Ramona L. V. Perez

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EDUCATION

Doctor of Philosophy, Physics	Florida International University, Miami, Florida	2008 - 04/2015*
Bachelor of Science, Physics	Florida International University, Miami, Florida	2003 - 2008

**Availability for employment 05/06 2015*

OBJECTIVE

To work in a challenging, collaborative environment in which I can use my technical skill set as an experimental physical scientist alongside my communication abilities to excel in technological efforts.

EXPERIENCE

Plasma Physics

Research Assistant FIU Physics Department, Werner Beoglin, Princeton Plasma Physics Laboratory (PPPL), Douglass Darrow, Culham Centre for Fusion Energy, Scott Allan, Ken McClements — 04/2010 - Present

- Designed, constructed, installed, and operated a new instrument to study fast ion loss and distribution during plasma instabilities in magnetically confined plasmas at the Mega Amp Spherical Tokamak
- Currently analyzing data to validate the instrument
- Success of initial results have led to support for a larger system to be developed for the National Spherical Torus Experiment at the PPPL
- `http://phy.fiu.edu/twiki/bin/view/TWiki/FEPP`

Teaching

Teaching Assistant FIU Physics Department, 12 Educationally Reformed Lab Sections 2048L (Physics 1) 2049L (Physics 2) — 01/2008 - 04/2010, 01/2014 - 04/2014

- Taught class size of 30 students and mentored learning assistants

Physics Education

Research Assistant FIU Physics Department, Leanne Wells — 04/2008 - 12/2008

- Researched quantitative impact of education reform and teacher preparation on introductory physics labs
- Conducted research interviews (Institutional Review Board certified) and administered evaluation instruments

Solid-State Physics

Research Assistant FIU Physics Department. Wenzhi Li — 08/2005 - 08/2007

- Synthesized novel ruthenium dioxide nanorods and fabricated carbon nanomaterials and thin film depositions
- Designed experimental systems, trained new students, and calibrated, operated, and maintained lab equipment

Biology Ecology

Laboratory Technician FIU Biology Department, Jim Fourqurean — 02/2004 - 08/2005

- Processed plant and abiotic samples for elemental and spectrophotometric analysis
- Surveyed and collected (Scientific SCUBA Certification) samples in Florida Keys National Marine Sanctuary and Gulf of Mexico

SKILLS

Experimental physical scientist with experience in instrument design, development, and validation in a collaborative fast-paced work environment

Electrical Design	• *Example*: Experience in data acquisition electronics system design (decreased cost of system cables by a factor of 20, saving $9K) • *Skills:* Created cable block diagrams and programs for interfacing to electronics, monitored electrical installation for projects, prepared electrical design reviews
Equipment	• *Current Research:* high-speed digitizers, modular crate electronics, pulse generators, radiation detection electronics, surface barrier detectors, vacuum pumps • *Past Research:* elemental analyzer, fluorometer, mass flow controller, mini electron-beam evaporator, sonicator, spectrophotometer
Mechanical Design	• *Example:* Successful instrument design ($8K+ UHV mechanical housing for sensitive electronic instruments) • *Skills:* Created machine drawings, experience in ultra high vacuum (UHV) and high vacuum design and practices, prepared mechanical design reviews
Programming	• *Operating Systems:* Mac, Windows, Linux/Unix • *Languages:* Python, C, C^{++}, Fortran 95, G (graphical language), shell scripting, IDL • *Skills:* Monte Carlo simulations, statistical analysis
Project Management	• *Control and Monitoring:* Developed troubleshooting techniques, identified risks and planned for contingencies, monitored schedules (including progress of student research activities), reinforced strong organizational skills, reprioritized tasks • *Cost Management*: Experience in budgeting ($25K+ equipment and expenses), knowledge of purchase orders and vendor paperwork, managed international freight forwarding ($40K+ worth of equipment) • *Dissemination:* Created and currently maintain group website/wiki page, first author and coauthor on peer-reviewed conference proceedings, developed oral presentation (technical and general) skills at: conferences, design reviews, and group meetings • *Project Planning and Execution:* Created status reports, prioritized tasks and developed schedules for instrument: design, construction, testing, installation, and operation (timescale of 2+ years) • *Team Development:* Advise student research activities (up to 6 students), create student research projects, run weekly group meetings, work within a large-scale collaboration
Software	LaTeX, Solidworks, Vectorworks, AutoCAD, LabVIEW, GNU Make, Microsoft Office, Virtual Network Computing, Matlab
Web Meetings	H.323 Polycom, ReadyTalk, Skype

FURTHER INFORMATION

Honors	APS FGSA Travel Award, FIU GPSC Conference Travel Grant, 2014
Curriculum Vitae (CV)	For more information regarding honors, officer positions held in organizations, outreach, presentations, publications, and student advising please request my CV or visit `http://phy.fiu.edu/twiki/bin/view/TWiki/Resume`