

Ramona L. V. Perez

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EDUCATION

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

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, Princeton Plasma Physics Laboratory, Culham Centre for Fusion Energy <i>*publications in CV</i> <ul style="list-style-type: none">• Designed, constructed, tested, and installed a new instrument to study the physics of plasma instabilities through charged fusion product detection in spherical tokamaks• Currently validating the instrument using data analysis	04/2010 - Present
Teaching	Teaching Assistant FIU Physics Department, 12 Educationally Reformed Lab Sections 2048L (Physics 1) 2049L (Physics 2) <ul style="list-style-type: none">• Taught class size of 30 students and mentored learning assistants• Monitored experiments, created and graded homework	01/2008 - 04/2010 01/2014 - 04/2014
Physics Education	Research Assistant FIU Physics Department <ul style="list-style-type: none">• Researched quantitative impact of FIU PhysTEC reform of introductory physics labs• Conducted research interviews (Institutional Review Board certified) and administered evaluation instruments	04/2008 - 12/2008
Solid-State Physics	Research Assistant FIU Physics Department <ul style="list-style-type: none">• Synthesized novel ruthenium dioxide nanorods and fabricated carbon nanomaterials and thin film depositions• Designed experimental systems and calibrated, operated, and maintained lab equipment	08/2005 - 08/2007
Space Physics	Research Assistant Florida Institute of Technology Physics and Space Sciences Department <ul style="list-style-type: none">• Analyzed and graphed satellite data to support the proposed existence of field-aligned currents in the earth's polar cap	06/2006 - 07/2006
Biology	Laboratory Technician FIU Biology Department <ul style="list-style-type: none">• Processed plant and abiotic samples for elemental and spectrophotometric analysis• Performed field work (Scientific SCUBA Certification), surveyed and collected samples in Florida Keys National Marine Sanctuary and Gulf of Mexico	02/2004 - 08/2005

SKILLS

Electrical Design	<ul style="list-style-type: none">• <i>Example:</i> Experience in data acquisition electronics system design (decreased cost of system cables by a factor of 20, saving \$9K)• <i>Skills:</i> Created cable block diagrams and programs for interfacing to electronics, monitored electrical installation for projects, prepared electrical design reviews
Equipment	<ul style="list-style-type: none">• <i>Current Research:</i> high-speed digitizers, modular crate electronics, pulse generators, radiation detection electronics, surface barrier detectors, vacuum pumps• <i>Past Research:</i> elemental analyzer, fluorometer, mass flow controller, mini electron-beam evaporator, sonicator, spectrophotometer
Mechanical Design	<ul style="list-style-type: none">• <i>Example:</i> Successful instrument design (\$8K+ UHV mechanical housing, parts manufactured by 4 different machining facilities, 3 different materials were used)• <i>Skills:</i> Created machine drawings, experience in ultra high vacuum (UHV) and high vacuum design and practices, prepared mechanical design reviews
Programming	<ul style="list-style-type: none">• <i>Operating Systems:</i> Mac, Windows, Linux/Unix• <i>Languages:</i> Python, C, C++, Fortran 95, G (graphical language), shell scripting, IDL• <i>Skills:</i> Monte Carlo simulations, statistical analysis
Project Management	<ul style="list-style-type: none">• <i>Control and Monitoring:</i> Developed troubleshooting techniques, identified risks and planned for contingencies, monitored schedules, reinforced strong organizational skills, reprioritized tasks• <i>Cost Management:</i> Experience in budgeting (\$25K+ equipment and expenses), knowledge of purchase orders and vendor paperwork, managed international freight forwarding (\$40K+ worth of equipment), performed equipment estimates for budgeting• <i>Dissemination:</i> Created group website/wiki page, developed oral presentation (technical and general) skills at: conferences, design reviews, and group meetings, maintain research group website/wiki page• <i>Project Planning and Execution:</i> Created status reports, prioritized tasks and developed schedules for instrument: design, construction, testing, and installation (timescale of 2+ years)• <i>Team Development:</i> Advise student research activities (up to 6 students), run weekly group meetings, enhance strong written and verbal communication skills, 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

Curriculum Vitae (CV)	For fellowships, honors, officer positions held in organizations, presentations, publications, and volunteer service please request my CV
Flexibility	Willing to relocate nationwide or internationally
Website/ Wiki Pages	http://phy.fiu.edu/twiki/bin/view/TWiki/FEPP http://phy.fiu.edu/twiki/bin/view/TWiki/MAST_Diagnostic http://phy.fiu.edu/twiki/bin/view/Main/RamonaValenzuelaPerez