Mark Yashar

864 Coachman Place • Clayton •California•94517 (United States)
Cell: 530-574-1834
mark.yashar@gmail.com
http://www.linkedin.com/in/markyashar

DATA ANALYSIS AND SCIENCE•SCIENTIFIC COMPUTING/PROGRAMMING•HIGH PERFORMANCE COMPUTING • PHYSICS

Experienced data analyst, physicist, and engineer with expertise in scientific computing and numerical modeling methods. Experience and knowledge of image processing, algorithm development, and data visualization, with particular attention to detail and excellent written and oral communication skills. Knowledge and experience with technical/scientific writing, as well as teambuilding, project management, and leadership skills. Ability to solve high level technical and scientific problems with both a holistic and granulistic point-of-view. Qualifications include:

COMPUTING/SOFTWARE

- Operating Systems: **Windows**, **Linux** (**Red Hat, Centos, Ubuntu**), **Unix**, **Mac OS**.
- Programming Languages and Data Analysis Packages: **Python** (including **numpy, matplotlib,** and **scipy** libraries), **C/C++** (including object-oriented programming and associated use of **gdb** and **ddd** debuggers and **Eclipse**), **MATLAB/Octave**, **Fortran**, **Perl**, **R**, Unix shell scripting, **IDL**, **Mathematica**, **HTML**, **Java**, **MySQL, Berkeley DB XML**, Common Astronomy Software Applications (**CASA**), Image Reduction and Analysis Facility (**IRAF**), **Supermongo**, **Meqtrees**, Weather Research and Forcasting Model (**WRF**), NCAR Command Language (**NCL**), NetCDF Command Line Operators (**NCO**).
- Other Software Applications: **LaTex**, **EXCEL** (including use of formulas, functions, and plotting features and capabilities), Concurrent Versions System (**CVS**), **VMware Workstation**, **Liferay Enterprise**.
- Supercomputers (e.g., **Cray** XE6) and high-performance computing.

SCIENTIFIC/TECHNICAL

- Monte Carlo methods and techniques
- Markov Chain Monte Carlo (**MCMC**) (including Bayesian analysis) and Metropolis-Hastings algorithms
- Data, signal, and image processing and analysis; error analysis and statistics
- Data visualization
- Numerical modeling, simulation
- Scientific/technical writing

MANAGEMENT & LEADERSHIP

- Excellent written and oral communications
- Cost/benefit ratio analysis and risk management
- Leadership and teambuilding
- Project Management
- Financial accountabilities and grant writing

EDUCATION

12/2008
University of California, Davis (UCD) (Davis, California)
PhD in Physics
Dissertation: "Topics in Microlensing and Dark Energy"
Gained skills and experience in Monte Carlo, MCMC, Bayesian, and Kolmogorov-Smirnoff methods and techniques, and data visualization; also gained experience and skills in MATLAB, Fortran, C, Perl and UNIX shell scripting.
Advisor: Dr. Andreas Albrecht

01/1999
San Francisco State University (SFSU) (San Francisco, California)
MS in Physics

05/1994
San Francisco State University (San Francisco, California)
BA in Physics, Concentration in Astronomy

EMPLOYMENT AND RESEARCH EXPERIENCE

- 02/12-02/14: **Postdoctoral Scholar-Employee,** Meteorological and CO_2 Regional Modeling. Supervisor: I. Fung (UCB)
- 02/09-02/12: **Postdoctoral Research Associate**, SKA research and development. Supervisor: A. Kemball (UIUC)
- 05/06 -12/08 : **Research Asst.,** Dark Energy research. Supervisor: A. Albrecht (UCD)
- 01/04-01/06: **Research Asst.,** MACHO research project. Supervisor: K. Cook (LLNL)
- 09/02-05/03: **Research Asst**., TEXES data processing. Supervisor: M. Richter (UCD)
- 08/99-08/01: **Data Aide,** USA data processing and handling. Supervisor: P. Kunz (SLAC) & Elliott Bloom (SLAC/Stanford)
- 9/01-12/08: **Reader/T.A.** Supervisors: W. Potter, L. Lubin, D. Webb (UCD)

REFERENCES

Prof. Inez Fung, Earth & Planetary Science, UCB, (510)-643-9367, ifung@berkeley.edu
Prof. Andreas Albrecht, Physics, UCD, (530)-754-9269, albrecht@physics.ucdavis.edu
Prof. Athol Kemball, Astronomy/NCSA, UIUC, (217)-333-7898, akemball@illinois.edu
David Elvins, Earth & Planetary Science, UCB,(510)-643-8336, elvins@berkeley.edu
Prof. John Rundle, Physics, UCD, (530)-752-6416, rundle@physics.ucdavis.edu
Prof. Chris Fassnacht, Physics, UCD, (530)-554-2600, fassnacht@physics.ucdavis.edu