# Melvyn Ian Drag

# Curriculum Vitae

## Education

- Summer 2015 **Workshop and Tutorial on PETSc**, *Argonne National Lab*, Learn to use the PETSc library for solving partial differential equations.
  - 2013–2015 **Master of Mathematical Science: Computational Science.**, *The Ohio State University*, Analytical and numerical methods for PDEs, parallel computing, advanced algorithms. Master's thesis: *Epithelium*: The lightweight, portable epithelial tissue simulator. Investigation of pros and cons of various implementations of a model. Exploration of parallelization strategies.
  - 2008-2012 **BA Mathematics**, *New Jersey City University*, Undergraduate mathematics degree with classes in Abstract Algebra, Differential Equations, Number Theory, Vector Calculus, and other fundamental mathematical subjects, Several credits short of double major in Spanish.
- Summer 2010 **Study Abroad**, *Universidad San Francisco de Quito, Ecuador*, Summer classes in chemistry and Spanish composition.

# Programming Projects

- matplotlib Documentation contributor to python plotting library.
- Moon Cube Modded version of a popular first person shooter with a peculiar gravitational force.
  - Vid2Sim Convert videos of epithelial tissue to data files compatible to simulators.

# Experience

#### Relevant Work Experience

- Jan 2015 Modeler/Engineer, BATTELLE MEMORIAL INSTITUTE, Columbus.
  - Present Development of powerful terrorism risk analysis tool. Write Python scripts to move data from Oracle, Access and PostgreSQL databases to Excel spreadsheets. Prepare presentations for government agencies and other clients.
- 2014-Present **GRE Instructor, Marketing Agent**, THE PRINCETON REVIEW, Columbus. Highly rated instructor. Presenter at marketing events.
  - Fall 2014 Calculus Recitation Instructor, THE OHIO STATE UNIVERSITY. Highly rated instructor.
- Fall 2008 Mathematics Tutor, New Jersey City University, Hudson County Com-Spring 2013 MUNITY COLLEGE.

Tutored all levels of undergraduate mathematics

Fall 2008 - Private Mathematics Tutor.

Spring 2013 Tutored high school and college students on a one on one basis. Strong References

#### Academic Awards

2015 Rhodes Graduate Fellowship for Computational Scientists, OSU

Summer 2014 Travel grant from OSU to attend Scipy conference in Austin (scientific computing in Python conference.)

2013-2014 Graduate Fellowship, OSU

2012 Grossnickle Scholarship, NJCU. For the senior with the highest GPA.

2008-2012 Presidential Scholarship (Full Tuition), NJCU

2011 12th place out of approximately 100 at the Garden State Undergraduate Mathematics Contest

## Computer skills

Essential Familiarity with multiple programming paradigms and parallelization strategies.

Proficient C++, Python, CUDA, openMP, LATEX, Debian flavors of Linux, Bash, Excel, SQL, relational databases, git, Excel.

Basic JAVA, Haskell, CLISP, MPI, Awk, Windows

#### Recent Presentations

2015 OSU and NJCU. "Implementing the Conjugate Gradient Method in Python: A Tutorial."

2015 Scipy 2015. "Vid2Sim: Image to data file tool for epithelial tissue simulators"

2015 Battelle. "Git's Internals".

2014 PyOhio conference. "Solving the Heat Equation in Python".

2014 Columbus Code Camp. "Soft Error Vulnerability in Sparse Matrix Vector Products".

2014 OSU. "A Tour of Linear Algebra Libraries in C++ and Python".

2014 Python Monthly Meeting. "Cache efficient Python".

### Languages

English Mothertongue

Spanish Fluent

Portuguese, Basic Reading proficiency

Italian

#### \_\_\_\_\_Interests

- Foreign languages with good movies, interesting radio programs, and rich literatures.
- Dog training.
- Raising my twin boys!

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HR Departmet June 1, 2015

Corporation 123 Pleasant Lane 12345 City, State

Dear Sir or Madam,

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

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Sincerely yours,

#### Melvyn Ian Drag

Attached: curriculum vitæ