# Jasmine Otto

Art imitates life reifies art.

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#### Education

2015-present PhD, Applied Math, University of Illinois at Chicago (UIC)

Expected 2020. MS received 2017.

2012–2015 BS, Mathematical Computer Science, UIC, Chicago, IL.

Minor in Biology. Graduated summa cum laude.

2009–2012 Transferred work, College of DuPage, Glen Ellyn, IL.

Early admissions.

### Experience

#### Selected Research & Teaching

Summer 2017 Research assistant, PHCpy Tutorials, under Professor Jan Verschelde.

JupyterHub deployment of PHCpack.org, integrated with existing accounts and docs.

Dependent sets and homologies for control of network dynamics.

Fall 2016 Independent study, Ecological Sociobiology, with Professor Lou Kauffman.

Memetic flow on a social graph. Patterns due to diffusivity, advection, nonlinear response.

Fa16-present **Organizer**, SIG Math Coding, UIC ACM.

Selected Works

March 2017 Model, Apollonius [Web, Hosted], Poster presented at SciPy 2017.

Real-time interactive visualization of the 8 circles (up to multiplicity and complex solutions)

tangent to 3 given. Original example and PHCpy solver by Verschelde.

Febuary 2016 Model, Rug [Video].

An experiment with the Gierer-Meinhardt model of 2D pattern formation.

## **Programming**

**Scientific** Python, Jupyter, Pandas, Matplotlib, Cython, numerics with C++ in a past life.

**Visual** *JavaScript*, D3.js, Processing, shaders.

Robust Scala, sbt, npm, Git, Tornado, Prolog.

Mathematical Rigorous proof, SAGE, LaTeX, biological applications of R & NetLogo.

#### Distinctions

April 2017 **Scholarship**, Yeuk-Lam Yau-Leung Memorial, in biomathematics.

June 2016 Participant, SMS 2016: Dynamics of Biological Systems, University of Alberta.

MSRI supported.

May 2015 **Member**, Phi Beta Kappa.

April 2015 Outstanding scholarship, Biological Sciences at UIC, BIOS 100 and 101.

#### **Interests**

Research Intuitive science through storytelling. Reachable concept classes under memetic

evolution constrained by context. Chained morphogens. Polyrhythmic improvisation.

Gesture study Modern dance, drumset, figure drawing.

Cultural hobby Indie game dev, Capoeira, Mandarin.