Michael K. McCourt

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github.com/mkmcc arxiv.org/a/mccourt_m_1

Skills and Technical Proficiencies

Modeling

* Specialize in building simple but predictive "toy" models for complex systems, identifying and highlighting the most salient features. *My goal is to make difficult problems easy.*
* Skilled in rapidly translating ideas into equations (or code) and vice-versa.

Programming

* Proficient in C, Ruby, Mathematica, Lisp, Shell Scripts. Competent with Python, including scipy and numpy.
* Proficient in high-performance computing (utilizing some of the nation's fastest supercomputers), and in statistical data fitting using genetic algorithms and Markov Chain Monte Carlo simulations.
* Created popular open-source tools for simplifying daily scientific tasks, including:
  - "gnuplot-mode," a package for editing plots, downloaded by nearly 8,000 scientists to date, and
  - "bibslurp," a tool for automatically making bibliographies from the standard NASA database, adopted by 750+ scientists

Communication and Collaboration

* Invited speaker to 26 conferences and seminars
* Regularly complimented on the clarity of my reasoning and writing; one proposal for supercomputer time was selected by the granting agency as their published example of a well-written application
* Selected as a referee for five academic journals, including *Nature Letters*
* Recognized for initiating new collaborations among scientists

Management Experience

* Raised over $2 million ($1.3 million as the sole or primary author) in funding and supercomputer time to run a small research group
* Conducted a job search and hired a postdoc
* Mentoring two undergraduate students and co-mentoring three graduate students on multi-year projects
* Organized and taught a fluid dynamics "bootcamp" at UCSB after recognizing it was needed

Experience and Education

* Authored 23 peer-reviewed scientific papers cited nearly 400 times (research index quotient in the 95th percentile for astrophysics)
* Conducted self-directed research on 10 different topics

KITP Fellow, UC Santa Barbara *(promised for 2019-2020)*
Hubble Fellow, NASA Sept 2016—present
ITC Fellow, Harvard University Sept 2014—July 2015

* Recipient of prestigious independent research fellowships.

Graduate Student Researcher, UC Berkeley. Aug 2008—Aug 2014

* Recipient of both department awards for outstanding graduate student research.

PhD, Astrophysics, UC Berkeley May 2014
MA, Astrophysics, UC Berkeley May 2010
BS, Physics, Stanford University (concentration in theoretical physics) June 2008

Last updated: June 8, 2017
current version: github.com/mkmcc/resume