

Daniel K. Wells

CONTACT INFORMATION

Website: www.dannykwells.com

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PROFESSIONAL EXPERIENCE

Parker Institute for Cancer Immunotherapy, San Francisco, California, USA

Research Data Scientist, 7/2016-

- The first member of the informatics team at PICI. Leading our efforts in all sequencing assays while collaborating extensively with member researchers at UCSF, Stanford, UCLA, MD Anderson, Memorial Sloan Kettering, and UPenn to accelerate advancements in cancer immunotherapy.

University of California, Berkeley/HHMI, Berkeley, California, USA

Postdoctoral Fellow, Department of Molecular and Cellular Biology, 2/2016-4/2016

Visiting Scholar, 6/2015 - 8/2015

Mentor: Nicole King

GRADUATE EDUCATION

Northwestern University, Evanston, Illinois USA

Postdoctoral Associate, Department of Physics, 12/2015-1/2016

Mentor: Adilson Motter

Graduate Student, Department of Applied Mathematics, 9/2010-12/2015

Ph.D, Applied Mathematics, 12/2015 (GPA: 3.99)

Mentors: William Kath (Math), Joshua Leonard (Bio. E), Adilson Motter (Physics)

M.S., Applied Math, 6/2011

Research Achievements:

- Used sequential quadratic programming and probability theory to develop new method to identify genetic targets for new cancer therapies.
- Constructed mathematical model of tumor-immune interaction; analyzed data from 125,000 simulation runs and identified new mechanism for tumor-induced immunosuppression.
- Published 2 first-author papers in high-impact journals.

Honors and Awards:

- Raised \$200,000 in research funding through successful grant applications:
 - National Science Foundation Graduate Research Fellowship
 - Chicago Biomedical Consortium Graduate Fellow
 - Royal E. Cabell First Year and Terminal Year Fellowships
- Presented 14 talks at professional conferences.

Marine Biological Laboratory Course in Cell Physiology, Woods Hole, MA, 2014

Cold Spring Harbor Course in Synthetic Biology, Cold Spring Harbor, NY, 2013

UNDERGRADUATE EDUCATION

Carleton College, Northfield, Minnesota USA

Department of Mathematics and Statistics

B.A., Mathematics, 6/2010, *Magna Cum Laude* with Distinction (GPA: 3.85)

Phi Beta Kappa (top 15%), Dean's List (top 10%).

Honors and Awards:

- Undergraduate research at the National Institutes of Health and Harvard Medical School.
- Awarded Steven P. Galovich Prize: given to one senior who demonstrates "an enthusiasm for and love of mathematics, a zestful joy in life, sense of humor, and compassion for others."

- National Merit Scholar

Budapest Semesters in Mathematics, Budapest, Hungary, 2008

PUBLICATIONS

1. Wells DK, Motter AE, Kath WL. *Bifurcation Control in Network Dynamical Systems*. In revision
2. Wells DK, Kath WL, Motter AE. *Control of Stochastic and Induced Switching in Biophysical Networks*. *Phys. Rev. X* 2015 5:031036 [link](#)
3. Wells DK, Chuang Y, Knapp LM, Brockmann D, Kath WL, Leonard, JN. *Spatial and Functional Heterogeneities Shape Collective Behavior of Tumor-Immune Networks*. *PLOS Comp. Biol.* 2015 11(4): e1004181 [link](#)
4. Wells, DK. and Ward, MM. *Nephritis and the Risk of Acute Myocardial Infarction in Patients with Systemic Lupus Erythematosus*. *Clinical & Experimental Rheumatology*. 2010 Mar-Apr; 28(2):223-9. [link](#)

KNOWLEDGE AREAS

Data Science, Tumor Immunology, Cancer Immunotherapy, Immunogenomics, Optimization, Network Theory, Machine Learning, Numerical Programming, Algorithm Implementation and Design, Statistics, Probability, Stochastic Processes, Mathematical Modeling, Parallel/High Performance Computing, Complex Systems, Systems Biology, Quantitative Biology, Nonlinear Dynamics, Agent-Based Modeling.

PROGRAMMING SKILLS

Matlab, \LaTeX , Python, R, Mathematica, Bash, SQL, C

EXPERIMENTAL SKILLS

- Microscopy (confocal, TIRF, two-photon, light-sheet), cloning and mammalian cell culture.
- Quantitative image analysis techniques.