**Mark Yashar**

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**DATA ANALYSIS/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, data visualization, and machine learning 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, scipy,** and **scikit-learn** 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, pivot tables, 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)
* Machine Learning
* 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

**PROFESSIONAL DEVELOPMENT**

09/2016-10/2016

**Introduction to Data Science with Python:** 6-week course, **Metis**, San Francisco, CA. Course Instructors: Ramesh Sampath (ramesh@sampathweb.com) and TJ Bay (spintronic@gmail.com). Please see https://github.com/markyashar/sf16\_ids1/ and my Linkedin profile for further details.

**EMPLOYMENT AND RESEARCH EXPERIENCE**

* 03/16-08/16: **Business Analyst,** Visa Checkout Fraud Analysis (Temporary contract position). Supervisor: T. Pan (Visa, Inc.)
* 02/12-02/14: **Postdoctoral Scholar-Employee,** Meteorological and CO2 Regional Modeling. Supervisor: I. Fung (University of California, Berkeley)
* 02/09-02/12: **Postdoctoral Research Associate**, SKA research and development. Supervisor: A. Kemball (University of Illinois, Urbana-Champaign)
* 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 (Lawrence Livermore National Laboratory)
* 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 (Stanford Linear Accelerator Center) & Elliott Bloom (SLAC/Stanford University)
* 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

**Tina Pan,** Visa Inc. Digital Operations, (415)-225-4388, tpan@visa.com