med. Engin. Inform.*, (accepted for publication) 2023.
- [J48] S. B. Lassers, Y. S. Vakilna, W. C. Tang, and G. J. Brewer, “The flow of axonal information among hippocampal subregions: 2. Patterned stimulation sharpens routing of information transmission sharpens routing of information transmission,” *Front. Neural Circ.*, Vol. 17, 08 Dec. 2023. DOI: 10.3389/fncir.2023.1272925.
- [J47] R. Chen, Y. S. Vakilna, S. B. Lassers, W. C. Tang, and G. Brewer, “Hippocampal network axons respond to patterned theta burst stimulation with lower activity of initially higher spike train similarity from EC to DG and later similarity of axons from CA1 to EC,” *J. Neural Eng.*, Vol. 20, 2023, DOI: 10.1088/1741-2552/acf68a.
- [J46] L. Pu, T. Liu, W. C. Tang, C. Song, M. Jin, L. Ren, T. Li, and Z. Liang, “Greater prefrontal activation during sitting toe tapping predicts severer freezing of gait in Parkinson’s disease: an fNIRS study,” *Cerebral Cortex*, Vol. 33, Is. 4, 15 Feb. 2023, pp 959–968. DOI: 10.1093/cercor/bhac114.
- [J45] K. Guetl, V. Muster, L. Schweiger, W. C. Tang, K. Patel, and M. Brodmann, “Standard balloon angioplasty versus Serranator serration balloon angioplasty for the treatment of below-the-knee artery occlusive disease: A single-center subanalysis from the PRELUDE-BTK prospective study,” *J. Endovasc. Ther.*, 20 Nov. 2022, DOI: 10.1177/15266028221134891.
- [J44] Y. Xue, B. Lin, J. T. Chen, W. C. Tang, A. W. Browne, and M. J. Seiler, “The prospects for retinal organoids in treatment of retinal diseases,” *Asia-Pac. J. Ophthalmol.*, Vol. 11, No. 4, Jul./Aug. 2022, DOI: 10.1097/APO.0000000000000538.
- [J43] P. Rwei, C. Qian, A. Abiri, Y. Zhou, E.-F. Chou, W. C. Tang, and M. Khine, “Soft iontronic capacitive sensor for beat-to-beat blood pressure measurements,” *Adv. Mater. Interfaces*, 21 May 2022, DOI: 10.1002/admi.202200294.
- [J42] Y. Chen, J. Chu, W. C. Tang, R. Zhang, M. Zhao, and B. Xin, “Study of the spatial scale stability of Mueller matrix parameters for textural characterization of biological tissues,” *J. Biophotonics*, Vol. 15, Is. 5, May 2022, DOI: 10.1002/jbio.202100269.

- [J41] S. Zhang, X. Guo, S. Yuan, Z. Jin, and W. C. Tang, "Insight on the structural changes of glass-ceramics during nanoindentation derived from reactive force-field-based molecular dynamic simulations," *Appl. Surf. Sci.*, Vol. 571, 1 Jan. 2022, DOI: 10.1016/j.apsusc.2021.151375.
- [J40] Y. Xue, A. W. Browne, W. C. Tang, J. Delgado, B. T. McLelland, G. Nistor, J. T. Chen, K. Chew, N. Lee, H. S. Keirstead, and M. J. Seiler, "Retinal organoids long-term functional characterization using two-photon fluorescence lifetime and hyperspectral microscopy," *Front. Cell. Neurosci.*, 10 Dec. 2021, DOI: 10.3389/fncel.2021.796903.
- [J39] S. McAleer, A. Fast, Y. Xue, M. J. Seiler, W. C. Tang, M. Balu, P. Baldi, and A. W. Browne, "Deep learning-assisted multiphoton microscopy to reduce light exposure and expedite imaging in tissues with high and low light sensitivity," *Transl. Vis. Sci. Technol.*, Vol. 10, No. 30, Oct. 2021, DOI: 10.1167/tvst.10.12.30.
- [J38] Y. S. Vakilna, W. C. Tang, B. C. Wheeler, and G. J. Brewer, "The flow of axonal information between hippocampal subregions. 1. Feedforward and feedback network spatial dynamics underpinning emergent information processing," *Front. Neural Circ.*, Aug. 2021, DOI: 10.3389/fncir.2021.660837.
- [J37] Y. Xue, M. J. Seiler, W. C. Tang, J. Y. Wang, J. Delgado, B. T. McLelland, G. Nistor, H. S. Keirstead, and A. W. Browne, "Retinal organoids on-a-chip: a micro-millifluidic bioreactor for long-term organoid maintenance," *Lab Chip*, Jul. 2021, DOI: 10.1039/D1LC00011J.
- [J36] Y. Chen, W. C. Tang, J. Chu, R. Zhang, and S. Li, "Error analysis and optimization of a sky full-polarization imaging detection system," *J. Photogramm. Eng. Remote Sens.*, Vol. 87, No. 4, Apr. 2021, DOI:10.14358/PERS.87.4.273.
- [J35] J. Liu, M. Li, W. C. Tang, and S. M. N. Islam, "A cyber physical system crowdsourcing inference method based on tempering: An advancement in artificial intelligence algorithms," *J. Wireless Comm. Mobile Comp.*, Vol. 2021, Feb. 2021, DOI: 10.1155/2021/6618980.
- [J34] L. Pu, N. K. Qureshi, J. Ly, B. Zhang, F. Cong, W. C. Tang, and Z. Liang, "Therapeutic benefits of music-based synchronous finger tapping in Parkinson's disease—an fNIRS study protocol for randomized controlled trial in Dalian, China," *Trials*, Vol. 21, No. 864, Oct. 2020, DOI: 10.1186/s13063-020-04770-9.
- [J33] S. Zhang, X. Guo, Z. Jin, R. Kang, D. Guo, and W. C. Tang, "Surface morphologies and corresponding hardness evolution during nanoscratching," *J. Mater. Res. Technol.*, Vol. 9, pp. 3179-3189. Nov. 2020, DOI: 10.1016/j.jmrt.2020.01.064.
- [J32] Y. Hui, Y. Liu, W. C. Tang, D. Song, M. Madou, S. Xia, and T. Wu, "Determination of mercury(II) on a centrifugal microfluidic device using ionic liquid dispersive liquid-liquid microextraction," *Micromachines*, Vol. 10, No. 523, Aug. 2019, DOI: 10.3390/mi10080523.
- [J31] Y. Hui, C. Xiong, C. Bian, S. Gui, J. Tong, Y. Li, C. Gao, Y. Huang, W. C. Tang, and S. Xia, "Temperature-controlled ionic liquid dispersive liquid-liquid microextraction combined with fluorescence detection of ultra-trace Hg²⁺ in water," *Anal. Methods*, Vol. 11, pp. 2669 – 2676, Apr. 2019, DOI: 10.1039/C9AY00029A.
- [J30] C. E. King, C. M. Hoo, W. C. Tang, and M. Khine, "Introducing entrepreneurship into a biomedical engineering capstone course at the University of California, Irvine," *Technol. Innov.*, Vol. 20, pp. 179 – 195, 2019, DOI: 10.21300/20.3.2019.179.
- [J29] Y.-H. Hsu, C.-H. Chan, and W. C. Tang, "Alignment of multiple electrospun piezoelectric fiber bundles across serrated gaps at an incline: A method to generate textile strain sensors," *Nature: Sci. Rep.*, 13 Nov. 2017, DOI: 10.1038/s41598-017-15698-7.
- [J28] C. Wu, T. G. Lin, Z. Zhan, Y. Li, S. C. H. Tung, W. C. Tang, and W. J. Li, "Fabrication of all-transparent polymer-based and encapsulated nanofluidic devices using nano-indentation lithography," *Nature: Microsyst. Nanoengin.*, 27 Mar. 2017, DOI: 10.1038/micronano.2016.84.

- [J27] B. Reddy, Jr., E. Codner, R. E. Hainley, and W. C. Tang, "Design and fabrication of field-emission tips with self-aligned gates," *Micro Nano Lett.*, Vol. 11, No. 9, pp. 524 – 527, 2016, DOI: 10.1049/mnl.2016.0174.
- [J26] R. Sahyouni, J. Bhatt, H. R. Djalilian, W. C. Tang, J. C. Middlebrooks, and H. W. Lin, "Selective stimulation of facial muscles with a penetrating electrode array in the feline model," *Laryngoscope*, 16 Jun. 2016, DOI: 10.1002/lary.26078.
- [J25] L. Esfandiari, M. Paff, and W. C. Tang, "Initial studies of mechanical compression on neurogenesis with neonatal neural stem cells," *Nanomed.: Nanotech., Biol., and Med.*, Vol. 8, No. 4, pp. 415 – 418, May 2012, DOI: 10.1016/j.nano.2012.01.001.
- [J24] Y.-H. Hsu and W. C. Tang, "Microbioreactor designed for integration with piezoelectric transducers for cellular diagnostics," *J. Microfluidics Nanofluidics*, Vol. 11, No. 4, pp. 459 – 468, Oct. 2011, DOI: 10.1007/s10404-011-0811-8.
- [J23] Y.-H. Hsu, P. Lu, J. L. Coleman, and W. C. Tang, "A microfluidic platform to isolate avian erythrocytes infected with *Plasmodium gallinaceum* malaria parasites based on surface morphological changes," *Biomed. Microdevices*, Vol. 13, No. 6, pp. 995 – 1004, Jul. 2011, DOI: 10.1007/s10544-011-9569-8.
- [J22] H. C. Wong and W. C. Tang, "Computational study of local and global ECM degradation and the effects on cell speed and cell-matrix tractions," *J. Nano Communication Networks*, Vol. 2, pp. 119 – 124, Jun. 2011, DOI: 10.1016/j.nancom.2011.05.005.]
- [J21] H. C. Wong and W. C. Tang, "Finite element analysis of the effects of focal adhesion mechanical properties and substrate stiffness on cell migration," *J. Biomechanics*, Vol. 44, pp. 1046 – 1050, Apr. 2011, DOI: 10.1016/j.jbiomech.2011.02.004.
- [J20] Y.-H. Hsu and W. C. Tang, "Microfabricated piezoelectric transducer platform for mechanical characterization of cellular events," *Smart Mater. Struct.*, Vol. 18, No. 9, on-line 095014, Jul. 2009, DOI: 10.1088/0964-1726/18/9/095014.
- [J19] G. Y. Yang, Y.-H. Wen, C. Földy, W. C. Tang, and I. Soltesz, "Sensor for stiffness measurements within the adult rat hippocampus," *IEEE Sensors J.*, Vol. 8, No. 11, pp. 1894 – 1899, Nov. 2008, DOI: 10.1109/JSEN.2008.2006472.
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