

Ramona L. V. Perez

School Address

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EDUCATION

| | | |
|---------------------------------------|----------------------------------|--------------------|
| <i>Doctor of Philosophy</i> , Physics | Florida International University | 2008 - exp:12/2014 |
| <i>Bachelor of Science</i> , Physics | Florida International University | 2003 - 2008 |

SKILLS

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|------------------------|--|
| Programming | Python, C, C ⁺⁺ , Fortran 95, G (graphical language), shell scripting, basic IDL |
| Operating Systems | Mac, Windows, Linux/Unix |
| Software | LaTeX, Solidworks, Vectorworks, AutoCAD, LabVIEW, GNU Make, MS Office, Virtual Network Computing, basic Matlab, basic Mathematica |
| General Research | Monte Carlo simulations, particle detection techniques, problem-solving, data acquisition automation, statistical analysis, ultra high vacuum (UHV) design and practices, software development for interfacing to electronics, instrument concept, design, development, and validation |
| Mechanical Design | Machine drawings and instrument concept and design (successful design of \$8K+ UHV mechanical housing with parts manufactured by 4 different machining facilities using 3 different materials), mechanical design reviews |
| Electrical Design | Cable block diagrams, data acquisition electronics system design (decreased cost of system cables by a factor of 20 saving \$9K), electrical design reviews |
| Equipment | Radiation detection electronics, high-speed digitizers, mini electron-beam evaporator, sonicator, vacuum pumps, elemental analyzer, fluorometer, spectrophotometer, mass flow controller |
| Project Management | Planning, design, and execution (project timescale 2+ years), international and domestic collaborations, technical and general oral presentations, status reports, grant budgeting (\$25K+ equipment and expenses), international freight forwarding (\$40K worth of equipment), vendor paperwork, purchase orders, supervising and advising student research projects |
| Web/Video Conferencing | H.323 Polycom, ReadyTalk, Skype |

RESEARCH EXPERIENCE

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|----------------|--|-------------------|
| Plasma Physics | Graduate Research Assistant FIU Physics Department, Princeton Plasma Physics Laboratory, Culham Centre for Fusion Energy, Conceptualizing, designing, and validating a new instrument to study the physics of plasma instabilities through charged fusion product detection in spherical tokamaks* <i>curriculum vitae available upon request</i> | 04/2010 - Present |
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| Physics Education | Graduate Research Experience FIU Physics Department, Researching FIU PhysTEC reform of introductory physics lab, conducting interviews (Institutional Review Board certified) | 04/2008 - 12/2008 |
| Solid-State Physics | Undergraduate Research Experience FIU Department of Physics, Carbon nanomaterial fabrication and system design, thin film deposition, and chemical vapor deposition synthesis of novel ruthenium dioxide nanorods | 08/2005 - 08/2007 |
| Space Physics | Undergraduate Research Experience Florida Institute of Technology Physics and Space Sciences Department, Analyzing satellite data to support the proposed existence of field-aligned currents in the earth's polar cap during geomagnetic storm conditions | 06/2006 - 07/2006 |
| Biology Ecology | Undergraduate Laboratory Technician FIU Biology Department, Processing of plant and abiotic samples for elemental and spectrophotometric analysis and performing field work (Scientific SCUBA Certification) surveying and collecting samples in Florida Keys National Marine Sanctuary and Gulf of Mexico | 02/2004 - 08/2005 |

MEMBERSHIP

American Physical Society, Student Member (2013)
 AVS Science and Technology, Student Member (2012-present)
 FIU Student Chapter of AVS, Founding Chair/ President (2012-present)
 FIU Society of Physics Students, President, (2006-2008)
 FIU Society of Physics Students, Member (2005-present)

HONORS

FIU Graduate & Professional Student Committee Research Travel Grant (2013)
 Ronald E. McNair Baccalaureate Program Fellow (2006-present)
 Center for High Energy Physics Research and Education Outreach Fellow (2005-2008)
 Cristina Menendez Fellowship for Everglades Research (2004)
 Florida Department of Transportation Employee Dependent Scholarship (2004)
 Florida Bright Futures Scholarship (2003-2008)
 FIU Salutatorian Scholarship (2003-2005)
 FIU Presidential Scholarship (2003-2005)

AVAILABILITY

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| Graduating | December 2014 |
| Flexibility | Willing to relocate nationwide or internationally |
| Travel Experience | Domestic, International |