

MICHELLE M. MAALOUF

• mmaalouf@ucsc.edu

EDUCATION

09/12- **Biomolecular Engineering and Bioinformatics, Ph. D**
University of California, Santa Cruz, Jack Baskin School of Engineering

Relevant Courses:

Bioinformatics Models and Algorithms

Student Organizations: Society of Women Engineers

Honors/Awards: Top 5 Deloitte-QB3 (UCSC, UCB, UCSF) Award for Innovation,
Creating Induced Pluripotent Stem Cells using Nanopipettes,

Teaching Experience:

Fall 2012: Teachers Assistant, Personal Computer Concepts: Software and Hardware
Guest Lecture, Bioinstrumentation course

Lab Rotations:

Fall 2012: Dr. Jeremy Sanford, Molecular, Cell and Developmental Biology department
Project: Studying Localized RNA using Nanopipettes

9/08-6/12 **Biomolecular Engineering, Bachelors of Science, Bioinformatics Minor**
University of California, Santa Cruz, Jack Baskin School of Engineering

Relevant Courses:

Ordinary Differential Equations	Programming in JAVA and Python
Bioethics in the 21 st Century	Bioinstrumentation
Biochemistry	Biomolecular Mechanics

Student Organizations: Society of Women Engineers, Biomedical Engineering
Society, Institute of Electrical and Electronics Engineers

Honors/Awards: Deans List, Undergraduate Travel Award 2012, Deans Undergraduate
Award 2012, Chancellors Undergraduate Award 2012

Summer 2011 **Biomedical Engineering Entrepreneurship Academy**
University of California, Davis

Summer 2010 **University of California, Berkeley: Organic Chemistry Lab**

EMPLOYMENT

1/11-present **Undergraduate Researcher, Nader Pourmand Research Laboratory**
University of California, Santa Cruz, Department of Bioengineering
Experience in nanotechnology and cell culture techniques for the following cell lines:
Human Fibroblasts, Mouse Fibroblasts, HeLa, Human Neuron, Pancreatic Cancer
Trained over 7 undergraduate and graduate students in lab techniques and protocols

Publications:

- 1) M. Maalouf et al. Localized RNA (in preparation)
- 2) M. Maalouf, P. Actis et al. Electrical Single-Cell Nanosurgery. (in preparation)
- 3) Seger R, Penfold C, Actis P, Maalouf M, Viložny B, Pourmand N. Voltage controlled nano-injection system for single-cell surgery. *Nanoscale*, 2012, **4**, 5843-5846
- 4) M. Maalouf, P. Actis and N. Pourmand. Single-Cell Manipulation using Nanopipettes. TechConnect World 2012 Conference Publication
- 5) Paolo Actis, Boaz Viložny and Nader Pourmand (2012). Immunoassays Using Artificial Nanopores, *Advances in Immunoassay Technology*, Dr. Norman H. L. Chiu (Ed.), ISBN: 978-953-51-0440-7. Acknowledged.

Presentations:

- 1) QB3 Award for Innovation, University of California, San Francisco, October 2012
- 2) Program in Biomedical Sciences and Engineering (PBSE) Annual Research Conference, Aptos, CA, September 2012
- 3) TechConnect World Conference 2012, Nanotech 2012, Santa Clara, CA, June 2012
- 4) University of California, Berkeley, UC Systemwide Bioengineering Symposium June 2012
- 5) Undergraduate Poster Symposium, UCSC, June 2012
- 6) Undergraduate Poster Symposium, UCSC, August 2011

1/10-1/12 **Reader, University of California, Santa Cruz, Department of Computer Science**
Exam, lab, and homework reader for Computer Science course with 150+ students.

8/08-08/10 **Private Math Tutor, Carondelet High School, Concord, CA**
Tutored high school student in junior and senior level math.

7/07-1/11 **Barista and Sales Associate, Peet's Coffee and Tea, Bay Area, CA**

VOLUNTEER WORK

Young Artists Studio and John Muir Mountain Day Camp, Bay Area, CA
Art teacher for disabled students and camp leader for 10+ children.

FOREIGN LANGUAGES

French (conversational); Arabic (basic)