

# Daniel L. Parton

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## Technical Skills

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<b>Python</b>	7 years experience; numerical/scientific computing, data handling, parallel computing, bioinformatics; packages—numpy, pandas, scikit-learn, Flask, SQLAlchemy, lxml, matplotlib, mpi4py, setuptools, nosetests.
<b>Other languages</b>	JavaScript, bash. Some experience with C, C++, R, MATLAB, CUDA.
<b>Web development</b>	2 years experience; HTML5, CSS3, Bootstrap, knockout.js, Python Flask, Apache, nginx.
<b>General</b>	GitHub, git, svn, Travis CI, Docker, Amazon AWS, L <sup>A</sup> T <sub>E</sub> X, OS X, Linux, Windows.

## Experience

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- 2012–pres    MEMORIAL SLOAN KETTERING CANCER CENTER, NEW YORK, NY  
**Postdoctoral Research Fellow**, Computational Biology Center  
*Advisor:* [John D. Chodera](#)
- Investigation of conformational networks in cancer-associated proteins using clustering techniques and Markov models.
  - Developed [MSMSeeder](#)—pipeline for generating millions of simulation starting configurations.
  - Developed [TargetExplorer](#)—database application for storing, presenting and querying biological data for a target protein family, with RESTful API and [frontend web client](#) (in development).
  - Implemented a [custom sorting and filtering scheme](#) for data-driven selection of kinase sequences suitable for bacterial expression.
  - 3 first-author papers in preparation.
- 2011–2012    UNIVERSITY OF CHICAGO  
**Postdoctoral Scholar**, Department of Chemistry  
*Advisor:* [Gregory A. Voth](#)
- Applied advanced computer simulation techniques and free energy calculations to the study of the actin cytoskeleton. One paper submitted as first author (in review).
- 2007–2011    UNIVERSITY OF OXFORD  
**Graduate Student Researcher**, Department of Biochemistry  
*Advisors:* [Mark S. P. Sansom](#) (Oxford) and Ross Nobes (Fujitsu Laboratories of Europe)
- Studied complex membrane protein systems and viruses using physics-based molecular simulations.
  - Developed various software tools for simulation analysis, and contributed to [MDAnalysis](#).
  - Organized and taught organic chemistry tutorials for a class of 3 undergraduates.
  - Co-authored 5 papers, 3 as first author. Results presented at many national and international conferences, and in national scientific magazines.
- 2005–2007    UNIVERSITY OF BRISTOL AND GLAXOSMITHKLINE, UK  
**Undergraduate Researcher / Industrial Placement Student**  
*Advisor:* [Chris Willis](#)
- Conducted the design and synthesis of drug candidates, as a member of medicinal chemistry teams at Bristol (6 months) and GSK (1 year). Co-authored one paper.

## Education

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- 2007–2011    **D.PHIL. in Biochemistry**, University of Oxford, UK  
2003–2007    **M.SCI. in Chemistry with Industrial Experience**, University of Bristol, UK