

Curriculum Vitae

Full Name: Mohsen Asadnia, PhD

Position: Senior Lecturer and ARC DECRA fellow, Macquarie University

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H-index: 21 **Total citation:** 1400

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Research Career Details

- 1- Senior Lecturer- Macquarie University (December 2018-Present)
- 2- ARC DECRA fellow at Macquarie University (April-2018-presnet)
ARC DECRA project title: Ear-on-a-Chip: Nanosensors in Artificial Cochlea for Natural Hearing
- 3- Lecturer at Macquarie University (May 2016-December 2018)
- 4- Postdoctoral research fellow (May 2015-May 2016) at University of Western Australia-Australia
- 5- Postdoctoral Associate (January 2015-May 2015) Massachusetts institute of Technology (SMART centre)
- 6- Research Associate (June 2011-January 2015) Nanyang Technological University-Singapore.
Working at Singapore-MIT Alliance for Research and Technology
- 7- Collaboration with Singapore-MIT Alliance for Research and Technology BioSystems and Micromechanics (BioSyM) - IRG
- 8- PhD student attachment to Institute of Microelectronics (IME)-Agency for science Technology and Research-Singapore (May 2012- January 2013)
- 9- Water & Environment Research Centre and Education Hub (DHI-NTU Centre) (August 2010-June 2011)

Education

- **PhD in Mechanical Engineering (2011-2014)**
Nanyang Technological University (NTU-Singapore) with Singapore MIT alliance for research and technology (SMART).
- **Master of Science degree in Mechanical Engineering (2007-2010)**
- **Bachelor of Science degree in Mechanical Engineering (2003-2007)**

Area of Expertise

- Biocomputational models (COMSOL)
- Micro-fabrication, MEMS, NEMS
- Artificial ear and engineering auditory system
- Microfluidic devices: cell sorting, particle separation
- Mechatronics: Soft robotic, medical robotics, unmanned underwater robots

Honors and Awards

- 1) Early Carrier Research award Winner, Macquarie University 2018
- 2) Fresh Science National Program Award 2018
- 3) Highly Commended for early carrier research award, Macquarie University 2017
- 4) Best technology innovation award at Japanese Tech Planter 2016
- 5) Best paper in oral presentation category at 18th IEEE Transducers conference, Alaska 2016
- 6) Best technology pitch award, SMART Innovation Center 2014
- 7) Research displayed on cover page of calendar published by EINST Technology 2014
- 8) Two Journal cover page in Analytical Chemistry ACTA and Lab on a Chip 2 2017 & 2018
- 9) Best student paper award, Asia Biotech Conference, 2014

Research Funding (total: ~ 2.45 million \$)

- 1) **AI-enabled Industry** (CI B), Industrial project with Faethm Pty Ltd (\$335,000). 2019-2020
- 2) **A compact and portable electrochemical gas sensor array to spot explosives (lead CI)**. Australian Academy of Science, Research Collaborative grant (\$100,000). 2019-2020
- 3) **CSIRO collaboration grant** (lead CI), MOF-based electrochemical sensors for the detection of environmentally important heavy metals. (\$40,000), 2019-2021.
- 4) **Australian Research Council Discovery Early Career Researcher Award (ARC-DECRA)**, (\$380,000) Ear-on-a-Chip: Nanosensors in Artificial Cochlea for Natural Hearing, 2018-2021.
- 5) **Australian Research Council LIEF (CI) (\$1,480,000) for Volumetric Imaging Facility: Observing the Cell in its Native Environment**, 2019-2021. LE190100130

- 6) **Macquarie University Competitive Research Seeding grant**, (Lead CI) Real-time sensing of heavy metals in water contaminated by resource industries, 2018, \$35,000.
- 7) **Macquarie University Competitive New Staff grant** (MQNS), Miniaturized Flow Sensor for Intravenous Therapy Application, \$18,000.
- 8) **CENSAM research initiative** (CI-B) 2016, Miniaturized MEMS sensors for in situ monitoring of harmful algal blooms and heavy metals, S\$ 87000.
- 9) **SMART Innovation Centre Grant** (lead CI), Biomimetic Micro-Sensors for flow sensing on UUVs, pipeline leakage monitoring and slosh detection in oil tanks, Total funds awarded: S\$ 250,000, 2014. ING 148070-ENG.
- 10) **SMART Ignition Grant** (Lead CI) (\$50,000) for development of a clog-free separation system for mammalian cell retention from perfusion bioreactors, 2013-2014.
- 11) **Research Infrastructure Scheme MQSIS small** (\$80k) (CI) 3D Printers for Biomedical Research. 2018
- 12) **WiMed Project Grants (Lead PI)** (\$20,000) Investigation of aortic endothelial cells abnormalities under influence of oxygen mass transport and hemodynamic parameters for treatment of vascular diseases. 2018
- 13) **WiMed Project Grants (Lead PI)** (\$5,000) A Pumpless Microfluidic-based Biosensor and Smartphone-based Colorimetric for Determination of Starch, Glycogen and Dextrin using Multi-enzymatic cascade reactions. 2018
- 14) **WiMed Project Grants (Lead PI)** (\$5,000) Biomimetic flow sensors for pipeline leakage monitoring. 2017
- 15) **WiMed Project Grants (Lead PI)** (\$5,000) Mechanism of particle/cell focusing within non-Newtonian fluids using microfluidic systems, mimicking the condition of blood flow within arteries, 2017.
- 16) **ARC Linkage** (lead CI) (\$600k) Acoustically-Enhanced Smart Watch for Water Safety Tracking And Recovery. Industry partner: Roads and Maritime Service and Smile like darke foundation (Submitted)

Teaching Experience

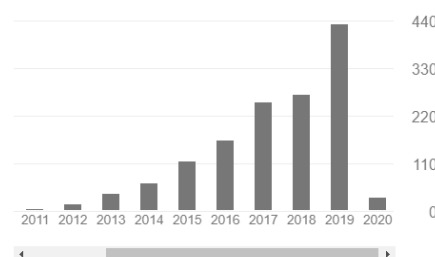
Unit name	Year/semester	University	Number of students	Status	Student survey result
Data Analysis and Visualisation	Semester 1 2017 Semester 1 2018	Macquarie University	192	New unit, I designed the whole curriculum	4.2 out of 5
Mechanical Engineering for Mechatronic students	Semester 1 2018	Macquarie University	32	New unit, I designed the whole curriculum	N/A
Advanced Mechatronic	Semester 1 2017 Semester 1 2018	Macquarie University	18	Co-teach	4.3 out of 5

Electric circuits	Semester 2, 2018 Semester 1, 2019	Xi'an University of Science and Technology	62	Co-teach	N/A
MEMS and microfluidics	Semester 1, 2016	UNSW	72	Co-teach	N/A

Publications

Publication includes **one book chapter, one edited book, 7 patents, 72 refereed Journal papers, 40 refereed conference papers, and 35 invited talk.** h-index is 21, total citation 1400

	All	Since 2015
Citations	1400	1266
h-index	21	20
i10-index	36	34



Top 5 Publications

1. Amir Razmjou, **M. Asadnia**, Ehsan Hosseini, Asghar Habibnejad Korayem, Vicki Chen, "Design principles of ion selective nanostructured membranes for the extraction of lithium ions," *Nature Communications*, vol. 10, p. 5793, 2019. (IF:12).
2. N. H. M. A. Parvez Mahmud, S. H. Farjana, **M. Asadnia**, C. Lang, "Recent Advances in Nanogenerator-Driven Self-Powered Implantable Biomedical Devices," *Advanced Energy Materials*, 2017. (Impact Factor: 21.8)
3. A. H. Barforoushi, A. Law, A. Hejri, **M. Asadnia**, D. G. Ortega, C. Ormandy, M.E Warkiani" Static droplet array for culturing single live adherent cells in an isolated chemical microenvironment", *Lab on a Chip*, 2018 (Impact Factor: 6)
4. **M. Asadnia**, M. Myers, G. A. Umana-Membreno, T. M. Sanders, U. K. Mishra, B. D. Nener, et al., "Ca²⁺ detection utilising AlGaN/GaN transistors with ion-selective polymer membranes," *Analytica Chimica Acta*, 2017. (Impact Factor: 5.1)
5. A. Razmjou, **M. Asadnia**, O. Ghaebi, H.-C. Yang, M. Ebrahimi Warkiani, J. Hou, et al., "Preparation of Iridescent 2D Photonic Crystals by using a Mussel-Inspired Spatial Patterning of ZIF-8 with potential applications in optical switch and chemical sensor," *ACS Applied Materials & Interfaces*, 2017. (Impact Factor: 8.1)

Patents

1. **M. Asadnia**, A. Razmjou, Novel surface treatment to prevent corrosion in electronic components, 2018.
2. A.G.P. Kottapalli, **M. Asadnia**, J.M. Miao, and M.S. Triantafyllou, MEMS adaptive artificial canal neuromast sensors with biomechanical filtering features, US PCT Application No. PCT/SG2015/050416, PCT filed on 06 May 2016.

3. A.G.P. Kottapalli, **M. Asadnia**, S. Zhiyuan, V. Subramaniam, J.M. Miao, and M.S. Triantafyllou, MEMS solutions for in situ infusion flow control in intravenous flow tubes, US Provisional Application No. 62/278,677, Provisional filed on 14 Jan 2016.
4. **M. Asadnia**, A.G.P. Kottapalli, J.M. Miao and M.S. Triantafyllou, Ultrasensitive and self-powered PDVF nanofiber strain sensors, filed as electrical device and method of manufacturing an electrical device, US International patent application number PCT/SG2016/050006, PCT filed on 06 January 2016.
5. A.G.P Kottapalli, **M. Asadnia**, J.M. Miao, and M.S. Triantafyllou, Sensor, method of forming the same, and method of controlling the same, US International Application No.: 14/758,661, European Patent Application No. 13870331.9 – 1554 / 2941638, Singapore Patent Application No. 11201504863W, China Patent Application No. 201380073884.7 (2015).
6. A.G.P. Kottapalli, **M. Asadnia**, J.M. Miao, and M.S. Triantafyllou, MEMS sensors for automated and in situ urine drainage monitoring, US Provisional patent Application No.: 62/448,536, (2017).
7. A.G.P. Kottapalli, **M. Asadnia**, J.M. Miao, and M.S. Triantafyllou, Intravenous Infusion Monitoring Through A Miniaturized Disposable Flow Sensor, US Provisional patent Application No.: 62/448,524 (2017).

Edited Book

A.G.P. Kottapalli, **M. Asadnia**, J. M. Miao and M.S. Triantafyllou, Biomimetic microsensors inspired by marine life, Springer Brief (Nature Series) Springer International Publishing, print date 20 Nov 2016, doi:10.1007/978-3-319-47500-4 (Web link: <http://link.springer.com/book/10.1007/978 3-319-47500-4>).

Book Chapters

A. G. P. Kottapalli and **M. Asadnia**, "Lateral-Line Inspired MEMS Neuromast Sensors," in Biomimetic Microsensors Inspired by Marine Life, Editors: A.G.P. Kottapalli, M. Asadnia, J. M. Miao and M.S. Triantafyllou, Springer International Publishing, 2017, pp. 1-21.

Journal Articles

- 1) Y. Boroumand, A. Razmjou, P. Moazzam, F. Mohagheghian, G. Eshaghi, Z. Etemadifar, **M. Asadnia et al.**, "Mussel inspired bacterial denitrification of water using fractal patterns of polydopamine," *Journal of Water Process Engineering*, vol. 33, p. 101105, 2020. (IF: 3.1)

- 2) Amir Razmjou, **M. Asadnia**, Ehsan Hosseini, Asghar Habibnejad Korayem, Vicki Chen, "Design principles of ion selective nanostructured membranes for the extraction of lithium ions," *Nature Communications*, vol. 10, p. 5793, 2019. (IF:12).
- 3) S. R. Bazaz, N. Kashaninejad, S. Azadi, K. Patel, **M. Asadnia**, D. Jin, *et al.*, "Rapid Softlithography Using 3D-Printed Molds," *Advanced Materials Technologies*, 2019. (IF: 3.5)
- 4) F. Ejeian, S. Azadi, A. Razmjou, Y. Orooji, A. Kottapalli, M. E. Warkiani, **M. Asadnia**., "Design and applications of MEMS flow sensors: A review," *Sensors and Actuators A: Physical*, 2019. (IF: 3)
- 5) Z. Mehrabi, A. Taheri-Kafrani, **M. Asadnia**, and A. Razmjou, "Biezymatic modification of polymeric membranes to mitigate biofouling," *Separation and Purification Technology*, p. 116464, 2019. (IF: 5.1)
- 6) M Raufi, S Moshizi, A Razmjou, S Wu, **M Asadnia**, Development of a Biomimetic semicircular canal with MEMS sensors to restore balance, *IEEE Sensors Journal*, 2019 **DOI:** 10.1109/JSEN.2019.2935480, (IF:3).
- 7) M, Mansoorianfar, A, Khataee, Z. Riahi, K, Shahin, **M. Asadnia**, A. Razmjou, C. Mei, Y, Orooji, and Li, D., 2019, "Scalable fabrication of tunable titanium nanotubes via sonoelectrochemical process for biomedical applications," *Ultrasonics Sonochemistry*, p. 104783. (IF:7)
- 8) Azadi, S., Abolkheyr, H., Bazaz, S. R., Thiery, J. P., **Asadnia, M.**, and Warkiani, M. E., "Upregulation of PD-L1 expression in breast cancer cells through the formation of 3D multicellular cancer aggregates under different chemical and mechanical conditions," *Biochimica et Biophysica Acta (BBA) - Molecular Cell Research*, 2019, p. 118526. (IF:4.4)
- 9) Razmjou, A., Eshaghi, G., Orooji, Y., Hosseini, E., Korayem, A. H., Mohagheghian, F., Boroumand, Y., Noorbakhsh, A., Asadnia, M., and Chen, V., "Lithium ion-selective membrane with 2D subnanometer channels," *Water research*, 2019,159, pp. 313-323. (IF: 7).
- 10) F. Noorisafa, S. Azadi, M. Myress, B. Pejdic, M. E. Warkiani, **M. Asadnia**, Advances in Sensing Nutrients in Aquatic Environments: A review, *Water research*, 2019 (accepted). (IF: 7).
- 11) A. Razmjou, G Eshaghi, Y Orooji, E Hosseini, A Habibnejad, **M. Asadnia** V Chen, Lithium ion-selective membrane 1 with 2D subnanometer channels, *Water research*, 2019 (accepted). (IF: 7).
- 12) M Raufi, A Mashhadian, A Niazmand, **M Asadnia**, M E, Warkiani, Experimental and numerical study of Elasto-Inertial focusing in straight channels. *Journal of Biomedical Materials Research: Part B - Applied Biomaterials* 2019 (Accepted). (IF:2.3)
- 13) R. Haghig, A Razmjou, Y Orooji, M.E Warkiani, **M Asadnia**, A miniaturized piezoresistive flow sensor for real-time monitoring of intravenous infusion.(IF: 2.7). DOI: 10.1002/jbm.b.34412

- 14) A. R. M Izzah Binti Mohammad, K Liang, A. Razmjou, **M Asadnia**, V Chen, "MOF-based enzymatic microfluidic biosensor via surface patterning and biomineralization," *ACS applied materials & interfaces*, vol. 11, pp. 1807-1820, 2019. (IF: 8).
- 15) A. Razmjou, M. Bagherian, **M. Asadnia**, Polydopamine surface modification with UV-shielding effect using KMnO₄ as an efficient oxidizing agent, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 2018. (IF: 2.8).
- 16) F Mohagheghian, A Razmjou, G Eshaghi, Y Boroumand, **M Asadnia**, Bioinspired forward osmosis hydroponic system with an efficient hollow fiber assisted nutrient delivery system, *Desalination* 445, 249-255, 2018. (IF: 6.6).
- 17) B Abbasnejad, W Thorby, A Razmjou, D Jin, M Asadnia, ME Warkiani, **M. Asadnia** MEMS piezoresistive flow sensors for sleep apnea therapy, *Sensors and Actuators A: Physical* 279, 577-585. (IF: 2.3).
- 18) P. Moazzam, H. Tavassoli, A. Razmjou, M. E. Warkiani, and **M. Asadnia**, "Mist harvesting using bioinspired polydopamine coating and microfabrication technology," *Desalination*, vol. 429, pp. 111-118, 2018. (IF: 6.6)
- 19) F. Ejeian, P. Etedali, H. Mansouri-Tehrani, A. Soozanipour, Z. Low, **M. Asadnia**, A. Taheri-Kafrani, A. Razmjou Biosensors for wastewater monitoring: a review. *Biosensors and Bioelectronics*, 2018. (IF: 8.1)
- 20) A. M. Khorasani, I. Gibson, **M. Asadnia**, and W. O'Neill, "Mass transfer and flow in additive manufacturing of a spherical component," *International Journal of Advanced Manufacturing Technology*, vol. 96, pp. 3711-3718, Jun 2018. (IF: 2.6).
- 21) A. H. Barforoushi, A. Law, A. Hejri, **M. Asadnia**, D. G. Ortega, C. Ormandy, M.E Warkiani "Static droplet array for culturing single live adherent cells in an isolated chemical microenvironment", *Lab on a Chip*, 2018. *This paper got the front cover page of Lab on a chip.* (IF: 6).].
- 22) H. Khan, A. Razmjou, M. E Warkiani, A. Kottapalli, and **M. Asadnia**, "Sensitive and Flexible Polymeric Strain Sensor for Accurate Human Motion Monitoring," *Sensors*, vol. 18, p. 418, 2018. (IF: 2.4).
- 23) SR Bazaz, AA Mehrizi, S Ghorbani, S Vasilescu, **M Asadnia**, ME Warkiani A hybrid micromixer with planar mixing units, "*RSC Advances* 8 (58), 33103-33120, 2018. (IF: 3).
- 24) **M. Asadnia**, S. M. M. Ehteshami, S. H. Chan, and M. E. Warkiani, "Development of a fiber-based membraneless hydrogen peroxide fuel cell," *RSC Advances*, vol. 7, pp. 40755-40760, 2017. (IF: 3).
- 25) **M. Asadnia**, A. M. Khorasani, and M. E. Warkiani, "An Accurate PSO-GA Based Neural Network to Model Growth of Carbon Nanotubes," *Journal of Nanomaterials*, vol. 2017. (IF: 3.2).
- 26) **M. Asadnia**, M. Myers, G. A. Umana-Membreno, T. M. Sanders, U. K. Mishra, B. D. Nener, et al., "Ca²⁺ detection utilising AlGa_N/Ga_N transistors with ion-selective polymer

- membranes," *Analytica Chimica Acta*, 2017. *This paper got the front cover page of Analytical Chimica Acta.* (IF: 5.3).
- 27) A. G. P. Kottapalli, M. Bora, E. Kanhere, **M. Asadnia**, J. Miao, and M. S. Triantafyllou, "Cupula-Inspired Hyaluronic Acid-Based Hydrogel Encapsulation to Form Biomimetic MEMS Flow Sensors," *Sensors*, vol. 17, p. 1728, 2017. (IF:2.4).
- 28) N. H. M. A. Parvez Mahmud, S. H. Farjana, **M. Asadnia**, C. Lang, "Recent Advances in Nanogenerator-Driven Self-Powered Implantable Biomedical Devices," *Advanced Energy Materials*, 2017. (IF: 21.8).
- 29) M. Rafeie, M. Welleweerd, A. Hassanzadeh-Barforoushi, **M. Asadnia**, W. Olthuis, and M. Ebrahimi Warkiani, "An easily fabricated three-dimensional threaded lemniscate-shaped micromixer for a wide range of flow rates," *Biomicrofluidics*, vol. 11, p. 014108, 2017. (IF: 2.6).
- 30) A. Razmjou, **M. Asadnia**, O. Ghaebi, H.-C. Yang, M. Ebrahimi Warkiani, J. Hou, et al., "Preparation of Iridescent 2D Photonic Crystals by using a Mussel-Inspired Spatial Patterning of ZIF-8 with potential applications in optical switch and chemical sensor," *ACS Applied Materials & Interfaces*, 2017. (IF: 8) .
- 31) T. M. Sanders, M. Myers, **M. Asadnia**, G. A. Umana-Membreno, M. Baker, N. Fowkes, et al., "Description of ionophore-doped membranes with a blocked interface," *Sensors and Actuators B: Chemical*, vol. 250, pp. 499-508, 2017. (IF: 5.6) .
- 32) D. Sengupta, A. Kottapalli, S. Chen, J. Miao, C. Kwok, M. Triantafyllou, **M. Asadnia**, "Characterization of single polyvinylidene fluoride (PVDF) nanofiber for flow sensing applications," *AIP Advances*, vol. 7, p. 105205, 2017. (IF: 1.7) .
- 33) E. Shirani, A. Razmjou, H. Tavassoli, A. Landarani-Isfahani, S. Rezaei, A. Abbasi Kajani, **M. Asadnia** "Strategically designing a pumpless microfluidic device on an "inert" polypropylene substrate with potential application in biosensing and diagnostics," *Langmuir*, 2017. (IF: 3.8).
- 34) M. Syed, M. Rafeie, R. Henderson, **M. Asadnia**, and M. E. Warkiani, "A 3D-printed mini-hydrocyclone for high throughput particle separation: Application to primary harvesting of microalgae," *Lab on a Chip*, 2017. (IF: 6) .
- 35) M. S. Syed, M. Rafeie, D. Vandamme, **M. Asadnia**, R. Henderson, R. A. Taylor, et al., "Selective separation of microalgae cells using inertial microfluidics," *Bioresource technology*, 2017. (IF: 5.8) .
- 36) N. D. Akhavan, G. A. Umana-Membreno, R. Gu, **M. Asadnia**, J. Antoszewski, and L. Faraone, "Superlattice Barrier HgCdTe nBn Infrared Photodetectors: Validation of the Effective Mass Approximation," *IEEE Transactions on Electron Devices*, vol. 63, pp. 4811-4818, 2016. (IF: 2.6) .
- 37) **M. Asadnia**, A. G. P. Kottapalli, K. D. Karavitaki, M. E. Warkiani, J. Miao, D. P. Corey, et al., "From Biological Cilia to Artificial Flow Sensors: Biomimetic Soft Polymer Nanosensors with High Sensing Performance," *Scientific Reports*, vol. 6, 2016. (IF: 4.1) .

- 38) **M. Asadnia**, M. Myers, N. Akhavan, K. O'Donnell, G. A. Umana-Membreno, U. Mishra, et al., "Mercury (II) selective sensors based on AlGa_N/Ga_N transistors," *Analytica Chimica Acta*, vol. 943, pp. 1-7, 2016. (IF: 5.1) .
- 39) S. M. M. Ehteshami, **M. Asadnia**, S. N. Tan, and S. H. Chan, "Paper-based membraneless hydrogen peroxide fuel cell prepared by micro-fabrication," *Journal of Power Sources*, vol. 301, pp. 392-395, 2016. (IF: 7) .
- 40) A. Hassanzadeh-Barforoushi, J. Shemesh, N. Farbehi, **M. Asadnia**, G. H. Yeoh, R. P. Harvey, M. E. Warkiani, "A rapid co-culture stamping device for studying intercellular communication," *Scientific reports*, vol. 6, 2016. (IF: 4.1) .
- 41) E. Kanhere, N. Wang, A. G. P. Kottapalli, **M. Asadnia**, V. Subramaniam, J. Miao, et al., "Crocodile-inspired dome-shaped pressure receptors for passive hydrodynamic sensing," *Bioinspiration & Biomimetics*, vol. 11, p. 056007, 2016. (IF: 2.7) .
- 42) A. G. P. Kottapalli, M. Bora, **M. Asadnia**, J. Miao, S. S. Venkatraman, and M. Triantafyllou, "Nanofibril scaffold assisted MEMS artificial hydrogel neuromasts for enhanced sensitivity flow sensing," *Scientific reports*, vol. 6, 2016. (IF: 4.1).
- 43) M. Rafeie, J. Zhang, **M. Asadnia**, W. Li, and M. E. Warkiani, "Multiplexing slanted spiral microchannels for ultra-fast blood plasma separation," *Lab on a Chip*, vol. 16, pp. 2791-2802, 2016. *This paper got the front cover page of Lab on a chip*. (IF: 6).
- 44) **M. Asadnia**, L. H. Chua, A. Talei, and X. Qin, "Closure to "Improved Particle Swarm Optimization–Based Artificial Neural Network for Rainfall-Runoff Modeling" by Mohsen Asadnia, Lloyd HC Chua, XS Qin, and Amin Talei," *Journal of Hydrologic Engineering*, vol. 20, p. 07015010, 2015. (IF: 2.2).
- 45) **M. Asadnia**, A. G. P. Kottapalli, R. Haghighi, A. Cloitre, P. V. Y. Alvarado, J. M. Miao, et al., "MEMS sensors for assessing flow- related control of an underwater biomimetic robotic stingray," *Bioinspiration & Biomimetics*, vol. 10, Jun 2015. (IF: 2.7).
- 46) **M. Asadnia**, A. G. P. Kottapalli, J. Miao, and M. Triantafyllou, "Artificial ciliary bundles with nano fiber tip links," arXiv preprint arXiv:1505.02340, 2015.
- 47) **M. Asadnia**, A. G. P. Kottapalli, J. M. Miao, M. E. Warkiani, and M. S. Triantafyllou, "Artificial fish skin of self-powered micro-electromechanical systems hair cells for sensing hydrodynamic flow phenomena," *Journal of the Royal Society Interface*, vol. 12, Oct 2015. (IF: 3.8).
- 48) A. G. P. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Soft polymer membrane micro-sensor arrays inspired by the mechanosensory lateral line on the blind cavefish," *Journal of Intelligent material systems and structures*, vol. 26, pp. 38-46, 2015. (IF: 3.4).
- 49) **M. Asadnia**, L. H. C. Chua, X. S. Qin, and A. Talei, "Improved Particle Swarm Optimization-Based Artificial Neural Network for Rainfall-Runoff Modeling," *Journal of Hydrologic Engineering*, vol. 19, pp. 1320-1329, Jul 2014. (IF: 2.2).
- 50) **M. Asadnia**, A. G. P. Kottapalli, J. M. Miao, A. B. Randles, A. Sabbagh, P. Kropelnicki, et al., "High temperature characterization of PZT(0.52/0.48) thin-film pressure sensors," *Journal of Micromechanics and Microengineering*, vol. 24, Jan 2014. (IF: 1.7).

- 51) A. G. P. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Touch at a distance sensing: lateral-line inspired MEMS flow sensors," *Bioinspiration & biomimetics*, vol. 9, p. 046011, 2014. (IF: 2.7).
- 52) H. R. Zangeneh, M. A. F. Jahromi, and **M. Asadnia**, "Design of a terahertz source using a nano-slot of GaAs," *Journal of Optics*, vol. 43, pp. 173-176, 2014. (IF: 2).
- 53) **M. Asadnia**, L. H. Chua, X. Qin, and A. Talei, "Improved Particle Swarm Optimization–Based Artificial Neural Network for Rainfall-Runoff Modeling," *Journal of Hydrologic Engineering*, vol. 19, pp. 1320-1329, 2013. (IF: 2.2).
- 54) **M. Asadnia**, A. Kottapalli, J. Miao, A. Randles, A. Sabbagh, P. Kropelnicki, et al., "High temperature characterization of PZT (0.52/0.48) thin-film pressure sensors," *Journal of Micromechanics and Microengineering*, vol. 24, p. 015017, 2013. (IF: 1.7).
- 55) **M. Asadnia**, A. G. P. Kottapalli, Z. Shen, J. Miao, and M. Triantafyllou, "Flexible and surface-mountable piezoelectric sensor arrays for underwater sensing in marine vehicles," *IEEE Sensors Journal*, vol. 13, pp. 3918-3925, 2013. (IF: 2.6).
- 56) A. M. Khorasani, **M. Asadnia**, and P. Saadatkia, "Modeling of TiC-N Thin Film Coating Process on Drills Using Particle Swarm Optimization Algorithm," *Arabian Journal for Science and Engineering*, vol. 38, pp. 1565-1571, Jun 2013. (IF: 1.1).
- 57) J. Dusek, A. Kottapalli, M. Woo, **M. Asadnia**, J. Miao, J. Lang, et al., "Development and testing of bio-inspired microelectromechanical pressure sensor arrays for increased situational awareness for marine vehicles," *Smart Materials and Structures*, vol. 22, p. 014002, 2012. (IF: 1.7).
- 58) A. Kottapalli, **M. Asadnia**, J. Miao, C. Tan, G. Barbastathis, and M. Triantafyllou, "Polymer MEMS pressure sensor arrays for fish-like underwater sensing applications," *Micro & Nano Letters*, vol. 7, pp. 1189-1192, 2012. (IF: 1.9).
- 59) A. G. Kottapalli, **M. Asadnia**, J. Miao, G. Barbastathis, and M. S. Triantafyllou, "A flexible liquid crystal polymer MEMS pressure sensor array for fish-like underwater sensing," *Smart Materials and Structures*, vol. 21, p. 115030, 2012. (IF: 1.7).
- 60) **M. Asadnia**, M. S. Yazdi, and A. Khorasani, "An Improved Particle Swarm Optimization Based on Neural Network for Surface Roughness Optimization in Face Milling of 6061-T6 Aluminum," *International Journal of Applied Engineering Research*, vol. 5, pp. 3191-3201, 2010. (IF:1.1)
- 61) M. Farahnakian, M. R. Razfar, M. Moghri, and **M. Asadnia**, "The selection of milling parameters by the PSO-based neural network modeling method," *The International Journal of Advanced Manufacturing Technology*, vol. 57, pp. 49-60, 2011. (IF: 2.6).
- 62) A. M. Khorasani, E. G. Sharabian, and M. Asadnia, "Investigation of thin film methods in hardening of industrial tools," *Journal of Manufacturing Technology*, vol. 1, pp. 41-7, 2009.
- 63) M. Razfar, **M. Asadnia**, M. Haghshenas, and M. Farahnakian, "Optimum surface roughness prediction in face milling X20Cr13 using particle swarm optimization algorithm," *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, vol. 224, pp. 1645-1653, 2010. (IF:0.7)

- 64) M. Reza, S. Yazdi, M. R. Razfar, and **M. Asadnia**, "Using particle swarm optimization based neural network for modeling of thrust force drilling of PA-6/Nanoclay Nanocomposites," *Journal of Applied Mechanics and Materials*, 2010, pp. 722-726. (IF:1.1)
- 65) M. Soleymani Yazdi, M. Razfar, and **M. Asadnia**, "Modelling of the thrust force of the drilling operation on PA6–nanoclay nanocomposites using particle swarm optimization," *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, vol. 225, pp. 1757-1771, 2011. (IF:0.7)
1. P. Moazzam, H. Tavassoli, A. Razmjou, M. E. Warkiani, and **M. Asadnia**, "Mist harvesting using bioinspired polydopamine coating and microfabrication technology," *Desalination*, vol. 429, pp. 111-118, 2018.
 2. F. Ejeian, P. Etedali, H. Mansouri-Tehrani, A. Soozanipour, Z. Low, **M. Asadnia**, A. Taheri-Kafrani, A. Razmjou Biosensors for wastewater monitoring: a review. *Biosensors and Bioelectronics*, 2018, DOI: <https://doi.org/10.1016/j.bios.2018.07.019>
 3. A. M. Khorasani, I. Gibson, **M. Asadnia**, and W. O'Neill, "Mass transfer and flow in additive manufacturing of a spherical component," *International Journal of Advanced Manufacturing Technology*, vol. 96, pp. 3711-3718, Jun 2018.
 4. A. H. Barforoushi, A. Law, A. Hejri, **M. Asadnia**, D. G. Ortega, C. Ormandy, M.E Warkiani "Static droplet array for culturing single live adherent cells in an isolated chemical microenvironment", *Lab on a Chip*, 2018. *This paper got the front cover page of Lab on a chip.*
 5. H. Khan, A. Razmjou, M. Ebrahimi Warkiani, A. Kottapalli, and **M. Asadnia**, "Sensitive and Flexible Polymeric Strain Sensor for Accurate Human Motion Monitoring," *Sensors*, vol. 18, p. 418, 2018.
 6. **M. Asadnia**, S. M. M. Ehteshami, S. H. Chan, and M. E. Warkiani, "Development of a fiber-based membraneless hydrogen peroxide fuel cell," *RSC Advances*, vol. 7, pp. 40755-40760, 2017.
 6. **M. Asadnia**, A. M. Khorasani, and M. E. Warkiani, "An Accurate PSO-GA Based Neural Network to Model Growth of Carbon Nanotubes," *Journal of Nanomaterials*, vol. 2017, 2017.
 7. **M. Asadnia**, M. Myers, G. A. Umana-Membreno, T. M. Sanders, U. K. Mishra, B. D. Nener, et al., "Ca²⁺ detection utilising AlGa_N/Ga_N transistors with ion-selective polymer membranes," *Analytica Chimica Acta*, 2017. *This paper got the front cover page of Analytical Chemica Acta*
 8. A. G. P. Kottapalli, M. Bora, E. Kanhere, **M. Asadnia**, J. Miao, and M. S. Triantafyllou, "Cupula-Inspired Hyaluronic Acid-Based Hydrogel Encapsulation to Form Biomimetic MEMS Flow Sensors," *Sensors*, vol. 17, p. 1728, 2017.
 9. N. H. M. A. Parvez Mahmud, S. H. Farjana, **M. Asadnia**, C. Lang, "Recent Advances in Nanogenerator-Driven Self-Powered Implantable Biomedical Devices," *Advanced Energy Materials*, 2017.

10. M. Rafeie, M. Welleweerd, A. Hassanzadeh-Barforoushi, **M. Asadnia**, W. Olthuis, and M. Ebrahimi Warkiani, "An easily fabricated three-dimensional threaded lemniscate-shaped micromixer for a wide range of flow rates," *Biomicrofluidics*, vol. 11, p. 014108, 2017.
11. A. Razmjou, **M. Asadnia**, O. Ghaebi, H.-C. Yang, M. Ebrahimi Warkiani, J. Hou, et al., "Preparation of Iridescent 2D Photonic Crystals by using a Mussel-Inspired Spatial Patterning of ZIF-8 with potential applications in optical switch and chemical sensor," *ACS Applied Materials & Interfaces*, 2017.
12. T. M. Sanders, M. Myers, **M. Asadnia**, G. A. Umana-Membreno, M. Baker, N. Fowkes, et al., "Description of ionophore-doped membranes with a blocked interface," *Sensors and Actuators B: Chemical*, vol. 250, pp. 499-508, 2017.
13. D. Sengupta, A. Kottapalli, S. Chen, J. Miao, C. Kwok, M. Triantafyllou, **M. Asadnia**, "Characterization of single polyvinylidene fluoride (PVDF) nanofiber for flow sensing applications," *AIP Advances*, vol. 7, p. 105205, 2017.
14. E. Shirani, A. Razmjou, H. Tavassoli, A. Landarani-Isfahani, S. Rezaei, A. Abbasi Kajani, **M. Asadnia** "Strategically designing a pumpless microfluidic device on an "inert" polypropylene substrate with potential application in biosensing and diagnostics," *Langmuir*, 2017.
15. M. Syed, M. Rafeie, R. Henderson, **M. Asadnia**, and M. E. Warkiani, "A 3D-printed mini-hydrocyclone for high throughput particle separation: Application to primary harvesting of microalgae," *Lab on a Chip*, 2017.
16. M. S. Syed, M. Rafeie, D. Vandamme, **M. Asadnia**, R. Henderson, R. A. Taylor, et al., "Selective separation of microalgae cells using inertial microfluidics," *Bioresource technology*, 2017.
17. N. D. Akhavan, G. A. Umana-Membreno, R. Gu, **M. Asadnia**, J. Antoszewski, and L. Faraone, "Superlattice Barrier HgCdTe nBn Infrared Photodetectors: Validation of the Effective Mass Approximation," *IEEE Transactions on Electron Devices*, vol. 63, pp. 4811-4818, 2016.
18. **M. Asadnia**, A. G. P. Kottapalli, K. D. Karavitaki, M. E. Warkiani, J. Miao, D. P. Corey, et al., "From Biological Cilia to Artificial Flow Sensors: Biomimetic Soft Polymer Nanosensors with High Sensing Performance," *Scientific Reports*, vol. 6, 2016.
19. **M. Asadnia**, M. Myers, N. Akhavan, K. O'Donnell, G. A. Umana-Membreno, U. Mishra, et al., "Mercury (II) selective sensors based on AlGaIn/GaN transistors," *Analytica Chimica Acta*, vol. 943, pp. 1-7, 2016.
20. S. M. M. Ehteshami, **M. Asadnia**, S. N. Tan, and S. H. Chan, "Paper-based membraneless hydrogen peroxide fuel cell prepared by micro-fabrication," *Journal of Power Sources*, vol. 301, pp. 392-395, 2016.
21. A. Hassanzadeh-Barforoushi, J. Shemesh, N. Farbehi, **M. Asadnia**, G. H. Yeoh, R. P. Harvey, et al., "A rapid co-culture stamping device for studying intercellular communication," *Scientific reports*, vol. 6, 2016.
22. E. Kanhere, N. Wang, A. G. P. Kottapalli, **M. Asadnia**, V. Subramaniam, J. Miao, et al., "Crocodile-inspired dome-shaped pressure receptors for passive hydrodynamic sensing," *Bioinspiration & Biomimetics*, vol. 11, p. 056007, 2016.

23. A. G. P. Kottapalli, M. Bora, **M. Asadnia**, J. Miao, S. S. Venkatraman, and M. Triantafyllou, "Nanofibril scaffold assisted MEMS artificial hydrogel neuromasts for enhanced sensitivity flow sensing," *Scientific reports*, vol. 6, 2016.
24. M. Rafeie, J. Zhang, **M. Asadnia**, W. Li, and M. E. Warkiani, "Multiplexing slanted spiral microchannels for ultra-fast blood plasma separation," *Lab on a Chip*, vol. 16, pp. 2791-2802, 2016. *This paper got the front cover page of Lab on a chip*
25. **M. Asadnia**, L. H. Chua, A. Talei, and X. Qin, "Closure to "Improved Particle Swarm Optimization–Based Artificial Neural Network for Rainfall-Runoff Modeling" by Mohsen Asadnia, Lloyd HC Chua, XS Qin, and Amin Talei," *Journal of Hydrologic Engineering*, vol. 20, p. 07015010, 2015.
26. **M. Asadnia**, A. G. P. Kottapalli, R. Haghighi, A. Cloitre, P. V. Y. Alvarado, J. M. Miao, et al., "MEMS sensors for assessing flow- related control of an underwater biomimetic robotic stingray," *Bioinspiration & Biomimetics*, vol. 10, Jun 2015.
27. **M. Asadnia**, A. G. P. Kottapalli, J. Miao, and M. Triantafyllou, "Artificial ciliary bundles with nano fiber tip links," arXiv preprint arXiv:1505.02340, 2015.
28. **M. Asadnia**, A. G. P. Kottapalli, J. M. Miao, M. E. Warkiani, and M. S. Triantafyllou, "Artificial fish skin of self-powered micro-electromechanical systems hair cells for sensing hydrodynamic flow phenomena," *Journal of the Royal Society Interface*, vol. 12, Oct 2015.
29. A. G. P. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Soft polymer membrane micro-sensor arrays inspired by the mechanosensory lateral line on the blind cavefish," *Journal of Intelligent material systems and structures*, vol. 26, pp. 38-46, 2015.
30. **M. Asadnia**, L. H. C. Chua, X. S. Qin, and A. Talei, "Improved Particle Swarm Optimization-Based Artificial Neural Network for Rainfall-Runoff Modeling," *Journal of Hydrologic Engineering*, vol. 19, pp. 1320-1329, Jul 2014.
31. **M. Asadnia**, A. G. P. Kottapalli, J. M. Miao, A. B. Randles, A. Sabbagh, P. Kropelnicki, et al., "High temperature characterization of PZT(0.52/0.48) thin-film pressure sensors," *Journal of Micromechanics and Microengineering*, vol. 24, Jan 2014.
32. A. G. P. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Touch at a distance sensing: lateral-line inspired MEMS flow sensors," *Bioinspiration & biomimetics*, vol. 9, p. 046011, 2014.
33. H. R. Zangeneh, M. A. F. Jahromi, and **M. Asadnia**, "Design of a terahertz source using a nano-slot of GaAs," *Journal of Optics*, vol. 43, pp. 173-176, 2014.
34. **M. Asadnia**, L. H. Chua, X. Qin, and A. Talei, "Improved Particle Swarm Optimization–Based Artificial Neural Network for Rainfall-Runoff Modeling," *Journal of Hydrologic Engineering*, vol. 19, pp. 1320-1329, 2013.
35. **M. Asadnia**, A. Kottapalli, J. Miao, A. Randles, A. Sabbagh, P. Kropelnicki, et al., "High temperature characterization of PZT (0.52/0.48) thin-film pressure sensors," *Journal of Micromechanics and Microengineering*, vol. 24, p. 015017, 2013.

36. **M. Asadnia**, A. G. P. Kottapalli, Z. Shen, J. Miao, and M. Triantafyllou, "Flexible and surface-mountable piezoelectric sensor arrays for underwater sensing in marine vehicles," *IEEE Sensors Journal*, vol. 13, pp. 3918-3925, 2013.
37. A. M. Khorasani, **M. Asadnia**, and P. Saadatkia, "Modeling of TiC-N Thin Film Coating Process on Drills Using Particle Swarm Optimization Algorithm," *Arabian Journal for Science and Engineering*, vol. 38, pp. 1565-1571, Jun 2013.
38. J. Dusek, A. Kottapalli, M. Woo, **M. Asadnia**, J. Miao, J. Lang, et al., "Development and testing of bio-inspired microelectromechanical pressure sensor arrays for increased situational awareness for marine vehicles," *Smart Materials and Structures*, vol. 22, p. 014002, 2012.
39. A. Kottapalli, **M. Asadnia**, J. Miao, C. Tan, G. Barbastathis, and M. Triantafyllou, "Polymer MEMS pressure sensor arrays for fish-like underwater sensing applications," *Micro & Nano Letters*, vol. 7, pp. 1189-1192, 2012.
40. A. G. Kottapalli, **M. Asadnia**, J. Miao, G. Barbastathis, and M. S. Triantafyllou, "A flexible liquid crystal polymer MEMS pressure sensor array for fish-like underwater sensing," *Smart Materials and Structures*, vol. 21, p. 115030, 2012.
41. A. G. P. Kottapalli, **M. Asadnia**, J. M. Miao, G. Barbastathis, and M. S. Triantafyllou, "A flexible liquid crystal polymer MEMS pressure sensor array for fish-like underwater sensing," *Smart Materials and Structures*, vol. 21, Nov 2012.

International Refereed Conference Proceedings

1. **M. Asadnia**, A. G. Kottapalli, M. E. Warkiani, J. M. Miao, and M. S. Triantafyllou, "Engineering miniaturized hair cell sensors for auditory system," in *Micro Electro Mechanical Systems (MEMS)*, 2017 IEEE 30th International Conference on, 2017, pp. 1173-1176.
2. **M. Asadnia**, A. G. P. Kottapalli, M. E. Warkiani, J. M. Miao, M. S. Triantafyllou, "Engineering Miniaturized Hair Cell Sensors for Auditory System," in *30th IEEE International Conference on Micro Electro Mechanical Systems*, ed, 2017, pp. 1173-1176.
3. A. G. P. Kottapalli, Z. Shen, **M. Asadnia**, S. Tian, K. Tao, J. Miao, et al., "Polymer MEMS sensor for flow monitoring in biomedical device applications," in *Micro Electro Mechanical Systems (MEMS)*, 2017 IEEE 30th International Conference, 2017, pp. 632-635.
4. A. G. P. Kottapalli, **M. Asadnia**, Z. Shen, V. Subramaniam, J. Miao, and M. Triantafyllou, "MEMS artificial neuromast arrays for hydrodynamic control of soft-robots," in *Nano/Micro Engineered and Molecular Systems (NEMS)*, 2016 IEEE 11th Annual International Conference, 2016, pp. 504-507.
5. Z. Shen, A. G. P. Kottapalli, V. Subramaniam, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Biomimetic flow sensors for biomedical flow sensing in intravenous tubes," in *Sensors*, 2016 IEEE, 2016, pp. 1-3.
6. M. Bora, A. Kottapalli, J. Miao, **M. Asadnia**, and M. Triantafyllou, "Biomimetic hydrogel cupula for canal neuromasts inspired sensors," in *SENSORS*, 2016 IEEE, 2016, pp. 1-3.

7. A. G. P. Kottapalli, **M. Asadnia**, E. Kanhere, M. S. Triantafyllou, J. M. Miao, Smart skin of self-powered hair cell flow sensors for sensing hydrodynamic flow phenomena, IEEE MEMS, 2015.
8. **M. Asadnia**, A. Kottapalli, A. Cloitre, R. Haghighi, M. Triantafyllou, and J. Miao, "Biomimetic locomotion for a robotic stingray using MEMS sensors," in Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS), Transducers-2015 18th International Conference 2015, pp. 831-834.
9. **M. Asadnia**, A. Kottapalli, J. Miao, and M. Triantafyllou, "Ultra-sensitive and stretchable strain sensor based on piezoelectric polymeric nanofibers," in Micro Electro Mechanical Systems (MEMS), 2015 28th IEEE International Conference, 2015, pp. 678-681.
10. E. Kanhere, N. Wang, **M. Asadnia**, A. Kottapalli, and J. Miao, "Crocodile inspired Dome Pressure sensor for hydrodynamic sensing," in Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS), 2015 Transducers-2015 18th International Conference on, 2015, pp. 1199-1202.
11. A. Kottapalli, **M. Asadnia**, E. Kanhere, M. Triantafyllou, and J. Miao, "Smart skin of self-powered hair cell flow sensors for sensing hydrodynamic flow phenomena," in Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS), 2015 Transducers-2015 18th International Conference on, 2015, pp. 387-390.
12. A. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Biomechanical canal sensors inspired by canal neuromasts for ultrasensitive flow sensing," in Micro Electro Mechanical Systems (MEMS), 2015 28th IEEE International Conference on, 2015, pp. 500-503.
13. A. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Harbor seal whisker inspired flow sensors to reduce vortex-induced vibrations," in Micro Electro Mechanical Systems (MEMS), 2015 28th IEEE International Conference on, 2015, pp. 889-892.
14. **M. Asadnia**, J. Miao, A. G. P. Kottapalli, P. V. y Alvarado, and M. S. Triantafyllou, "Self-powered micro-sensors to improve control and maneuvering of a robotic stingray," in Sensors, 2014 IEEE, 2014, pp. 458-461.
15. A. Kottapalli, **M. Asadnia**, H. Hans, J. Miao, and M. Triantafyllou, "Harbor seal inspired MEMS artificial micro-whisker sensor," in Micro Electro Mechanical Systems (MEMS), 2014 IEEE 27th International Conference on, 2014, pp. 741-744.
16. A. G. P. Kottapalli, **M. Asadnia**, J. Miao, and M. S. Triantafyllou, "MEMS artificial canal neuromast sensor arrays for underwater sensing," in Sensors, 2014 IEEE, 2014, pp. 448-451.
17. **M. Asadnia**, A. Kottapalli, J. Miao, A. Randles, and J. Tsai, "Performance analysis of PZT (0.52/0.48) for high temperature and pressure sensing applications," in Solid-State Sensors, Actuators and Microsystems, 2013 Transducers & Eurosensors: The 17th International Conference on, 2013, pp. 984-987.
18. **M. Asadnia**, A. Kottapalli, Z. Shen, J. Miao, G. Barbastathis, and M. Triantafyllou, "Flexible, zero powered, piezoelectric MEMS pressure sensor arrays for fish-like passive underwater sensing in marine vehicles," in Micro Electro Mechanical Systems (MEMS), 2013 IEEE 26th International Conference on, 2013, pp. 126-129.

19. A. P. Kottapalli, **M. Asadnia**, J. Miao, and M. Triantafyllou, "Electrospun nanofibrils encapsulated in hydrogel cupula for biomimetic MEMS flow sensor development," in Micro Electro Mechanical Systems (MEMS), 2013 IEEE 26th International Conference on, 2013, pp. 25-28.
20. A. G. Kottapalli, **M. Asadnia**, Z. Shen, J. Miao, and M. Triantafyllou, "Piezoelectric sensor array for passive fish-like underwater sensing," in Sensors, 2012 IEEE, 2012, pp. 1-4.

Invited lectures/talks (selected)

- 1) M. Asadnia, IIT Bombay, India (September 2019)
- 2) M. Asadnia, IIT Madras, India (September 2019)
- 3) M. Asadnia, 2nd International Microfluidic Conference, Iran, 2018 (Invited talk)
- 4) M. Asadnia, 3rd Nastran International Cancer Symposium, Iran, 2017 (Plenary talk)
- 5) M. Asadnia, "Advance microfabrication for sensing" University of Western Australia, 2017
- 6) M. Asadnia, UTS-ARC center of excellence, Sydney. 2017 (Invited talk)
- 7) M. Asadnia, 12th International Breast Cancer conference, Iran, 2017 (Invited talk)
- 8) M. Asadnia, 6th Annual World Congress of Nano Science and Technology 2016, in a session entitled Nano-Sensors, Nano-Actuators and Nano-Probes
- 9) M. Asadnia, IEEE 6th International Conference on Biomedical Robots and Biomechanics (IEEE BIOROB) 2016, June 26-29, 2016 Singapore.
- 10) M. Asadnia, CENSAM Annual Workshop 2016, June 22, 2016 Singapore.
- 11) M. Asadnia, 5th European Biosensors and Bioelectronics Conference (Euro Biosensors), 30 June-02 July 2016, Valencia, Spain.
- 12) M. Asadnia, CREATE theater Singapore on 23 March 2015.
- 13) M. Asadnia, CENSAM Seminar hall, Create Tower, Singapore on 07 Oct 2015.
- 14) M. Asadnia, Massachusetts Institute of Technology (MIT) Sea Grant College Program on 19 Nov 2014.
- 15) M. Asadnia, at ERA Singapore on 25 June 2014.

Lab members

Direct PhD Students

- 1) Mojtaba Abdollahzade
Project title: Development a novel tongue-on-a-chip sensory system based on ion selective membranes
- 2) Sajjad Moshizi
Project title: Development of artificial inner ear semicircular structures
- 3) Hadi Ahmadi

Project title: Development of a novel ear-on-a-chip device inspired by human cochlea to create natural sense of hearing

Research Associates:

- 1) Andrew Belford
- 2) M A Parvez Mahmud
- 3) Asieh Soozanipour
- 4) Ranji Sharma

Graduated Students

1. **Max Moore**, M.Sc. student in Mechatronic Engineering (Macquarie University), 2018
2. **Abel Rop**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2018
3. **Vidanalage De Mel**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2018
4. **Daniel Chua**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2017
5. **Tejas Pitale**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2017
6. **Ashik Zhao**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2017
7. **Anthony Sun**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2017
8. **Mathijs Bronkhorst**, M.Sc. student in Mechatronic Engineering (Macquarie University), 2016
9. **Marcel Welleweerd**, B.Sc. student in Mechatronic Engineering (Macquarie University), 2016
10. **Moses Lee** B.Sc. student in Mechatronic Engineering (Macquarie University), 2016
11. **Hanming Zhang** B.Sc. student in Mechatronic Engineering (Macquarie University), 2016
12. **Jayden W** B.Sc. student in Mechatronic Engineering (Macquarie University), 2016
13. **Ahmad Firdaus Abu Hanipah** B.Sc. student in Mechatronic Engineering (Macquarie University), 2016

Alumni:

- 1) MohammadAmin Raufi (PhD student)
Thesis title: Mechanism of particle/cell focusing within non-Newtonian fluids using microfluidic systems, mimicking the condition of blood.
- 1) Zinat *Changani* (PhD student)
Project title: Removal of iodine using PDA-coated polypropylene membrane
- 2) Fatemeh Ejeian
Project title: Design a geometrical patterned substrates for regulation of MSCs behavior

Activities and Service:

- 1) Outreach and marketing in school of engineering Macquarie University-2016- present
Organiser for outreach activities such as Open Day, Science day, Macquarie in one day, Women in STEM etc.

- 2) High degree research (HDR) office
Working with HDR office and Macquarie International to promote Macquarie University in Iran and Oman.
- 3) Editorial board of the following Journals; IEEE SENSORS, SENSORS MDPI, IEEE member and treasure in IEEE instrumentation and measurements-Sydney chapter
- 4) Active reviewer for various journals including: Analytical Chemistry Acta, Sensors and actuators B, Scientific report and IEEE SENSORS