

Ramona L. V. Perez

School Address

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EDUCATION

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

†Availability for employment 05/2015, Willing to relocate nationwide or internationally

EXPERIENCE - RESEARCH/ TEACHING

Plasma Physics*	Research Assistant FIU Physics Department, Werner Beoglin, Princeton Plasma Physics Laboratory, Douglass Darrow, Culham Centre for Fusion Energy, Scott Allan, Ken McClements <ul style="list-style-type: none">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 TokamakCurrently analyzing data to validate the instrumenthttp://phy.fiu.edu/twiki/bin/view/TWiki/FEPP	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	01/2008 - 04/2010 01/2014 - 04/2014
Physics Education	Research Assitant FIU Physics Department, Leanne Wells <ul style="list-style-type: none">Researched quantitative impact of education reform and teacher preparation on introductory physics labsConducted research interviews (Institutional Review Board certified) and administered evaluation instruments	04/2008 - 12/2008
Solid-State Physics	Research Assistant FIU Physics Department, Wenzhi Li <ul style="list-style-type: none">Synthesized novel ruthenium dioxide nanorods and fabricated carbon nanomaterials and thin film depositionsDesigned experimental systems, trained new researchers, and calibrated, operated, and maintained lab equipment	08/2005 - 08/2007
Biology Ecology	Laboratory Technician FIU Biology Department, Jim Fourqurean <ul style="list-style-type: none">Processed plant and abiotic samples for elemental and spectrophotometric analysisSurveyed and collected (Scientific SCUBA Certification) samples in Florida Keys National Marine Sanctuary and Gulf of Mexico	02/2004 - 08/2005

EXPERIENCE - SKILLS

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

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
Mechanical Design	<ul style="list-style-type: none">• <i>Example:</i> Successful instrument design (\$8K+ UHV mechanical housing for sensitive electronic instruments)• <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 (including progress of student research activities), 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)• <i>Dissemination:</i> Created and currently maintain group website/wiki page, developed oral presentation (technical and general) skills at: conferences, design reviews, and group meetings• <i>Project Planning and Execution:</i> Created status reports, prioritized tasks and developed schedules for instrument: design, construction, testing, installation, and operation (timescale of 2+ years)• <i>Team Development:</i> 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

CONFERENCES

20 th Topical Conference on High-Temperature Plasma Diagnostics	Atlanta, Georgia	06/2014
2014 FL AVS Science and Technology /FL Society for Microscopy Joint Symposium	Orlando, Florida	03/2014
55 th APS Division of Plasma Physics Meeting	Denver, Colorado	11/2013

HONORS

APS FGSA Travel Award for Excellence in Graduate Research	2014
FIU Graduate & Professional Student Committee Research Travel Grant	2013

Ronald E. McNair Baccalaureate Program Fellow	2006 - present
Cristina Menendez Fellowship for Everglades Research	2004
FIU Salutatorian Scholarship	2003 - 2005

MEMBERSHIPS/ SERVICE

Young Leaders Session FL AVS/FSM Joint Symposium, Co-Chair	2014
FIU Physics Graduate Program Review, Committee Member	2009 - 2010
FIU Public Astronomy Colloquia Series, Volunteer	2008-2010
FIU Society of Physics Students Quantum Leap Event, Organizer, Volunteer	2008
FIU Society of Physics Students, President	2006 - 2008

PRESENTATIONS

<i>Perez, R. V.</i> , S. Allen, W. U. Boeglin, M. Ceconello, K. G. McClements, D. S. Darrow, and the MAST team. First Results from a Charged Fusion Products Diagnostic at MAST, Poster session, APS DPP 55 th Annual Meeting. Denver, Colorado	11/2013
<i>Perez, R. V.</i> Initial Results from the Proton Detector, Friday Physics Seminar. Culham Centre for Fusion Energy, Culham Science Centre, Abingdon, Oxfordshire, England	09/2013
<i>Perez, R. V.</i> Charged Fusion Product Diagnostic Electrical Design Review, Culham Centre for Fusion Energy, Culham Science Centre, Abingdon, Oxfordshire, England	05/2013
<i>Perez, R. V.</i> and Boeglin, W. Charged Fusion Product Diagnostic Mechanical Design Review, Culham Centre for Fusion Energy, Culham Science Centre, Abingdon, Oxfordshire, England	09/2012

PUBLICATIONS

<i>R.V. Perez</i> , W.U. Boeglin, Names and the MAST team. Investigating Fusion Plasma Instabilities Using Protons, Invited Talk Abstract , The 20 th Topical Conference on High Temperature Plasma Diagnostics. Atlanta, Georgia	06/2014
S. Neupane, G. Kaganas, <i>R. Valenzuela</i> , L. Kumari, X. W. Wang, W. Z. Li, Synthesis and characterization of ruthenium dioxide nanostructures, Journal of Materials Science, July 2011, Volume 46, Number 14, 4803-4811	07/2011
Boeglin WU, <i>Valenzuela Perez R</i> , Darrow DS. Concept of a charged fusion product diagnostic for NSTX. Rev. Sci. Instrum. 2010 Oct; 81(10):10D301, http://dx.doi.org/10.1063/1.3464262	10/2010
Wells, L., <i>Valenzuela, R.</i> , Brewae, E., Kramer, L., O'Brien, G., & Zamolla, E., Impacts of the FIU PhysTEC reform of introductory physics lab, Phys. Ed. Res. Conf. Edmonton, Canada, 2008 AIP Conference Proceedings.	06/2008

FURTHER INFORMATION

For more information please request my full Curriculum Vitae (CV) or visit <http://phy.fiu.edu/twiki/bin/view/TWiki/Resume>