Curriculum Vitae (Summary)

Dung Trung Nguyen
Assistant Professor of Mechanical Engineering

EDUCATION

Ph.D. in Mechanical Engineering, Queensland University of Technology (QUT), Brisbane, QLD, Australia, 2015

Dissertation: *Experimental and Numerical Investigation of Strain-Rate Dependent Mechanical Properties of Single Living Cells*

M.E. in Mechanical Engineering, University of Malaya (UM), Kuala Lumpur, Malaysia, 2010

B.E. in Mechanical Engineering, Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam, 2007

ACADEMIC EXPERIENCE

Seattle Pacific University

9/2018-present: Assistant Professor in Mechanical Engineering, Department of Engineering and Computer Science

Queensland University of Technology

9/2013-6/2016: Tutor in Mechanical Engineering, School of Chemistry, Physics and Mechanical Engineering

Ho Chi Minh City University of Technology

9/2010-2/2011: Lecturer in Mechanical Engineering, Department of Machine Design, Faculty of Mechanical Engineering

7/2007-7/2007: Assistant Lecturer in Mechanical Engineering, Department of Machine Design, Faculty of Mechanical Engineering

RESEARCH EXPERIENCE

2/2018-9/2018 Postdoctoral Research Associate, Dartmouth-Hitchcock Medical Center, Thayer School of Engineering, Dartmouth College

2/2016-2/2018 Postdoctoral Research Associate, Department of Aerospace and Mechanical Engineering, College of Engineering, University of Notre Dame

2/2015-2/2015 Postdoctoral Research Fellow, School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology

INSTITUTIONAL AND PROFESSIONAL SERVICE (within the past five years)

Reviewer for:

- Journal of the Mechanical Behavior of Biomedical Materials,
- Cell Biochemistry and Biophysics
- Applied Mathematical Modelling journals

PUBLICATIONS AND PRESENTATIONS (from the past five years)

1. Catalina-Paula Spatarelu*, Hao Zhang*, **Dung Trung Nguyen***, Xinyue Han, Ruchuan Liu, Qiaohang Guo, Jacob Notbohm, Jing Fan, Liyu Liu, Zi Chen, *Biomechanics of Collective Cell Migration in Cancer Progression: Experimental and Computational Methods*, ACS Biomaterials Science & Engineering, (2019) **Accepted**.
2. Aylin Acun, Trung Dung Nguyen, Pinar Zorlutuna, *In vitro aged, hiPSC-origin engineered heart tissue models with age-dependent functional deterioration to study myocardial infarction*, Acta Biomaterialia, (2019) **Accepted**.
3. Devon Mason, Joseph Collins, James Dawahare, **Trung Dung Nguyen**, Yang Lin, Sherry Voytik-Harbin, Pinar Zorlutuna, Mervin Yoder, and Joel Boerckel, Persistent Cell Motility Requires Transcriptional Feedback of Cytoskeletal – Focal Adhesion Equilibrium by YAP/TAZ, *Journal of Cell Biology*, (2019) jcb-201806065.
4. Alim Iftekhar Rasel, Sanjleena Singh, **Trung Dung Nguyen**, Isaac O Afara, Yuantong Gu, Impact of Nanoparticle Uptake on the Biophysical Properties of Cells for Biomedical Engineering Applications, *Scientific Reports*, 9: 5859 (2019) 1-13.
5. **Trung Dung Nguyen**, Neerajha Nagarajan, Pinar Zorlutuna, Investigating the Effect of Substrate Stiffness on Mechanical Coupling and Contractile Force Propagation in Myocardial Cells, *Biophysical Journal*, 115 (2018) 1966-1980.
6. Xiaoshan Yue, **Trung Dung Nguyen**, Victoria Zellmer, Siyuan Zhan, Pinar Zorlutuna, Stromal Cell-Laden 3D Hydrogel Microwell Arrays as Tumor Microenvironment Model for Studying Stiffness Dependent Stromal Cell-Cancer Interactions, *Biomaterials*, 170 (2018) 37-48.
7. Jin Shao, Yinghong Zhou, Jinying Lin, **Trung Dung Nguyen**, Rong Huang, Yuantong Gu, Thor Friis, Ross Crawford, Yin Xiao, Notch expressed by osteocytes plays a critical role in mineralization, *Journal of Molecular Medicine*, (2018) 1-15.
8. John Casey, Xiaoshan Yue, **Trung Dung Nguyen**, Aylin Acun, Victoria Zellmer, Siyuan Zhan, Pinar Zorlutuna, 3D Hydrogel-Based Microwell Arrays as a Tumor Microenvironment Model to Study Breast Cancer Growth, *Biomedical Materials*, 12: 025009 (2017) 1-12.
9. **T.D. Nguyen**, Y.T. Gu, Investigation of Cell-Substrate Adhesion Properties of Living Chondrocyte by Measuring Adhesive Shear Force and Detachment Using AFM and Inverse FEA, *Scientific Reports*, 6: 38059 (2016) 1-13.
10. **T.D. Nguyen**, A. Oloyede, S. Singh, Y.T. Gu, Investigation of the Effects of Extracellular Osmotic Pressure on Morphology and Mechanical Properties of Single Living Chondrocytes, *Cell Biochemistry and Biophysics*, 74 (2016) 229-240.
11. Md. Alim Iftekhar Rasel, Tong Li, **Trung Dung Nguyen**, Sanjleena Singh, Yinhong Zhou, Yin Xiao, YuanTong Gu, Biophysical response of living cells to boron nitride nanoparticles: Uptake mechanism and bio-mechanical characterization, *Journal of Nanoparticle Research*, 17 (2016) 1-13.
12. **T.D. Nguyen**, A. Oloyede, Y.T. Gu, A Poroviscohyperelastic Model for Numerical Analysis of Mechanical Behaviour of Single Chondrocyte, *Computer Methods in Biomechanics and Biomedical Engineering*, 19 (2016) 126-136.
13. **T.D. Nguyen**, A. Oloyede, S. Singh, Y.T. Gu, Microscale Consolidation Analysis of Relaxation Behavior of Single Living Chondrocytes Subjected to Varying Strain-Rates, *Journal of the Mechanical Behavior of Biomedical Materials*, 49 (2015) 343-354.
14. **T.D. Nguyen**, Y.T. Gu, Determination of Strain-rate-dependent Mechanical Behavior of Living and Fixed Osteocytes and Chondrocytes Using AFM and Inverse FEA, *Journal of Biomechanical Engineering*, 136, 101004 (2014) 1-8.

15. **T.D. Nguyen**, A. Oloyede, Y.T. Gu, Stress Relaxation Analysis of Single Chondrocytes Using Porohyperelastic Model Based on the AFM Experiments, *Theoretical and Applied Mechanics Letters*, 4, 054001 (2014) 1-7.
16. **T.D. Nguyen**, Y.T. Gu, Exploration of Mechanisms Underlying the Strain-Rate-Dependent Mechanical Property of Single Chondrocytes, *Applied Physics Letters*, 104, 183701 (2014) 1-5.
17. **T.D. Nguyen**, Y.T. Gu, A. Oloyede, & W. Senadeera, Analysis of Strain-rate-dependent Mechanical Behavior of Single Chondrocyte: A Finite Element Study, *International Journal of Computational Methods*, 11, 1344005 (2014) 1-20.