4102 Georgetown Rd Blue Ash, OH 45236	**Jacob Bellman**	Phone: (513) 884-0930 Email: bellmajb@mail.uc.edu Website: bellmajb.github.io

Objective: Seeking a career solving complex problems using modeling and scientific computing.

Education

Cincinnati, OH	**University of Cincinnati**	**September 2010 - Present**

- Ph.D. candidate in Applied Mathematics.
- M.S. in Mathematics. Graduation date: May, 2015.
- Research Project: Phase Response Analysis of Circadian Oscillators. Optimized phase response curves against experimental data for 6 circadian rhythm ODE models using Simulated Annealing and visual methods. A unique model has been developed using chemical kinetics and bifurcation analysis. Computations executed in MATLAB, Python, and XPPAUT. Physical experiments developing PRCs currently in progress.
- Coursework: Scientific Computation, Math Modeling, Partial and Ordinary Differential Equations, Probability, Numerical Analysis, Systems Biology, Fourier Analysis, Bioinformatics.

Oxford, OH	**Miami University**	**August 2006 - 2010**

- B.S. in Mathematics and Statistics, Cum Laude. Graduation date: May, 2010.
- Coursework: Analysis, Differential Equations, Optimization, Hyperbolic Geometry.
- Thematic Sequence: Economics.
- Summer Research (2008): Investigating Hopf Bifurcations in the Mechanical Clock. Developed an ODE model of a clock system and simulated parametric alteration with MATLAB.

Employment

Research Assistant	**Dr. Chris Hong's Lab**	**August 2013-Present**

- Measured *Neurospora crassa* fungus growth in response to light and inducible transcription.
- Became skilled at experimental design/procedure and lab facilitation.
- Funding: NIH (August 2014-Present), DARPA (August 2013 - August 2014).

Mathematics Instructor	**University of Cincinnati**	**Summers 2011-2012**

- Taught Linear Algebra (Summer 2012).
- Taught Calculus I (Summer 2011).

Graduate Assistant	**University of Cincinnati**	**September 2010-May 2013**

- Instructed and graded for Differential Equations and Calculus 0-III.
- Addressed IT responsibilities and course organization for Calculus I/II WebAssign.
- Tutored for the SRS Tutoring Program and the Math Learning Center.

Textbook Editor	**Target Test Prep**	**March 2012-April 2013**

- Edited probability and geometry chapters for a GMAT prep book.

| **Tutor** | **Miami University** | **August 2007-August 2010** |

- Promoted to Head Tutor 2009; managed/instructed tutors.
- Tutored Calculus I-IV students.

Programming

- Proficient in MATLAB, Python, LaTeX, XPPAUT.
- Novice in COMSOL Multiphysics, C++, HTML.

Skills & Abilities

- Dynamical Systems
- Algorithm Development
- Teaching
- Systems Biology
- Optimization
- Public Speaking
- Modeling and Simulation
- Scientific Writing
- Leadership

References available upon request.