

TRANSON V. NGUYEN

Note: This is a public version of my CV, posted on my website. For a current resume, please contact me.

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INFORMATION Web: www.trasonn.com
 Twitter: [@trasonn](https://twitter.com/trasonn)

EDUCATION **Massachusetts Institute of Technology**, Cambridge, MA
 M.S., Mechanical Engineering, 2015

University of California, Irvine, Irvine, CA
 M.S., Biomedical Engineering, 2012
 B.S., Biomedical Engineering, 2010

EXPERIENCE **Notable Labs**, San Francisco, CA **June 2015 – Present**
 Lead Engineer
 Integrating software, hardware, and biology for the advancement of personalized cancer therapy.

Charles Stark Draper Laboratory, Cambridge, MA **August 2012 – August 2013**
 Biomedical Engineer (Contractor via Digital Prospectors Corp.)
 Conducted research under BIO-MIMETICS program, a joint DARPA and NIH-funded program between MIT, Draper, and CN BIO Innovations for the development of a “human body on a chip.”

ACADEMIC **Griffith Lab**, MIT **September 2013 – June 2015**
EXPERIENCE *Principal Investigator: Prof. Linda Griffith*
 Focused on an extension of aforementioned DARPA research. Designed a device for culturing an *in vitro* small intestine model. Created finite element models of fluid flow and oxygen transport/consumption through the device.

Biological Microtechnology Laboratory, UC Irvine **November 2008 – July 2012**
 Principal Investigator: Prof. Elliot Hui
 Developed microfluidic digital logic for automated fluid handling on a chip. Heavily involved in all stages of device development, namely iterative cycles of design, fabrication, and testing.

TECHNICAL **Laboratory Skills**
SKILLS Mammalian Cell Culture, Microfabrication, Soft Lithography, Photolithography
Engineering Skills
 Laboratory Automation, Design for Manufacturing for CNC, Design for Additive Manufacturing, Finite Element Analysis, DevOps (AWS), Continuous Integration
Project Management
 Agile Development, Root Cause Analysis, Gantt Charts, BOMs
Engineering Software
 SolidWorks, OnShape, AutoCAD, COMSOL, Unix, Git
Design Software
 Adobe Photoshop/Illustrator/InDesign/Lightroom/Premiere
Languages/Frameworks
 Python (+Flask, Django), Ruby (+Rails), C#, R, React, Angular 1.x, L^AT_EX

PATENTS E.E. Hui, P.N. Duncan, and T.V. Nguyen. “Microfluidic oscillator pump.” U.S. Patent Application 14/029,286, published Mar. 20, 2014.

J. Cuiffi, M.J. Mescher, J.R. Coppeta, S.W. Inman, A.J. Spencer, T.V. Nguyen, and J.T. Borenstein. “Modular platform for multi-tissue integrated cell culture.” U.S. Patent 9249387B2, granted Feb. 2, 2016.

PAPERS

A.M. Clark, S.E. Wheeler, D.P. Taylor, V.C. Pillai, C.L. Young, R. Prantil-Baun, T.V. Nguyen, D.B. Stolz, J.T. Borenstein, D.A. Lauffenburger, R. Venkataramanan, L.G. Griffith, and A. Wells, "A Microphysiological System Model of Therapy for Liver Micrometastases," *Experimental Biology and Medicine*, 2014. doi:10.1177/1535370214532596

P.N. Duncan, T.V. Nguyen, and E.E. Hui, "Pneumatic Oscillator Circuits for Timing and Control of Integrated Microfluidics," *Proceedings of the National Academy of Sciences of the United States of America*, vol. 110, no. 45, pp. 18104–09, 2013. doi:10.1073/pnas.1310254110

A. Mueller, A. Lever, T.V. Nguyen, J. Comolli, and J. Fiering, "Continuous Acoustic Separation in a Thermoplastic Microchannel," *Journal of Micromechanics and Microengineering*, vol. 23, no. 12, 2013. doi:10.1088/0960-1317/23/12/125006

S.E. Wheeler, J.T. Borenstein, A.M. Clark, M.R. Ebrahimkhani, I.J. Fox, L.G. Griffith, W. Inman, D.A. Lauffenburger, T.V. Nguyen, V.C. Pillai, R. Prantil-Baun, D.B. Stolz, D. Taylor, T. Ulrich, R. Venkataramanan, A. Wells, and C.L. Young, "All-Human Microphysical Model of Metastasis Therapy" *Stem Cell Research and Therapy*, vol. 4, suppl. 1, 2013. doi:10.1186/scrt372

S. Ahrar, T.V. Nguyen, Y. Shi, T. Ikrar, X. Xu, and E.E. Hui, "Optical Stimulation and Imaging of Functional Brain Circuitry in a Segmented Laminar Flow Chamber," *Lab on a Chip*, vol. 13, no. 4, pp. 536–41, 2013. doi:10.1039/C2LC40689F

T.V. Nguyen, P.N. Duncan, S. Ahrar, and E.E. Hui, "Semi-Autonomous Liquid Handling via On-Chip Pneumatic Digital Logic," *Lab on a Chip*, vol. 12, no. 20, pp. 3991–4, 2012. doi:10.1039/C2LC40466D

CONFERENCE PROCEEDINGS

T.V. Nguyen, E.S. Kim, J.R. Coppeta, S.E. Wheeler, A.M. Clark, A.R. Lever, M. Cirit, J. Yu, A.J. Spencer, F.L. Sinatra, R. Prantil-Baun, A. Wells, L.G. Griffith, and J.T. Borenstein, "Automated Reagent Delivery, Media Replenishment, and Media Sampling Platform for Open Cell Culture Systems," *The 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS)*, 2014, pp. 491–3.

T.V. Nguyen, S. Ahrar, P.N. Duncan, and E.E. Hui, "Microfluidic Finite State Machine for Autonomous Control of Integrated Fluid Networks," *The 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS)*, 2011, pp. 741–3.

S. Ahrar, T.V. Nguyen, Y. Shi, P.V. Thomas, T. Ikrar, X. Xu, and E.E. Hui, "Optical Stimulation and Imaging of Functional Brain Circuitry in a Laminar Flow Chamber," *The 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS)*, 2011, pp. 873–5.

P.N. Duncan, T.V. Nguyen, and E.E. Hui, "Precision Microfluidic Oscillators for On-Chip Timing and Control," *The 14th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS)*, 2010, pp. 1838–40.

TALKS

"Microfluidic Finite State Machine for Autonomous Control of Integrated Fluid Networks," *The 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS)*, Seattle, WA. October 4, 2011.

"Reducing Off-Chip Complexity of Microfluidic Devices with Integrated Pneumatic Digital Logic," *12th Annual UC Systemwide Bioengineering Symposium*, Santa Barbara, CA. June 15, 2011.

T.V. Nguyen and J.D. De Jesus, "Design and Fabrication of a Fully Encapsulated Microfluidic Diagnostic Device," *The 17th Annual UCI Undergraduate Research Symposium*, Irvine, CA. May 15, 2010.

HONORS AND AWARDS

PM360 ELITE 100, 2017

Charles Stark Draper Laboratory Fellow, 2013–2015

Honorable Mention – NSF Graduate Research Fellowship Program, 2012

Chemical and Biological Microsystems Society Student/Young Researcher Travel Grant, 2011

UCI Undergraduate Research Opportunities Program Fellowship (Academic Year), 2009–10

UCI Undergraduate Research Opportunities Program Fellowship (Summer), 2009

UCI Summer Undergraduate Research Program Fellowship, 2009

OTHER
AFFILIATIONS

Rocket Science Tutors (RST), Orange County, CA
www.rocketsciencetutors.com

September 2009 - May 2012

Volunteer organization comprised of professional engineers and engineering students. Organization is dedicated to fostering students' interest in science, technology, engineering and mathematics (STEM) and inspiring them to pursue a career in those fields. Volunteered at RST after-school sessions at middle schools in nearby economically disadvantaged areas.

Tutor.com

February 2007 - October 2009

Calculus Tutor

Comprised of 1-on-1 tutoring in algebra, trigonometry, statistics, calculus, and real analysis to hundreds of drop-in students through an online environment.