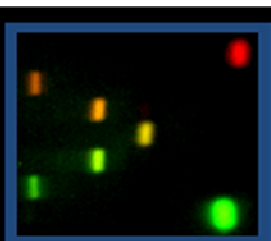


**30th Puerto Rico
Interdisciplinary
Scientific Meeting**

**PROGRAM
2010**

**45th ACS Junior
Technical Meeting**



PUERTO RICO LOUIS STOKES



ALLIANCE FOR MINORITY PARTICIPATION



45th ACS Junior Technical Meeting
30th Puerto Rico Interdisciplinary Scientific Meeting (PRISM)

University of Puerto Rico
Mayagüez Campus
March 13, 2010

SPONSORED BY

Puerto Rico – Louis Stokes Alliance for Minority Participation (PR-LSAMP)
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45th ACS Junior Technical Meeting
30th Puerto Rico Interdisciplinary Scientific Meeting (PRISM)
University of Puerto Rico
Mayagüez Campus
March 13, 2010

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Mayagüez Campus
March 13, 2010

ORGANIZING AND SCIENTIFIC COMMITTEES

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Dr. Ana R. Mayol
Ms. Ana M. Feliciano
Prof. Javier Figueroa
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Ms. Lisnet Santiago
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**45th ACS Junior Technical Meeting
30th Puerto Rico Interdisciplinary Scientific Meeting (PRISM)**

INVITED SPEAKER

Dr. Dan Luo

Department of Biological and Environmental Engineering
Cornell University

DNA as Both a Genetic and a Generic Nano-material

Abstract

Our research focuses on Nucleic Acid Engineering: molecular engineering DNA as both a genetic (bio-) and a generic (nano-) material. Previously using DNA we have created tree-shaped DNA (dendrimers-like DNA), DNA nanobarcodes, DNA hydrogels, DNA liposomes, and DNA-organized nanoparticles. We have also invented a novel “target-driven polymerization” process where polymers can only be synthesized in the presence of a pathogen DNA. The technology will have wide applications in diagnostics as well as in imaging and multi-drug delivery. In addition, nanoparticle-based 1D nano-wires, 2D superlattices, 3D supracrystals, and free-standing monolayer sheets have been achieved with nanoparticles by using DNA as an organizer. Recently, we have created a DNA gel that can produce large amounts of proteins without any living cells (termed P-gel). P-gel successfully converts the central dogma from inside a cell to a gel-based chemical reaction in a test tube. Cloning, transformation and cell culturing are no longer needed for protein expression. P-gel will become a platform technology for producing and engineering proteins. Furthermore, we have created an “unforgettable” DNA gel. These examples illustrate the fact that DNA is a truly amazing genetic and generic materials and that we can create new materials via DNA with novel properties and real-world applications. For more information, please refer to our recent publications:

1. High-yield cell-free protein production from P-gel, *Nature Protocols*, 4, 1759-1770 (2009)
2. Multifunctional nano-architectures from DNA-based ABC monomers, *Nature Nanotechnology*, 4, 430-436 (2009)
3. Free-standing nanoparticle superlattice sheets controlled by DNA (Article), *Nature Materials*, 8, 519-525 (2009)
4. A Cell-free protein producing gel, (Article), *Nature Materials*, 8, 432-437 (2009)
5. Nanopatterning self-Assembled nanoparticle superlattices by molding microdroplets (Cover Article) *Nature Nanotechnology*, 3, 682-690 (2008)
6. Enzyme catalyzed assembly of DNA hydrogels, *Nature Materials* 5, 797-801 (2006)

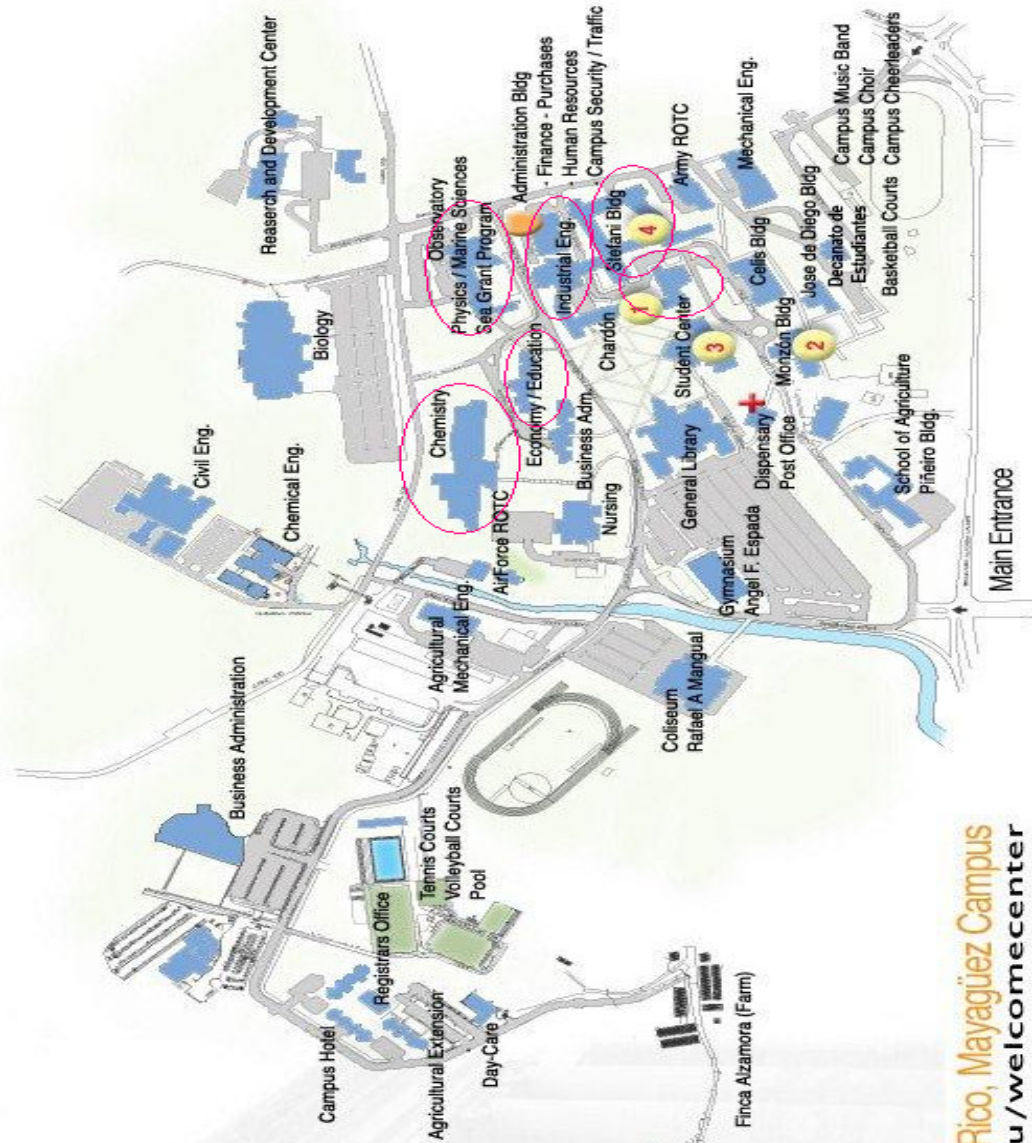
7. DNA nanobarcodes, *Nature Protocols* 1, 995-1000 (2006)
8. DNA fluorescence nanobarcodes for multiplexed pathogen detection, *Nature Biotechnology* 23, 885-889 (2005)
9. Controlled assembly of dendrimer-like DNA. *Nature Materials*, 3, 38-42 (2004).

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March 13, 2010

PROGRAM

| | |
|--------------------------------|--|
| 7:30 a.m. – 10:00 a.m. | Registration / Breakfast (Lobby Chardon Building) |
| 9:00 a.m. – 9:30 a.m. | Welcoming Remarks (Ramón Figueroa Chapel Theater) Dr. Benjamín Colucci, Dean of Engineering University of Puerto Rico in Mayagüez Dr. Manuel Ramírez Freyre, Dean of Arts and Sciences University of Puerto Rico in Mayagüez Dr. Nilka Rivera, President ACS Puerto Rico Chapter 2010 Dr. Manuel Gómez, Director University of Puerto Rico Resource Center for Science and Engineering Dr. Jorge Rivera Santos, Chancellor University of Puerto Rico in Mayagüez |
| 9:30 a.m. – 9:45 a.m. | Presentation of Plenary Speaker Dr. Manuel Gomez |
| 9:45 a.m. – 10:45 a.m. | Plenary Conference Dr. Dan Luo Cornell University |
| 10:45 a.m. – 11:00 a.m. | Coffee Break (Lobby Chardon Building) |
| 11:00 a.m. – 3:00 p.m. | Late Registration (Lobby Chemistry Building) |
| 11:00 a.m. – 12:00 p.m. | Concurrent Scientific Sessions (Steffani, Industrial Engineering, Sanchez Hidalgo, Physics and Chemistry Buildings) |
| 11:30 a.m. – 1:30 p.m. | Lunch –“Gimnasio Ángel F. Espada” |
| 1:30 p.m. – 2:00 p.m. | Poster Set-up (Lobby of Chemistry Building) |
| 1:45 p.m. – 3:25 p.m. | Concurrent Scientific Sessions (Steffani, Industrial Engineering, Sanchez Hidalgo, Physics and Chemistry Buildings) |
| 2:00 p.m. – 5:00 p.m. | Poster Session (Lobby of Chemistry Building) |
| 3:25 p.m. – 5:00 p.m. | Reception (Lobby of Chemistry Building) |

- 1. Chardón Bldg.**
 - Department of English
 - Department of Humanities
 - Department of Social Sciences
 - Department of Hispanic Studies
 - Art Gallery
 - Auditorium
- 2. Monzón Bldg.**
 - Department of Mathematics
 - Campus Computer Center
 - Graduate Studies Office
 - Communications & Press Office
- 3. Student Center Bldg.**
 - Cafeteria
 - Bookstore
 - Off-Campus Housing Office
 - Placement Office
 - Orientation Office
 - Tutoring / Help Center
 - Exchange / Foreign Students Office
 - Social & Cultural Activities Office
 - Bank - ATMs
- 4. Stefani Bldg.**
 - General Eng.
 - Electrical Eng.
 - Computer Eng.
 - Industrial Eng.



ORAL SESSIONS

- Agricultural Sciences
- Chemistry
- Computer Sciences
- Education
- Engineering
- Environmental Science
- Geosciences
- Life Sciences
- Mathematics
- Physics

Agricultural Science

Session: 01

Room: S-303

Moderator: José M. Huerta

| Time | Speaker and affiliation | Title |
|-------------------|--|--|
| 11:00AM → 11:20AM | <i>[Agricultural Sciences 1]</i> Morales, Diane UPR-MAYAGUEZ | <i>Pathogenicity of Fungal Species Isolated From Longan Leaf Tissue</i> |

Chemistry

Session: 01

Room: Q-123

Moderator: Enrique Meléndez, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|---|---|
| 11:00AM → 11:20AM | <i>[Chemistry 24]</i> Garcia, Erika UPR-MAYAGUEZ | <i>Formation of Sulfmyoglobin with Sodium Dithionite</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 45]</i> MARTINEZ, ROBERTO UPR-RIO PIEDRAS | <i>Methanol Tolerance of Pd Catalysts for the Oxygen Reduction Reaction</i> |
| 11:40AM → 12:00PM | <i>[Chemistry 7]</i> Barbosa, Cindy UPR-RIO PIEDRAS | <i>Intercalation of Titanocene Dichloride into Zirconium Phosphate Layered Nanomaterial Envisioned as a Drug Delivery System</i> |
| 12:00MD -> 1:30PM | | Lunch Break |

Moderator: Kariluz Dávila

| | | |
|-----------------|---|--|
| 1:45PM → 2:05PM | <i>[Chemistry 76]</i> Rodríguez, Dianny M. PCUPR | <i>Synthesis and Characterization of Palladium(II) Complexes with Methyl-Substituted Benzothiazoles</i> |
| 2:05PM → 2:25PM | <i>[Chemistry 16]</i> Chaparro, Francisco UPR-MAYAGUEZ | <i>Optimization of Eu:TiO₂ Nanoparticles for Aqueous Systems Applications</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 74]</i> Robles, Emily UPR-RIO PIEDRAS | <i>Synthesis of Fe₃O₄-core dendrimers.</i> |
| 2:45PM → 3:05PM | <i>[Chemistry 88]</i> Vargas, Diane UPR-RIO PIEDRAS | <i>Chemical Characterization of Ferrocene Derivatives Intercalated into Zirconium Phosphate Layers</i> |
| 3:05PM → 3:25PM | <i>[Chemistry 42]</i> Marrero Méndez, María del Carmen UPR-MAYAGUEZ | <i>Hydrogen Sulfide and Heme-Oxygen Complex Activation</i> |

Session: 02

Room: Q-125

Moderator: Astrid Cruz, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|--|---|
| 11:00AM → 11:20AM | <i>[Chemistry 12]</i> Burgos, Natalia UPR-RIO PIEDRAS | <i>Photochemistry and Photophysics of 2-Nitropyrene in Different Solvents</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 13]</i> Casiano, Rosa UPR-MAYAGUEZ | <i>A Discrete Analogy Using Pennies and Dimes to Resolved Rate Constant Values In Complex Kinetics Systems</i> |
| 11:40AM → 12:00PM | <i>[Chemistry 20]</i> Delgado, Roxanna UPR-RIO PIEDRAS | <i>Studying Intermolecular Forces in Benzene-like Molecules</i> |
| 12:00MD -> 1:30PM | | Lunch Break |

Moderator: Jessica Torres, UPR-Mayagüez

| | | |
|------------------|--|--|
| 1:45PM ->2:05PM | <i>[Chemistry 29]</i> Gonzalez, Roxannie UPR-MAYAGUEZ | <i>Surface Enhanced Raman Spectroscopy of Yeast as Model for Biological Threats Detection</i> |
| 2:05PM -> 2:25PM | <i>[Chemistry 15]</i> Chandler, Yishara UPR-RIO PIEDRAS | <i>Photodegradation of Fluoranthene and 3-Nitrofluoranthene in Organic Solvents</i> |
| 2:25PM -> 2:45PM | <i>[Chemistry 30]</i> Gonzalez-Pesquera, Melinda UIA-BAYAMON | <i>Docking and Molecular Dynamics Calculations of Orphan Nuclear Receptors</i> |
| 2:45PM -> 3:05PM | <i>[Chemistry 36]</i> Jiménez Ramos, Ricardo UPR-MAYAGUEZ | <i>Use of Metal/Polymer Composites as Substrates to Enhance the Energy Conversion Performance of a Miniature Bionanoreactor</i> |
| 3:05PM - >3:25PM | <i>[Chemistry 46]</i> Massanet, Nicole UPR-RIO PIEDRAS | <i>Using Isodesmic Reactions to Calculate Aromaticity in Boron-Nitrogen Benzene-Like Compounds</i> |

Session: 03

Room: Q-148

Moderator: Carlos Nieves, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Chemistry 48]</i> Miranda, Iliane UPR-MAYAGUEZ | <i>Synthesis of Silver Nanoparticles</i> |
| 11:20AM ->11:40AM | <i>[Chemistry 56]</i> Nieves, Mairim, UIA-BAYAMON | <i>Quantum Mechanical Calculations of Ligands Bonded to Silver Clusters</i> |
| 11:40AM ->12:00PM | <i>[Chemistry 57]</i> Nieves, Gabriel UPR-MAYAGUEZ | <i>Quantification of TNT, DNT and PETN on Glass Substrate by Fiber Optic-Grazing Angle Probe FTIR Spectroscopy</i> |
| 12:00MD -> 1:30PM | | Lunch Break |

Moderator: Miguel Castro, UPR-Mayagüez

| | | |
|-----------------|--|--|
| 1:45PM → 2:05PM | <i>[Chemistry 60]</i> Ortiz, Natasha UPR-MAYAGUEZ | <i>Growth of Silver Sulfide Nanoparticles</i> |
| 2:05PM → 2:25PM | <i>[Chemistry 77]</i> Rodriguez, Gabriela UPR-MAYAGUEZ | <i>Bacillus thuringiensis Detection and Characterization by Normal Raman and SERS at the Stationary Growth Stage</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 84]</i> Sosa, Jason UPR-RIO PIEDRAS | <i>Adsorption of Organics Pollutants on Carbon Nanotubes and their Bulk Counterparts</i> |
| 2:45PM → 3:05PM | <i>[Chemistry 73]</i> Rivera-Santiago, Roland UPR-MAYAGUEZ | <i>Microwave-Assisted Synthesis of Ni-Doped ZnSe@ZnS Quantum Dots for Photodynamic Therapy</i> |
| 3:05PM → 3:25PM | <i>[Chemistry 81]</i> Sanchez, Rhaisa UPR-MAYAGUEZ | <i>Thermal Gravimetric Analysis for Vapor Pressure and Enthalpy Sublimation of Acetone Peroxide and Other Energetic Materials</i> |

Session: 04

Room: Q-150

Moderator: Carlos Ruiz, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|-------------------|--|--|
| 11:00AM → 11:00AM | <i>[Chemistry 51]</i> Morales, Christian UPR-RIO PIEDRAS | <i>Total Synthesis of 6-hexadecynoic Acid</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 14]</i> Castro, Silvette UPR-RIO PIEDRAS | <i>A Greener Approach for Esterification Reactions</i> |
| 11:40AM → 12:00PM | <i>[Chemistry 22]</i> Farré-Rosado, Silvia UPR-HUMACAO | <i>Synthesis of Optically Pure 1-Arylethylamines via the Asymmetric reduction of (E)-O-Benzoyloxime Ethers with Spiroborate Ester derived from Diphenyl Valinol</i> |

12:00MD -> 1:30PM

Lunch Break

Moderator: Rafael Estremera, UPR-Aguadilla

| | | |
|------------------|--|--|
| 1:45PM -> 2:05PM | <i>[Chemistry 53]</i> Munoz, Mirnel UPR-RIO PIEDRAS | <i>Isolation of Cembranes Diterpenes From Tobacco's Leaf (Nicotiana Tabacum) Acquire From Puerto Rico</i> |
| 2:05PM -> 2:25PM | <i>[Chemistry 37]</i> Lafontaine, Ninoshka UPR-RIO PIEDRAS | <i>Synthesis and Characterization of 1,1'-disubstituted-Ferrocenyl Chalcones</i> |
| 2:25PM -> 2:45PM | <i>[Chemistry 38]</i> Lopez, Rosa UPR-RIO PIEDRAS | <i>On the Synthesis of the (5Z,9Z)-18-methyl-5,9-nonadecadienoic Acid from the Caribbean Sponge Pseudospongosorites Suberitoides</i> |
| 2:45PM -> 3:05PM | <i>[Chemistry 63]</i> Padilla, Miriam, UPR-HUMACAO | <i>Enantioselective Reduction of Prochiral α-Halogenated Aryl Ketones for the Synthesis of Chiral Oxetanes</i> |
| 3:05PM ->3:25PM | <i>[Chemistry 85]</i> Sotomayor, Janice PCUPR | <i>Bisnitrile Synthesis with Acetylene as Linker Between Two Aromatic Rings as Precursors of Diamidines with Diverse Biological Functionality</i> |

Session: 05

Room: Q-151

Moderator: Carmen Lecumberry, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Chemistry 2]</i> Adorno, Wilmer, UPR-RIO PIEDRAS | <i>Discrete Hexadecameric Fluorescent Multifunctional Self-Assembled Dendrimers in Aqueous Media</i> |
| 11:20AM -> 11:40AM | <i>[Chemistry 3]</i> Alvarez, Marietta UPR-MAYAGUEZ | <i>Powder flow monitoring for continuous manufacturing operations using Near-infrared Spectroscopy</i> |

11:40AM → 12:00PM *[Chemistry 5]*
Aviles, Melvin
UPR-CAYEY ***Isolation and Identification of Potentially Bioactive Compounds from Momordica charantia L. “Cundeamor”***

12:00MD → 1:30PM

Lunch Break

Moderator: Vilmarí López, UPR-Utuado

1:45PM → 2:05PM *[Chemistry 8]*
Barros, Christine
UPR-MAYAGUEZ ***Analysis of Fluoride in Drinking Water Municipalities in Puerto Rico***

2:05PM → 2:25PM *[Chemistry 17]*
Colón, Lauren
UPR-RIO PIEDRAS ***Thin Layer Chromatography for the Analysis of Food Colorings***

2:25PM → 2:45PM *[Chemistry 19]*
De la Torre - Melendez,
Yarimar
UPR-RIO PIEDRAS ***Electrochemical Study and Characterization of Methylene Blue Intercalation to Single-stranded DNA Attached on a Gold Surface***

2:45PM → 3:05PM *[Chemistry 21]*
Diaz Laboy, Michelle M
UPR-MAYAGUEZ ***Removal of Arsenic (III) from Aqueous Solutions with Calcium Alginate Beads-Based Composites***

3:05PM → 3:25PM *[Chemistry 23]*
Flores, Gabriel
UPR-RIO PIEDRAS ***Chemical Characterization of Cytochrome c Intercalated in Zirconium Phosphate Layers***

Session: 06

Room: Q-152

Moderator: Luis Rivera, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|---|--|
| 11:00AM → 11:20AM | <i>[Chemistry 26]</i> Gomez, Jessica UPR-MAYAGUEZ | <i>Identification of antibacterial properties of Pimenta Racemosa</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 27]</i> Gonzalez, Camille UPR-RIO PIEDRAS | <i>Development of a Peroxidase Biosensor for the Detection of Endocrine Disrupting Chemicals (EDCS)</i> |

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|-------------------|---|--|
| 11:40AM → 12:00PM | <i>[Chemistry 31]</i> Hernandez, Janibeth UPR-CAYEY | <i>Cytotoxic Screening of Tropical Plant: Croton discolor Using Brine Shrimp Lethality Test</i> |
| 12:00MD → 1:30PM | Lunch Break | |
| | Moderator: Arnaldo Carrasquillo, UPR-Mayagüez | |
| 1:45PM → 2:05PM | <i>[Chemistry 32]</i> Hernandez, Bianca J. UIA-BAYAMON | <i>Capillary Electrophoresis as a Tool for the Determination of Detergent Residues in Cleaning Validation</i> |
| 2:05PM → 2:25PM | <i>[Chemistry33]</i> Hernández, Liz Janice, UPR-RIO PIEDRAS | <i>Electrochemical and Spectroscopy Studies of Meldola's Blue</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 40]</i> Márquez, Eduardo A. UPR-MAYAGUEZ | <i>Characterization of Synthesized and Nanostructured Single Crystal Platinum Electrodes</i> |
| 2:45PM → 3:05PM | <i>[Chemistry 43]</i> Marrero Ortiz, Wilmarie UPR-RIO PIEDRAS | <i>Inorganic and Organic Chemical Composition of Atmospheric Particles in the Guánica's Dry Forest</i> |

Session: 07

Room: Q-222

Moderator: Sonia Rivera, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|-------------------|--|--|
| 11:00AM → 11:20AM | <i>[Chemistry 34]</i> Hernández, Kenneth UPR-RIO PIEDRAS | <i>Electrochemical Characterization of Ferrocene Chalcone Derivatives Nafion Studies</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 47]</i> Medina, Edwin UPR-MAYAGUEZ | <i>An Insecticidal Constituents in the Essential Oil of Petiveria alliacea L. by Soxhlet extraction and GC/MS</i> |

| | | |
|-------------------|--|--|
| 11:40AM → 12:00PM | <i>[Chemistry 49]</i> Montañez, Efrain UPR-RIO PIEDRAS | <i>Preparation and Characterization of Unsupported Iridium, and Platinum Oxides Nanoelectrocatalysts for the Oxygen Evolution Reaction by the Rotating Disk Slurry Electrode Method</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| | Moderator: Javier Figueroa, UPR-Aguadilla | |
| 1:45PM → 2:05PM | <i>[Chemistry 52]</i> Munoz, Christian UPR-MAYAGUEZ | <i>Purification of HbI, HbII, HbIII and Cysteine Rich Protein from Lucina Pectinata</i> |
| 2:05PM → 2:25PM | <i>[Chemistry 54]</i> Ñeco, Franjesmar UPR-MAYAGUEZ | <i>Removal of Toluene on Gaseous Phase Using Tire Crumb Rubber</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 55]</i> Negron, Yashira L. UPR-RIO PIEDRAS | <i>Designing a New Generation of Electrochemical Biosensors for the Detection of Pseudomonas aeruginosa</i> |
| 2:45PM -> 3:05PM | <i>[Chemistry 62]</i> Otero La Luz, Liz UPR-MAYAGUEZ | <i>Analysis of Low Content Drug Tablets by Transmission Near Infrared Spectroscopy – Assessing Specificity</i> |
| 3:05PM → 3:25PM | <i>[Chemistry 65]</i> Perez, Marianita UPR-RIO PIEDRAS | <i>Development of a Universal Method to Detect Pharmaceutical Compounds in the Waters of Puerto Rico using Solid Phase Extraction and Gas Chromatography -Mass Spectrometry</i> |

Session: 08

Room: Q-245

Moderator: Javier Figueroa, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|---|--|--|
| 11:00AM -> 11:20AM | <i>[Chemistry 58]</i> Oquendo, Abdiel UPR-MAYAGUEZ | <i>Sorption of Xylene onto Crumb Rubber from Gas Phase</i> |
| 11:20AM -> 11:40AM | <i>[Chemistry 69]</i> Rivera, Alexis UPR-MAYAGUEZ | <i>Characterization of Diesel, Biodiesel, and Blends of Them with Multivariable Analysis Method</i> |
| 11:40AM -> 12:00PM | <i>[Chemistry 72]</i> Rivera-Negrón, Jose R. UPR-MAYAGUEZ | <i>Direct Screening Analysis of PAHs in Atmospheric Particulate Matter with HS/SPME and GC/MS</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| Moderator: Patricia Ortiz Bermúdez, UPR-Mayagüez | | |
| 1:45PM -> 2:05PM | <i>[Chemistry 71]</i> Rivera, Arelys UPR-MAYAGUEZ | <i>Evaluation by Raman, NIR, and, Chemical Imaging Spectroscopy for Determination of the Effect of Shear Stress in Tablets Using Magnesium Stearate</i> |
| 2:05PM -> 2:25PM | <i>[Chemistry 78]</i> Rodriguez, Angel UPR-MAYAGUEZ | <i>Application of SPME-GC/MS for the Characterization of Beer Brands</i> |
| 2:25PM -> 2:45PM | <i>[Chemistry 79]</i> Rodriguez, Alexander UPR-RIO PIEDRAS | <i>A Novel Methodology to Determine the Presence of B-N-methylamino-L-alanine neurotoxin in Natural Waters</i> |
| 2:45PM -> 3:05PM | <i>[Chemistry 90]</i> Vázquez, Soleyl UPR-RIO PIEDRAS | <i>Fluorometric determination of Allura Red in M&M</i> |
| 3:05PM -> 3:25PM | <i>[Chemistry 83]</i> Santiago, Omar UPR-MAYAGUEZ | <i>Petiveria Alliacea: Use of Different Techniques for the Extraction of Essential Oils</i> |

Session: 09

Room: Q-124

Moderator: Marisol Vera, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|---|---|
| 11:00AM -> 11:20AM | <i>[Chemistry 86]</i> Torres, Melany PCUPR | <i>Comparison of Two Methods for Determination of Vitamin C in Oregano Leaves</i> |
| 11:20AM -> 11:40AM | <i>[Chemistry 87]</i> Vargas, Jennifer UPR-MAYAGUEZ | <i>Monitoring of Powder Density of Diffuse Reflectance Near Infrared Spectroscopy</i> |
| 11:40AM -> 12:00PM | <i>[Chemistry 89]</i> Vazquez, Orlando UPR-MAYAGUEZ | <i>Characterization of the Organic Constituents of Momordica charantia Linn. (Cucurbitaceae) Leafs</i> |

12:00MD -> 1:30PM

Lunch Break

Session: 10

Room: Q-251

Moderator: Vilmarí López, UPR-Utuado

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Chemistry 1]</i> Abreu, Doris Giselle UPR-MAYAGUEZ | <i>The VEa4 aptamer and its association to the VEGF protein</i> |
| 11:20AM -> 11:40AM | <i>[Chemistry 4]</i> Andujar, Beatriz UPR-MAYAGUEZ | <i>Study of Sulphemoglobin's stability</i> |
| 11:40AM -> 12:00PM | <i>[Chemistry 6]</i> Báez, Nancy, UIA- BAYAMON | <i>Finding active sites of orphan receptors from homologous structures</i> |

12:00MD -> 1:30PM

Lunch Break

Moderator: Alberto Santana, UPR-Mayagüez

| | | |
|------------------|---|---|
| 1:45PM -> 2:05PM | <i>[Chemistry 11]</i> Berrios, Paola UPR-MAYAGUEZ | <i>Exposure of Saccharomyces cerevisiae to a Limited-Nutrition Environment for the</i> |
|------------------|---|---|

Expression of FAP1

| | | |
|-----------------|---|--|
| 2:05PM → 2:25PM | <i>[Chemistry 35]</i> Jaiman, Melissa PCUPR | <i>The Identification of Cytochrome P450 2C19 Isoenzyme in CHO Cells Treated With Oregano Leaf Extracts</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 9]</i> Benejam, Jorge A. UPR-MAYAGUEZ | <i>Design of new estrogen analogs using Quantitative Structure Activity Relationship models</i> |
| 2:45PM → 3:05PM | <i>[Chemistry 28]</i> Gonzalez, Pedro UPR-CAYEY | <i>Chemical Analyses and Biological Evaluation of the Stem of the Endemic Plant Simarouba Tulae</i> |
| 3:05PM → 3:25PM | <i>[Chemistry 10]</i> Berrios, Grace UPR-MAYAGUEZ | <i>Myoglobin encapsulation in Sol- gel</i> |

Session: 11

Room: Q-344

Moderator: Elsie Parés, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|---|---|---|
| 11:00AM → 11:20AM | <i>[Chemistry 39]</i> Luciano, Elsa UPR-CAYEY | <i>Chemical Analysis and Biological Evaluation of Endemic Simarouba tulae Leaves</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 82]</i> Santiago, Jorge UPR-MAYAGUEZ | <i>Two-Dimensional Correlation Analysis of the Chlamydomonas Centrin-Melittin Complex By Fourier Transform Infrared Spectroscopy</i> |
| 11:40AM → 12:00PM | <i>[Chemistry 44]</i> Martinez, Giselle UPR-MAYAGUEZ | <i>SAA2 Interactions with Proteins Expressed in Activated Macrophages</i> |
| 12:00MD → 1:30PM | Lunch Break | |
| Moderator: Robert Ríos, UPR-Mayagüez | | |
| 1:45PM → 2:05PM | <i>[Chemistry 25]</i> Gil de Rubio, Rafael UPR-MAYAGUEZ | <i>The study of the promoter region of the human gene NF- IL6 in the cell line THP-1</i> |

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|-----------------|---|---|
| 2:05PM → 2:25PM | <i>[Chemistry 41]</i> Marrero, Ulises UPR-MAYAGUEZ | <i>Egg-white lysozyme crystallization by Equilibrium Techniques</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 50]</i> Monteagudo, Alina UPR-RIO PIEDRAS | <i>Covalent Immobilization of Carbonic Anhydrase into Mesoporous Silica Particles for Drug Delivery Applications</i> |
| 2:45PM → 3:05PM | <i>[Chemistry 59]</i> Ortiz, Isamar UPR-CAYEY | <i>Thounia Striata: Study of the Chemical Composition and Cytotoxic Properties using the Artemia Salina Bioassay</i> |
| 3:05PM → 3:25PM | <i>[Chemistry 80]</i> Ruiz, Doribeth UPR-AGUADILLA | <i>Exploring the Structure and Function of Rhbi from Lucina Pectinata</i> |

Session: 12

Room: Q-350

Moderator: Brenda Ramos, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|-------------------|--|--|
| 11:00AM → 11:20AM | <i>[Chemistry 66]</i> Pietri-Vázquez, Frances UPR-MAYAGUEZ | <i>Catalase from Bovine Liver in the Sulf Scenario</i> |
| 11:20AM → 11:40AM | <i>[Chemistry 64]</i> Perez, Sol V. UPR-MAYAGUEZ | <i>The "Hormone Replacement Therapy" Effects of Black Cohosh</i> |
| 11:40AM → 12:00PM | <i>[Chemistry 68]</i> Repollet, Christian PCUPR | <i>Identifying Cytochrome P450 CYP3A4 Activity in CHO Cells Treated with Choline Bitartrate</i> |
| 12:00MD → 1:30PM | Lunch Break | |
| | Moderator: Elba Reyes, UPR-Cayey | |
| 1:45PM → 2:05PM | <i>[Chemistry 67]</i> Quinones, Tatiana UPR-MAYAGUEZ | <i>Chemical Reaction Between Mercaptans with Mb: Acidity vs. Steric Hindrance Complex Formation</i> |

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|-----------------|---|---|
| 2:05PM → 2:25PM | <i>[Chemistry 70]</i> Rivera, Ángel UPR-CAYEY | <i>Biological Evaluation of the Tropical Plant Canella Winterana</i> |
| 2:25PM → 2:45PM | <i>[Chemistry 91]</i> Vélez, Christian PCUPR | <i>Cytochrome P450 Isoenzyme Activity in Chinese Hamster ovarian Cells Treated with N.O. Xplode and NaNO Vapor Solutions</i> |
| 2:45PM → 3:05PM | <i>[Chemistry 61]</i> Ortiz, Nerymar UPR-MAYAGUEZ | <i>Role of Histidine in Sulfheme Complex</i> |
| 3:05PM → 3:25PM | <i>[Chemistry 75]</i> Rodriguez, Nashicel UPR-CAYEY | <i>Identification of “Maguey” Roots Infusion and Crude Extracts with Potential antidiabetes Bioactive Compounds</i> |
| 3:25PM → 3:45PM | <i>[Chemistry 18]</i> Cruz, Leishla UPR-MAYAGUEZ | <i>Development of a Novel Biosensor Using Hb I of Lucina Pectinata and its Characterization by Electroanalytical Technique</i> |

Computer Science

Session: 01

Room: F-319

Moderator: Elvia Camayd

| Time | Speaker and affiliation | Title |
|---|---|--|
| 11:00AM -> 11:20AM | [Computer Sciences 01] Carrillo, Angel, UPR-RIO PIEDRAS | <i>Development of a LabVIEW Interface for a Field Emission Measurement Setup</i> |
| 11:20AM -> 11:40AM | [Computer Science 04] Figueroa, Nicolas III, TURABO UNIV | <i>Intelligent Object Recognition System</i> |
| 11:40AM -> 12:00PM | [Computer Sciences 02] Cruz, Clara, UPR-RIO PIEDRAS | <i>Cómo crear una Infraestructura de Datos Geoespaciales</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| Moderator: Ivelisse Rubio, UPR-Rio Piedras | | |
| 1:45PM -> 2:05PM | [Computer Sciences 03] Farrington, Jose J., UPR-RIO PIEDRAS | <i>A Special Case of Reduced Linear Modular Systems</i> |
| 2:05PM -> 2:25PM | [Computer Science 05] Gonzalez, Amilcar, UPR-MAYAGUEZ | <i>Hyperspectral Image Analysis for Target Detection using CUDA</i> |
| 2:25PM -> 2:45PM | [Computer Science 06] Martínez, Richard, UPR-RIO PIEDRAS | <i>Software APKG, De Algebra de Productos Kronecker a Grafos</i> |
| 2:45PM -> 3:05PM | [Computer Science 08] Rodríguez, Antonio, TURABO UNIV | <i>Development of a Computer Mobile Data Management, a XML Approach</i> |
| 3:05PM -> 3:25PM | [Computer Science 07] Miranda, Luis Omar, UPR-RIO PIEDRAS | <i>Optimized Strategies for the Mastermind Game</i> |

Education

Session: 01

Room: S-303

Moderator: José M. Huerta Jiménez

| Time | Speaker and affiliation | Title |
|-------------------|---|---|
| 11:20AM → 11:40AM | <i>[Education 01]</i> Antuna, Wilnelia, UPR-RIO PIEDRAS | <i>Leaf litter decomposition in tropical and temperate rainforests: teaching climate-driven ecosystem processes outside the science classroom.</i> |
| 11:40AM → 12:00PM | <i>[Education 02]</i> Saez, Jameil, UPR-RIO PIEDRAS | <i>Wildlife Protection Through an Education Field Science Program</i> |

Engineering

Session: 01

Room: S-303

Moderator: María Martínez Inesta, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-----------------|---|--|
| 1:45PM → 2:05PM | <i>[Engineering 42]</i> Torres, Jaime, UPR-MAYAGUEZ | <i>WIMS Cochlear Implant: Support to Test Electrode Array</i> |
| 2:05PM → 2:25PM | <i>[Engineering 15]</i> Espinosa, Javier, UIA-BAYAMON | <i>Design of the Grid Portal</i> |
| 2:25PM → 2:45PM | <i>[Engineering 05]</i> Borges, Raymond, TURABO UNIV | <i>Basic Human Computer Interface for the Blind</i> |

2:45PM -> 3:05PM

[Engineering 03]
Ayala, Abner,
UPR-MAYAGUEZ

***Local Service Network using
Wireless Mesh Network***

Session: 02

Room: S-305

Moderator: Marcelo Suárez, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|---|---|
| 11:00AM -> 11:20AM | <i>[Engineering 01]</i> Alvarez, Steven, UPR-MAYAGUEZ | <i>Composite Nanoparticles for Magnetically Activated Drug Delivery</i> |
| 11:20AM -> 11:40AM | <i>[Engineering 08]</i> De Jesus, Rigoberto, UPR-MAYAGUEZ | <i>Characterization of the Saccharification Capabilities of Xylanase from Trichoderma viride, to be used in the Design of Reactors to Produce Bio- Ethanol</i> |
| 11:40AM -> 12:00PM | <i>[Engineering 04]</i> Baez, Carlos, UPR-MAYAGUEZ | <i>Particle-Loaded Biodegradable Polymers for Pharmaceutical and Structural Applications</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| | Moderator: Felipe Acosta, UPR-Mayagüez | |
| 1:45PM -> 2:05PM | <i>[Engineering 16]</i> Fernandez-Rivera, Ernesto, UPR-MAYAGUEZ | <i>Synthesis and Characterization of Au-Ps Janus Particles: Self- Propelled Micro Heaters</i> |
| 2:05PM -> 2:25PM | <i>[Engineering 19]</i> Gonzalez, Richard, UPR-MAYAGUEZ | <i>Hydrocarbon Product from Syngas Reaction with Zeolyte and Copper Zinc Catalyst</i> |
| 2:25PM -> 2:45PM | <i>[Engineering 23]</i> Lugo, Nichole, UPR-MAYAGUEZ | <i>Synthesis of Nanowires by Solid-State Ion Exchange and Solid Reduction</i> |

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|------------------|--|--|
| 2:45PM -> 3:05PM | <i>[Engineering 13]</i> Encarnacion, Luis G., UPR-MAYAGUEZ | <i>Conversion of Cellulose Under Heterogeneous Catalysis</i> |
| 3:05PM -> 3:25PM | <i>[Engineering 14]</i> Espinal, Ana, UIA-BAYAMON | <i>X-ray and Radiation Sources Detection with a Low Cost Multi Channel Analyzer</i> |

Session: 03

Room: II-201

Moderator: Oscar Perales, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Engineering 25]</i> Martin, Julio, UPR-MAYAGUEZ | <i>Fabrication of Functionally Graded Al-Si-B for Hybrid Composites</i> |
| 11:20AM -> 11:40AM | <i>[Engineering 39]</i> Rosso, Diego, UPR-MAYAGUEZ | <i>Brownian Dynamics Simulations of Small-Amplitude Oscillatory Shear Magnetorheology of Ferrofluids</i> |
| 11:40AM -> 12:00PM | <i>[Engineering 41]</i> Sepulveda, Melyorise, UPR-MAYAGUEZ | <i>Ultrasound Fundamentals for Microalgae Processing</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| | Moderator: Arsenio Cáceres, UPR-Mayagüez | |
| 1:45PM -> 2:05PM | <i>[Engineering 07]</i> Carrasco, Rodrigo, UPR-MAYAGUEZ | <i>Nitride Formation by Plasma- Alloy Reaction of Al-B Base Alloy</i> |
| 2:05PM -> 2:25PM | <i>[Engineering 18]</i> Garcia, Gabriel, UPR-MAYAGUEZ | <i>Experimental Study of Levee Breach Erosion</i> |

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|-----------------|---|--|
| 2:25PM → 2:45PM | <i>[Engineering 22]</i> Lopez, Neshma, UPR-MAYAGUEZ | <i>Synthesis of NiFe₂O₄ Nanoparticles from NiO and α-Fe₂O₃ Solid Precursors Via High Impact Ball Milling at Different Stoichiometric Weight Percentage Ratios and Comparison Using Their Magnetic Properties Through Mössbauer Spectroscopy</i> |
| 2:45PM → 3:05PM | <i>[Engineering 28]</i> Montes, Gina, UPR-MAYAGUEZ | <i>Synthesis and Magnetic Properties of Pure and Cobalt-Doped Bismuth Ferrite Nanoparticles</i> |
| 3:05PM → 3:25PM | <i>[Engineering 38]</i> Rodriguez, Christie, UPR-MAYAGUEZ | <i>Synthesis and Functionalization of Nanoparticles for Magnetic Targeting and Drug Delivery</i> |

Session: 04

Room: II-202

Moderator: Francisco Maldonado, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Engineering 02]</i> Alvarez Lamela, Nestor, UPR-MAYAGUEZ | <i>Vibration Effects on the Fabrication of Structural Al-Zn-B Composites</i> |
| 11:20AM → 11:40AM | <i>[Engineering 06]</i> Cabanas, Cristal, UPR-MAYAGUEZ | <i>Characterization of Al-Mg-Zn-B and Al-Zn-B Composites</i> |
| 11:40AM → 12:00PM | <i>[Engineering 09]</i> De Jesus, Xavier, UPR-MAYAGUEZ | <i>On the Thermomechanical Response of Al-Cu Mg Composite Reinforced with Diboride Particles</i> |
| 12:00MD -> 1:30PM | | Lunch Break |

Moderator: Aldo Acevedo, UPR-Mayagüez

| | | |
|-----------------|---|--|
| 1:45PM → 2:05PM | <i>[Engineering 12]</i> Diaz-Zayas, Luis Raul, UPR-MAYAGUEZ | <i>PACE: Global Vehicle Collaboration Project In-Wheel Vehicle</i> |
| 2:05PM → 2:25PM | <i>[Engineering 27]</i> Miranda, Aideliz, UPR-MAYAGUEZ | <i>Manufacturing of Al Based Targets for Deposition of Nanocomposites</i> |
| 2:25PM → 2:45PM | <i>[Engineering 31]</i> Munoz, Lauren, UPR-MAYAGUEZ | <i>Processing of AIB2-Reinforced Al-Zn Alloys</i> |
| 2:45PM → 3:05PM | <i>[Engineering 34]</i> Rivera, Phillip, UPR-MAYAGUEZ | <i>A Portable and Wireless DNA Biosensor</i> |
| 3:05PM → 3:25PM | <i>[Engineering 37]</i> Rodriguez, Rogie, UPR-MAYAGUEZ | <i>Passive Wireless Temperature Sensor for Rotating Components in Harsh Environment</i> |

Session: 05

Room: II-203

Moderator: Aidcer L. Vidot, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|---|--|
| 11:00AM → 11:20AM | <i>[Engineering 40]</i> Sanchez, Gabriel, UPR-MAYAGUEZ | <i>Development of a Road Grade Measurement System by Combining GPS and Pitch Sensing</i> |
| 11:20AM → 11:40AM | <i>[Engineering 43]</i> Torres, Jose, TURABO UNIV | <i>Design of a Water Heating System to be Implemented in a Fish Farm in Puerto Rico</i> |
| 11:40AM → 12:00PM | <i>[Engineering 44]</i> Uribe, Angela Maria, Colorado LSAMP | <i>Effectiveness of Novel Antimicrobial Coatings on the Microbial Load and Performance of Large</i> |
| 12:00MD → 1:30PM | | Lunch Break |

Moderator: Mauricio Cabrera, UPR-Mayagüez

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|-----------------|--|--|
| 1:45PM → 2:05PM | <i>[Engineering 10]</i> Díaz, Felix, UPR-MAYAGUEZ; | <i>Statistical Analysis of Microarrays</i> |
| 2:05PM → 2:25PM | <i>[Engineering 11]</i> Díaz, Paloma, UPR-MAYAGUEZ | <i>A Discrete Event Simulation of an Automated Storage Retrieval System with Two Non-passing Lifts and how it will help solve future problems</i> |
| 2:25PM → 2:45PM | <i>[Engineering 20]</i> Hernandez, Zaimara, UPR-MAYAGUEZ | <i>Statistical Characterization and Optimization of Magnetic Properties of Cobalt-Zinc Ferrite doped with Gadolinium</i> |
| 2:45PM → 3:05PM | <i>[Engineering 21]</i> Laboy, Maria E, UPR-MAYAGUEZ | <i>Optimizing an Automated Storage/Retrieval System with Two Non-passing Lifts.</i> |
| 3:05PM → 3:25PM | <i>[Engineering 24]</i> Marrero, Oscar Antonio, UPR-MAYAGUEZ | <i>Development of Innovative Learning Tools for Fundamentals Physics and Engineering Concepts</i> |

Session: 06

Room: II-204

Moderator: Eduardo Ortiz, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|---|---|
| 11:00AM → 11:20AM | <i>[Engineering 17]</i> García, Sergio, UPR-MAYAGUEZ | <i>Research on Smart-Materials, complex Algorithms, and Game Theory applied to Nonholonomic Robots</i> |
| 11:20AM → 11:40AM | <i>[Engineering 29]</i> Morales, Alberto, TURABO UNIV | <i>Electronic Domino Game</i> |
| 11:40AM → 12:00PM | <i>[Engineering 36]</i> Rivera, Joel, TURABO UNIV | <i>Electrical Design for Commercial Building using Renewable Energy</i> |

12:00MD -> 1:30PM

Lunch Break

Moderator: Isidoro Couvertier, UPR-Mayagüez

1:45PM -> 2:05PM

[Engineering 26]
**Martinez, Yarymar,
UPR-MAYAGUEZ**

***Study of Al-Sn Alloys Covered
by Arc-Melted Al-Si for Bearing
Applications***

2:05PM -> 2:25PM

[Engineering 30]
**Morel, Eliezer,
TURABO UNIV**

***Operations Analysis/ IE for a
Public Healthcare Facility***

2:25PM -> 2:45PM

[Engineering 32]
**Pérez, Gabriel,
UPR-MAYAGUEZ**

***Improving Engineering
Education with Serious Video
Games***

2:45PM -> 3:05PM

[Engineering 33]
**Plaza, Nayomi,
UPR-MAYAGUEZ**

***Vibration Effects on the
Fabrication of Structural Al-Mg-
Zn-B Composites***

3:05PM -> 3:25PM

[Engineering 35]
**Rivera, Adamaris,
UPR-MAYAGUEZ**

***Simultaneous Consideration of
Scalable-Reconfigurable
Manufacturing System
Investment and Operating Costs***

Environmental Sciences

Session: 01

Room: SH-101

Moderator: Alberto Figueroa

| Time | Speaker and affiliation | Title |
|--------------------|---|--|
| 11:00AM -> 11:20AM | <i>[Enviromental Sciences 01]</i> Alicea, Vivianette, UPR-ARECIBO | <i>Chromium speciation by the aquatic plant Nasturtium officinale</i> |

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|-------------------|--|---|
| 11:20AM → 11:40AM | <i>[Environmental Sciences 02]</i> Almodóvar, Laura, UPR-MAYAGUEZ | <i>Sediment Dynamics at the Jug Bay Wetland Sacnctuary, Maryland</i> |
| 11:40AM → 12:00PM | <i>[Environmental Sciences 03]</i> Arguello, Gwendolyn, UPR-RIO PIEDRAS | <i>Survival of Enterococcus faecalis-infecting phages (enterophages)-in fresh and drinking waters and their potential as indicators of human fecal contamination</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| | Moderator: Alberto Figueroa | |
| 1:45PM → 2:05PM | <i>[Environmental Sciences 04]</i> Armina, Albersy, UPR-ARECIBO | <i>Tolerance Studies of the Rhizobacteria Isolated from the Aquatic Plant Ceratophyllum demersum in Culture Media with Heavy Metals</i> |
| 2:05PM → 2:25PM | <i>[Environmental Sciences 05]</i> Betancourt, Clarisse, UPR-RIO PIEDRAS | <i>Land Use Change Assessment In Northeastern Puerto Rico From Years 2000 And 2007, Using Digitized Aerial Photos</i> |
| 2:25PM → 2:45PM | <i>[Environmental Sciences 10]</i> Crespo, Ivelisse, UPR-AGUADILLA | <i>Bird Species Richness and Abundance in Guajataca Forest, Northwestern Puerto Rico</i> |
| 2:45PM -> 3:05PM | <i>[Environmental Sciences 07]</i> Cardona, Jaime, PCUPR | <i>Population Growth of Cyrtophora Citrícola in the Dry Forest of Guánica</i> |
| 3:05PM → 3:25PM | <i>[Environmental Sciences 08]</i> Centeno, Diana C., UPR-HUMACAO | <i>Comparison of Arecibo's Composition, Densities and Temperatures of the Ionosphere, with the IRI Models</i> |

Session: 02

Room: SH-102

Moderator: Rafael Jusino Atresino, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Environmental Sciences 09]</i> Clancey, Marie, PCUPR | <i>Population Growth of Cyrtophora citricola in the Dry Forest of Guánica</i> |
| 11:20AM -> 11:40AM | <i>[Environmental Sciences 06]</i> Calderon, Ariana I., UPR-ARECIBO | <i>Heavy Metal Concentrations in Callinectes sp. from the Caño Tiburones Wetland</i> |
| 11:40AM -> 12:00PM | <i>[Environmental Sciences 12]</i> Deliz, Aurivette, UPR-RIO PIEDRAS | <i>Does the African dust affect the precipitation in Puerto Rico?</i> |

12:00MD -> 1:30PM

Lunch Break

Moderator: Rafael Jusino Atresino, UPR-Aguadilla

| | | |
|------------------|---|--|
| 1:45PM -> 2:05PM | <i>[Environmental Sciences 11]</i> De La Rosa, Anthony, UPR-AGUADILLA | <i>Lights out, savings in” Energy usage improvement, through a Basic Lighting and Air Conditioning Control System</i> |
| 2:05PM -> 2:25PM | <i>[Environmental Sciences 13]</i> Erazo, Angélica, UPR-RIO PIEDRAS | <i>Improving Slow Sand Filters (SSF) for Communities with Low Incomes and Limited Water Access</i> |
| 2:25PM -> 2:45PM | <i>[Environmental Sciences 14]</i> Gomez, Ivonne, TURABO UNIV | <i>Prevalence of Dissimilatory Arsenate-Reducing Prokaryotes in Nature</i> |
| 2:45PM -> 3:05PM | <i>[Environmental Sciences 15]</i> Gonzalez, Jeannette, UIA-BAYAMON | <i>Persistent Organic Pollutants (POPs) in Puerto Rico: Passive Sampling Network</i> |

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| 2:25PM → 2:45PM | <i>[Environmental Sciences 21]</i> Melendez, Keyra J., UPR-RIO PIEDRAS | <i>Ecology of a Dioecious Tree in the Luquillo Forest Dynamics Plot</i> |
| 2:45PM → 3:05PM | <i>[Environmental Sciences 22]</i> Miranda, Christine, UPR-MAYAGUEZ | <i>Microalgae Derived C10+BioFuels</i> |
| 3:05PM → 3:25PM | <i>[Environmental Sciences 23]</i> Negron, Josue E., UPR-HUMACAO | <i>Breeding phenology of Eleutherodactylus juanariveroi</i> |

Session: 04

Room: SH-104

Moderator: Rafael Canales

| Time | Speaker and affiliation | Title |
|-------------------------|--|--|
| 11:00AM → 11:20AM | <i>[Environmental Sciences 24]</i> Ramos, Paola, UPR-RIO PIEDRAS | <i>History of Water Development and Human Population Change in the Río Grande de Arecibo Watershed</i> |
| 11:20AM → 11:40AM | <i>[Environmental Sciences 25]</i> Rivera, Deborah, UIA-BAYAMON | <i>Development of a Hyper- Accumulator Plant Introducing PPK Gene</i> |
| 11:40AM → 12:00PM | <i>[Environmental Sciences 26]</i> Rivera, Victor, UPR-RIO PIEDRAS | <i>The Effect of Land Cover on Water Quality</i> |
| 12:00MD → 1:30PM | Lunch Break | |
| Moderator: _____ | | |
| 1:45PM → 2:05PM | <i>[Environmental Sciences 27]</i> Rodriguez, Brenda, TURABO UNIV | <i>Diversity and Abundance of Sulfate Reducing Bacteria Among Microbial Mats on Two Hypersaline Lagoons</i> |

at Cabo Rojo, Puerto Rico

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|-----------------|--|---|
| 2:05PM → 2:25PM | <i>[Environmental Sciences 28]</i> Román, Laura, UIA-BAYAMON | <i>Phytoremediation of Mercury by Chloroplast Transgenic Tobacco Plants</i> |
| 2:25PM → 2:45PM | <i>[Environmental Sciences 29]</i> Ruiz, Jean Frances, UPR-RIO PIEDRAS | <i>Application of Microbial Source Tracking Assays in a Tropical Watershed</i> |
| 2:45PM → 3:05PM | <i>[Environmental Sciences 30]</i> Sandoval, Jean, UIA-BAYAMON | <i>Metabolic rates, Nutritional State, and Thermoregulatory Behavior of <i>Molossus molossus</i> (Molossidae) and <i>Brachyphylla cavernarum</i> (Phyllostomidae) in Puerto Rico</i> |
| 3:05PM → 3:25PM | <i>[Environmental Sciences 31]</i> Tosado, Eduardo L., UPR-MAYAGUEZ | <i>Halophilic Microbial Diversity in Black Mangrove (<i>Avicennia germinans</i>)</i> |

Geosciences

Session: 01

Room: S-309

Moderator: Linda Vélez

| Time | Speaker and affiliation | Title |
|-----------------|--|---|
| 3:05PM → 3:25PM | <i>[Geosciences 01]</i> Adames, Angel F., UPR-MAYAGUEZ | <i>Rainfall Climatology Study of Puerto Rico</i> |

Life Sciences

Session: 01

Room: S-203

Moderator: Yolanda Serrano

| Time | Speaker and affiliation | Title |
|--------------------|---|--|
| 11:00AM -> 11:20AM | <i>[Life Sciences 01]</i> Acevedo, Suehelay, UPR-MAYAGUEZ | <i>Frequency of the 32 bp deletion in the CCR5 gene in the municipality of Aguada, Puerto Rico</i> |
| 11:20AM -> 11:40AM | <i>[Life Sciences 04]</i> Almodovar, Natalia, UPR-RIO PIEDRAS | <i>Functional Role of the Human Interleukin-3 Adenosine/Uridine-Rich Region and its trans-acting factors in Post-Transcriptional Control of Gene Expression</i> |
| 11:40AM -> 12:00PM | <i>[Life Sciences 06]</i> Ares, Samuel, UPR-MAYAGUEZ | <i>Functional Analysis of Cassava β-Cyanoalanine Synthase Gene in Arabidopsis Mutants</i> |
| 12:00MD -> 1:30PM | | Lunch Break |
| | Moderator: _____ | |
| 1:45PM -> 2:05PM | <i>[Life Sciences 12]</i> Colon, Jennifer, UIA-METROPOLITANO | <i>Plasmid DNA Profile of Bacteria from the Environment</i> |
| 2:05PM -> 2:25PM | <i>[Life Sciences 27]</i> Grajales, José, UPR-RIO PIEDRAS | <i>Characterization of Fluoxetine as an Open Channel Blocker on δS268F, a Slow Channel Congenital Miasthenic Syndrome Mouse Model</i> |
| 2:25PM -> 2:45PM | <i>[Life Sciences 25]</i> Gonzalez, Antonio, UPR-MAYAGUEZ | <i>Extraction, genomic collection and database development of DNA from Puerto Rico Zoo</i> |

2:45PM -> 3:05PM *[Life Sciences 15]*
Cruz, Ambar,
UPR-RIO PIEDRAS ***DNA Recombination, Remote
Memory and Hippocampal
Synaptic Plasticity***

3:05PM -> 3:25PM *[Life Sciences 31]*
Hernandez, Diego,
UPR-MAYAGUEZ ***Analysis of Mitochondrial DNA
Variation in Free-living
Populations of Erythrocebus
Patas from Puerto Rico***

Session: 02

Room: S-204

Moderator: Matías Cafaro, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Life Sciences 02]</i> Alers, Nianest, UPR-AGUADILLA | <i>Identifying the presence of Haloviruses in the salterns of Guanica, Puerto Rico</i> |
| 11:20AM -> 11:40AM | <i>[Life Sciences 03]</i> Alicea, Alessandra, UPR-RIO PIEDRAS | <i>Evaluation of the best tissue source for molecular detection of the pathogenic chytrid fungus in amphibian skin.</i> |
| 11:40AM -> 12:00PM | <i>[Life Sciences 46]</i> Minaya, Noeli, UNIV DEL SAGRADO CORAZON | <i>Propiedades antimicrobianas de la mucina de caracoles en Puerto Rico</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| | Moderator: Matías Cafaro, UPR-Mayagüez | |
| 1:45PM -> 2:05PM | <i>[Life Sciences 05]</i> Alonso-Rodriguez, Aura M., UPR-RIO PIEDRAS | <i>Comunidad de hormigas de hojarasca estructurada por luz y profundidad de hojarasca en un bosque tropical lluvioso</i> |
| 2:05PM -> 2:25PM | <i>[Life Sciences 16]</i> Cruz, Jean Carlos, UPR-MAYAGUEZ | <i>Screening for Urease Activity in Metagenomic Libraries from Tropical and Dry Forest in Puerto Rico</i> |
| 2:25PM -> 2:45PM | <i>[Life Sciences 17]</i> Cruz, Stephanie, UPR-BAYAMON | <i>Unexpected generalized pollination system in a tropical island herb, Heliconia caribaea</i> |

2:45PM -> 3:05PM *[Life Sciences 07]*
**Bernard Flores, María
Alejandra,
UPR-CAYEY** ***Fungi In A Library: A Survey At
UPR-Cayey***

3:05PM -> 3:25PM *[Life Sciences 36]*
**Lastra Diaz, Lourdes,
UPR-RIO PIEDRAS** ***Effect of Megathyrus Maximus,
Exotic Grass, on Soil Mites in
Mona Island Reserve***

Session: 03

Room: S-205

Moderator: Josué Malavé Orengo, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|--------------------|--|--|
| 11:00AM -> 11:20AM | <i>[Life Sciences 18]</i> Cruz, Stephanie, UPR-BAYAMON | <i>Features of Fruits Consumed by Introduced Primates to the Southwest of Puerto Rico: I. Fruit and Seed Sizes</i> |
| 11:20AM -> 11:40AM | <i>[Life Sciences 09]</i> Caicedo, Laura, UPR- RIO PIEDRAS | <i>How can we find Drone Congregation Areas of Apis mellifera?</i> |
| 11:40AM -> 12:00PM | <i>[Life Sciences 11]</i> Claudio, Jennifer, PCUPR | <i>Creation of a New Butterfly Garden</i> |
| 12:00MD -> 1:30PM | | Lunch Break |
| | Moderator: Luis Piñero, UPR-Mayagüez | |
| 1:45PM -> 2:05PM | <i>[Life Sciences 19]</i> Cruz, Jose, UPR-MAYAGUEZ | <i>Unraveling Activities from Metagenomic Libraries Generated from Dry and Rain Forest Soils in Puerto Rico Using Functional Approaches</i> |
| 2:05PM -> 2:25PM | <i>[Life Sciences 38]</i> Lopez, Luis, UPR-RIO PIEDRAS | <i>Cómo los Niveles de E.coli Cambian Temporalmente a lo Largo del Río Piedras?</i> |

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| 2:25PM → 2:45PM | <i>[Life Sciences 43]</i> Mejia, Daniel, UIA-METROPOLITANO | <i>Study of the Microbial and Physical-Chemical Water Quality at Tortuguero Lagoon, Vega Baja P.R.</i> |
| 2:45PM → 3:05PM | <i>[Life Sciences 54]</i> Olmo-Fontánez, Angélica M., UPR-MAYAGUEZ | <i>Cyanobacterias and Tropical Montane Bryophytes: How To Produce Pure Colonies for Identification</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 60]</i> Ozuna, Hazel, UMET | <i>Validation of a Fluorescent Probe for Detection of an Oral Bacterium in Environmental Sites</i> |

Session: 04

Room: S-206

Moderator: Luis Ríos, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|--|--|
| 11:00AM → 11:20AM | <i>[Life Sciences 22]</i> De La Rosa, Veronica, UPR-HUMACAO | <i>On the Possible Carcinogenic Effects of Cosmic Rays on Airplane Travel</i> |
| 11:20AM → 11:40AM | <i>[Life Sciences 24]</i> Falcon, Wilfredo, UPR-HUMACAO | <i>Population Growth Rates and Distribution of the Non-Native Brotogeris Versicolurus: Puerto Rican Passport Granted?</i> |
| 11:40AM → 12:00PM | <i>[Life Sciences 26]</i> González Juarbe, Norberto, UPR-ARECIBO | <i>Planetary Habitability: Growth Temperatures and Global Distribution of Primary Producers</i> |
| 12:00MD → 1:30PM | | Lunch Break |

Moderator: Luis Ríos, UPR-Mayagüez

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|-----------------|--|---|
| 1:45PM → 2:05PM | <i>[Life Sciences 08]</i> Bracero, Luis, PCUPR | <i>Protocol Standarization to Assess Metabolism in Mammalian Tissue Culture Cells</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 28]</i> Gutierrez, Elizabeth, UPR-MAYAGUEZ | <i>Pathway to a Synapse: Cell Adhesion Molecules Function at the Onset of Synaptogenesis</i> |

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|-----------------|---|---|
| 2:25PM → 2:45PM | <i>[Life Sciences 49]</i> Moreno, Emanuel C, UNE | <i>Pluripotency Markers and Neural differentiation of Inducible Pluripotent Stem Cell and Human Embryonic Stem Cells.</i> |
| 2:45PM → 3:05PM | <i>[Life Sciences 65]</i> Reyes, Jeyshka, UIA-ARECIBO | <i>Effects of Thalidomide in the Proliferation and Secretion of Vascular Endothelial Growth Factor on Human Multiple Myeloma RPMI-8226 Cell Line</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 90]</i> Velez, Wilson, UIA-ARECIBO | <i>Establishment of an “in vitro” angiogenesis model: Evaluation of Cytokines and Growth Factor Released by HPAF II and RPMI 8226 cancer cells</i> |

Session: 05

Room: S-207

Moderator: Ricardo Burgos, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|--|---|
| 11:00AM → 11:20AM | <i>[Life Sciences 20]</i> De Jesús, Héctor J., UPR-RIO PIEDRAS | <i>Proteome Dynamics Associated to the Pathobiology of Alzheimer’s Disease</i> |
| 11:20AM → 11:40AM | <i>[Life Sciences 30]</i> Hernandez, Mayte, UPR-RIO PIEDRAS | <i>The Role of Neurotensin During Reinstatement of Cocaine Seeking Behavior</i> |
| 11:40AM → 12:00PM | <i>[Life Sciences 33]</i> Isidro, Raymond, PCUPR | <i>Neurokinin-1 Receptor (NK-1R), Phosphorylated Epidermal Growth Factor Receptor (pEGFR) and Cyclooxygenase-2 (Cox-2) are Up-regulated in Patients with Colonic Dysplasia</i> |
| 12:00MD → 1:30PM | | Lunch Break |

Moderator: Esbal Jiménez

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|-----------------|--|---|
| 1:45PM → 2:05PM | <i>[Life Sciences 21]</i> De Jesus, Christina, UPR-HUMACAO | <i>Characteristics of Breeding Sites used by Eleutherodactylus Juanariveroi</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 29]</i> Hamid, Laila, UIA-METROPOLITANO | <i>Medicinal Plants of Puerto Rico</i> |
| 2:25PM → 2:45PM | <i>[Life Sciences 34]</i> Jaiman, Rosa, PCUPR | <i>Molecular Characterization of Dryas iulia iulia</i> |
| 2:45PM → 3:05PM | <i>[Life Sciences 42]</i> Marrero, Wilnery, UPR-CAYEY | <i>General Plant Inventory and Survey of “Verdes Sombras” Park located at UPR-Cayey</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 50]</i> Moreno, Lorna, UPR-RIO PIEDRAS | <i>Effect of invasive grass, Megathyrsus maximus, on Soil and Plant Communities of Mona Island Reserve</i> |

Session: 06

Room: S-227

Moderator: Irimar Torres, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|--|--|
| 11:00AM → 11:20AM | <i>[Life Sciences 32]</i> Irizarry, Raisa, UIA-METROPOLITANO | <i>Plantas medicinales de Puerto Rico</i> |
| 11:20AM → 11:40AM | <i>[Life Sciences 64]</i> Recart, Wilnelia, UPR-RIO PIEDRAS | <i>Naturalized exotics affecting native plants in Puerto Rico: the weevils and orchid interaction</i> |
| 11:40AM → 12:00PM | <i>[Life Sciences 81]</i> Santiago, Louis, UPR-RIO PIEDRAS | <i>Captive Breeding of Three Endangered Eleutherodactylus from Puerto Rico (Anura: Eleutherodactylidae)</i> |
| 12:00MD → 1:30PM | | Lunch Break |

Moderator: Héctor Carlo

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|-----------------|--|---|
| 1:45PM → 2:05PM | <i>[Life Sciences 35]</i> Landrau, Solymar, UNE | <i>Determination of Pre-Existing Anxiety Differences Between C57BL/6 N and J Mice to Investigate Fear Extinction Learning Disparity Related to Post Traumatic Stress Disorder (PTSD)</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 37]</i> Lopez, Armando, UPR-RIO PIEDRAS | <i>Identification and Characterization of RNA Binding Proteins that Bind to the hIL-3 ARE in Jurkat Leukemic T Cells</i> |
| 2:25PM → 2:45PM | <i>[Life Sciences 40]</i> Malpica, Odalis, UPR-CAYEY | <i>Modulation of pCREB and ERK ^{1/2} by Neuropeptide-Y in wild type C. elegans</i> |
| 2:45PM → 3:05PM | <i>[Life Sciences 44]</i> Méndez, Samary, PCUPR | <i>Muscarinic Receptors Regulate Infralimbic Excitability and Fear Extinction</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 48]</i> Montalvo, Alexandra, UPR-RIO PIEDRAS | <i>Role of Metabotropic Glutamate Receptors Within the Nucleus Accumbens Shell During Environment - Elicited Cocaine Conditioning</i> |

Session: 07

Room: S-229

Moderator: Kristina Soto, UPR-Mayagüez

| Time | Speaker and affiliation | Title |
|-------------------|---|--|
| 11:00AM → 11:20AM | <i>[Life Sciences 39]</i> Lozada, Eunice, UPR-HUMACAO | <i>Egg Survival Without Parents in the Terrestrial, Direct-Development Frog, Eleutherodactylus Juanariveroi</i> |

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|-------------------|--|--|
| 11:20AM → 11:40AM | <i>[Life Sciences 45]</i> Mendez, Alejandro, UPR-RIO PIEDRAS | <i>Determination of the minimum lethal dose of <i>Batrachochytrium dendrobatidis</i> inoculations in <i>Eleutherodactylus coqui</i> in ex-situ conditions</i> |
| 11:40AM → 12:00PM | <i>[Life Sciences 47]</i> Miranda, Noraliz, UPR- AGUADILLA | <i>Determining the Concentration of Egg Proteins in <i>Anolis Pulchellus</i></i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| Moderator: | Walter Silva Araya | |
| 1:45PM → 2:05PM | <i>[Life Sciences 41]</i> Marino, Jimena, UPR-RIO PIEDRAS | <i>Anxiolytic Effects of Oxytocin on Acquisition and Reinstatement of Cocaine Seeking Behavior.</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 52]</i> Nieves-Christie, Juan C., UPR-MAYAGUEZ | <i>Elucidation of the Mechanism of Action of Antifungal β-Peptides</i> |
| 2:25PM → 2:45PM | <i>[Life Sciences 53]</i> Nigaglioni, Joel, PONCE MEDICAL SCHOOL | <i>Blockade of SK Channels Facilitates Recall of Fear Extinction</i> |
| 2:45PM -> 3:05PM | <i>[Life Sciences 56]</i> Ortiz Díaz, Cristina, UPR-RIO PIEDRAS | <i>Alcohol Exacerbate the Neuromuscular Degeneration in ΔS262T a Transgenic Mice Expressing the Slow-Channel Congenital Myasthenic Syndrome</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 51]</i> Nieves, José Reynaldo, UPR-RIO PIEDRAS | <i>Alpha-2 adrenergic receptor activation in the VTA and PFC modulates the development of cocaine sensitization</i> |

Session: 08

Room: S-230

Moderator: Aidsa Santiago

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Life Sciences 55]</i> Ortiz, Carlos, | <i>Nest Defense in the Little Fire Ant <i>Wasmannia Auropunctata</i></i> |

UIA-BAYAMON

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|-------------------|---|---|
| 11:20AM → 11:40AM | <i>[Life Sciences 57]</i> OTERO, BEATRIZ, UPR-RIO PIEDRAS | <i>Effect of Land-Use History on the Recovery of Bird and Amphibian Communities in Puerto Rico</i> |
| 11:40AM → 12:00PM | <i>[Life Sciences 59]</i> Otero-Negron, Aurora, UPR-RIO PIEDRAS | <i>Living shallow: How does the elevation gradient affect the size of <i>Epilobucera Sinuatifrons</i> in riffles?</i> |
| 12:00MD -> 1:30PM | | Lunch Break |
| | Moderator: | Elsie Parés, UPR-Mayagüez |
| 1:45PM → 2:05PM | <i>[Life Sciences 58]</i> Otero-De León, Lidiannie, UPR-CAYEY | <i>Viability Assessment of Pancreatic and Hepatic Cells Upon Stimulation with Plants Extracts Used as Diabetic Treatment Adjuvants</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 61]</i> Pasiche Lisboa, Carlos J., UPR-MAYAGUEZ | <i>Effect of pH Medium on Bryophyte Growth: A Study for Protocol Optimization</i> |
| 2:25PM → 2:45PM | <i>[Life Sciences 62]</i> Perez, Zulmarie, UPR-RIO PIEDRAS | <i>Biochemical Analysis of MLH Mutations Linked to Leukemia Patients</i> |
| 2:45PM -> 3:05PM | <i>[Life Sciences 66]</i> Rios, Ramon, UPR-RIO PIEDRAS | <i>Mechanism Elucidation of the Lys49 A2 Phospholipase Induced Myotoxicity in C2C12 Differentiated Myoblasts</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 67]</i> Rivera, Andrea, UPR-RIO PIEDRAS | <i>Understanding the Role of Phosphorylation of Upf1 Protein in the Activity of the Nonsense-Mediated mRNA Decay (NMD) Pathway</i> |

Session: 09

Room: S-306

Moderator: Migdalia Sotomayor, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|---|---|--|
| 11:00AM -> 11:20AM | <i>[Life Sciences 63]</i> Ramos, Gladiany, UPR-MAYAGUEZ | <i>Isolation and Characterization of Puerto Rican Soils Bioprospects Resistant to Metals</i> |
| 11:20AM -> 11:40AM | <i>[Life Sciences 74]</i> Rodriguez, Ronald, PCUPR | <i>Calcium Carbonate Precipitation and pH Variation During Biofilm Development from Bacterial Strains Isolated in Puerto Rico</i> |
| 11:40AM -> 12:00PM | <i>[Life Sciences 88]</i> Velez, Nelson, UPR-RIO PIEDRAS | <i>Utilization of Nocturnal Perches by Anolis Gundlachi: Does size matter?</i> |
| 12:00MD -> 1:30PM | Lunch Break | |
| Moderator: Migdalia Sotomayor, UPR-Aguadilla | | |
| 1:45PM -> 2:05PM | <i>[Life Sciences 68]</i> Rivera, Britzy, PCUPR | <i>Discovering Calisto Nubila Nubila</i> |
| 2:05PM -> 2:25PM | <i>[Life Sciences 72]</i> Rodríguez, Tatiana, UPR-HUMACAO | <i>Collection and Identification of Unreported Feather Mite Genera in Puerto Rico</i> |
| 2:25PM -> 2:45PM | <i>[Life Sciences 73]</i> Rodriguez, Francisco, UPR-RIO PIEDRAS | <i>Silk Islands: Diversity and Distribution of Spider Kleptoparasites Among Host Webs an Island Biogeography Approach</i> |
| 2:45PM -> 3:05PM | <i>[Life Sciences 82]</i> TORAÑO, DANIEL, UIA- METROPOLITANO | <i>Medicinal Properties of Plants in Puerto Rico</i> |

3:05PM → 3:25PM

[Life Sciences 71]
**Rodriguez, Perla
Marina,
UPR-RIO PIEDRAS**

***The Effect of Commercial
Observation on the Social
Structure of Bottlenose Dolphins
(Tursiops Truncatus) in Bocas
Del Toro, Panama***

Session: **10**

Room: **S-307**

Moderator: Patricia Burrowes

| Time | Speaker and affiliation | Title |
|--------------------|---|--|
| 11:00AM -> 11:20AM | <i>[Life Sciences 69]</i> Rivera, Nelitza, UPR-CAYEY | <i>Pharmacological Modulation of NPY by CREB knockout in C. elegans.</i> |
| 11:20AM → 11:40AM | <i>[Life Sciences 70]</i> Rivera, Alexandra M., UIA-BAYAMON | <i>Molecular Characterization of the Thioredoxin Reductase Gene on Plasmodium Yoeli</i> |
| 11:40AM → 12:00PM | <i>[Life Sciences 75]</i> Rodriguez, Victor, PCUPR | <i>Impact of Stress on Expression of Nerve Growth Factor and Trk-A in Endometriosis</i> |
| 12:00MD -> 1:30PM | | Lunch Break |
| | Moderator: Patricia Burrowes | |
| 1:45PM → 2:05PM | <i>[Life Sciences 76]</i> Rojas, Raziell, UIA-ARECIBO | <i>Analysis of IL-8 Levels in a Proliferative Solid Tumor and a Non-Solid Cancer</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 78]</i> Rubio, Eva, UPR-MAYAGUEZ | <i>Genomic Annotation of contig34 of Drosophila erecta</i> |
| 2:25PM → 2:45PM | <i>[Life Sciences 83]</i> Torres, Karylisa, PCUPR | <i>Molecular Characterization</i> |

2:45PM -> 3:05PM *[Life Sciences 80]*
Santiago, Eduardo,
UPR-RIO PIEDRAS ***Alfa7- Nicotinic Acetylcholine
Receptors are Upregulated After
Exposure to HIV-1 gp120***

3:05PM -> 3:25PM *[Life Sciences 80]*
Del Valle, Nicole,
UPR-CAYEY ***Modulation of a Neuropeptide-Y
Proposed Pathway by a NPYR1
Knockout in C. elegans***

Session: 11

Room: S-308

Moderator: Yvonne Colón Mena, UPR-Aguadilla

| Time | Speaker and affiliation | Title |
|--------------------|--|---|
| 11:00AM -> 11:20AM | <i>[Life Sciences 77]</i> Rosado-Rodriguez, Adriana, UIA-BAYAMON | <i>Effect of methoprene on the behavior in workers of the little fire ant Wasmannia auropunctata</i> |
| 11:20AM -> 11:40AM | <i>[Life Sciences 79]</i> Ruiz, Jennifer M., UPR-RIO PIEDRAS | <i>Degeneration of the Neuromuscular Junction of a Congenital Myasthenic Syndrome via Cholesterol-Reducing Treatment; a Transgenic Mice Study of the αC418w Novel Mutation</i> |
| 11:40AM -> 12:00PM | <i>[Life Sciences 86]</i> Vazquez, Melba, UPR-RIO PIEDRAS | <i>The Amino Terminal Domain of Upf2 is Involved in Translation Termination Accuracy</i> |
| 12:00MD -> 1:30PM | | Lunch Break |
| | Moderator: Yvonne Colón Mena, UPR-Aguadilla | |
| 1:45PM -> 2:05PM | <i>[Life Sciences 84]</i> Torres, Stephanie, UPR-RIO PIEDRAS | <i>Bitter Orange (Citrus aurantium) and Anxiety</i> |
| 2:05PM -> 2:25PM | <i>[Life Sciences 85]</i> Vaquer, Ana Del C., UPR-RIO PIEDRAS | <i>TEA Protein Overexpression In rTg4510 Inducible Mouse Model</i> |

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| 2:25PM → 2:45PM | <i>[Life Sciences 92]</i> Vizcarrondo, Giovann, UNE | <i>Down-regulation of Noggin Gene in the Bone Morphogenetic Protein (BMP) Signaling Pathway by the Presence of Class I Androgen Analog Testosterone Propionate</i> |
| 2:45PM → 3:05PM | <i>[Life Sciences 87]</i> Velazquez, Francisco, UPR-AGUADILLA | <i>Analysis of Physical, Chemical and Microbiological Parameters of the Rio Grande de Arecibo.</i> |
| 3:05PM → 3:25PM | <i>[Life Sciences 13]</i> Colón, Edgardo, UPR- AGUADILLA | <i>Assessment of Estrogenic Contamination with Anolis Pulchellus as a Sentinel Organism</i> |

Session: 12

Room: S309

Moderator: Linda Vélez

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|-----------------|--|--|
| 1:45PM → 2:05PM | <i>[Life Sciences 89]</i> Velez, Carol, UPR-RIO PIEDRAS | <i>Effects of Cholesterol Depletion in Caveolin Binding Motif AchR Mutations</i> |
| 2:05PM → 2:25PM | <i>[Life Sciences 91]</i> Velez, German, UPR-RIO PIEDRAS | <i>Head and Neck Cancer in Puerto Ricans: Genetic, Environmental and Clinical Determinants HPV16 Papillomavirus Risks</i> |
| 2:25PM → 2:45PM | <i>[Life Sciences 10]</i> Castro-Escobar, Betsabé, UPR-RIO PIEDRAS | <i>Variation in Native And Cactaceae Seeds in the Soil as a Function of an Invasive Exotic Grass in Mona Island Reserve</i> |
| 2:45PM → 3:05PM | <i>[Life Sciences 14]</i> Correa, Maria, UPR-RIO PIEDRAS | <i>The Shuttling Protein Npl3 Promotes Translation Termination Accuracy in Saccharomyces cerevisiae</i> |

Mathematics

Session: 01

Room: Q-124

Moderator: Karen Ríos

| Time | Speaker and affiliation | Title |
|-----------------|---|---|
| 1:45PM → 2:05PM | <i>[Mathematics 03]</i> Ojeda, Iván, UPR-RIO PIEDRAS | <i>Threaded distance trees and E-sets of star graphs</i> |
| 2:05PM → 2:25PM | <i>[Mathematics 02]</i> Morales, Lourdes, UPR-RIO PIEDRAS | <i>Some properties of latin squares - Study of mutually orthogonal latin squares</i> |
| 2:25PM → 2:45PM | <i>[Mathematics 01]</i> Martinez, Xavier, UPR-MAYAGUEZ | <i>Two strain competition: Trypanosoma cruzi</i> |
| 2:45PM → 3:05PM | <i>[Mathematics 04]</i> Ramírez, Camila, UPR-RIO PIEDRAS | <i>Linear Algebra Parameters Applied to Ciclos and Estrellas Graph Families</i> |
| 3:05PM → 3:25PM | <i>[Mathematics 05]</i> Rivera, Vanessa, UPR-RIO PIEDRAS | <i>Study of the solutions to the $\sum_{i=1}^5 1/x_i = 1$ equation</i> |

Physics

Session: 01

Room: F-321

Moderator: Rafael Canals

| Time | Speaker and affiliation | Title |
|-------------------|---|---|
| 11:00AM → 11:20AM | <i>[Physics 07]</i> Garcia-Ramos, Camille, UPR-HUMACAO | <i>Modeling a Radiotherapy Clinical Procedure: Total Body Irradiation</i> |
| 11:20AM → 11:40AM | <i>[Physics 01]</i> Betancourt, Angelica, UPR-RIO PIEDRAS | <i>Global Climatology of the Planetary Boundary Layer Inversions</i> |
| 11:40AM → 12:00PM | <i>[Physics 03]</i> Colón, John P., UPR- HUMACAO | <i>Geometric Properties of Magnetized Black Hole Event Horizons and Ergosurfaces</i> |
| 12:00MD → 1:30PM | Lunch Break | |
| | Moderator: Víctor Huérfano | |
| 1:45PM → 2:05PM | <i>[Physics 04]</i> Davila, Melissa, UPR-HUMACAO | <i>Image Analysis of Polystyrene Nanosphere Masks and Resulting Interstices for Nanocapacitors Fabrication</i> |
| 2:05PM → 2:25PM | <i>[Physics 05]</i> De Jesús, Maria A., UPR-HUMACAO | <i>Observational Data of Binary Stars</i> |
| 2:25PM → 2:45PM | <i>[Physics 08]</i> Hernandez, Janice, UPR-RIO PIEDRAS | <i>Transition Metal Silicide Nanorods for Spintronics Applications</i> |
| 2:45PM → 3:05PM | <i>[Physics 06]</i> Franco, Eframir, UPR-HUMACAO | <i>Comparison of TEC Data using the Arecibo ISR and GPS Receivers</i> |

Session: 02

Room: F-322

Moderator: Andrés Calderón

| Time | Speaker and affiliation | Title |
|-----------------|--|---|
| 1:45PM → 2:05PM | <i>[Physics 02]</i> Castro, Amnerys, UPR-HUMACAO | <i>The Distribution of the ELDWIM Outer of the Solar Circle</i> |
| 2:05PM → 2:25PM | <i>[Physics 09]</i> Maldonado, Vianca, UPR-HUMACAO | <i>Reporte De Observacion de Angulo de posicion y separacion de estrellas binarias</i> |
| 2:25PM → 2:45PM | <i>[Physics 12]</i> Velez, Ericka, UPR-CAYEY | <i>Control of PLLA/PEG Fiber Diameter and Alignment During Electrospinning</i> |
| 2:45PM → 3:05PM | <i>[Physics 11]</i> Rivera, Leonardo, UPR-HUMACAO | <i>Neutrino Oscillation and the LSND results</i> |
| 3:05PM → 3:25PM | <i>[Physics 10]</i> Martinez, Sarahi, UPR- HUMACAO | <i>A Numerical and Graphical Analysis of the Jones Model</i> |

**45th ACS Junior Technical Meeting
30th Puerto Rico Interdisciplinary Scientific Meeting (PRISM)**

TITLES FOR POSTER SESSIONS

(Arranged in alphabetical order by field and presenter's last name)

- Agricultural Sciences
- Chemistry
- Education
- Engineering
- Environmental Sciences
- Geosciences
- Life Science
- Mathematics
- Physics

Agricultural Sciences

Latoni, Elena, UPR-MAYAGUEZ; Vaz, Melissa, Dept. of Crops and Agroenvironmental Sciences; Rivera, Lydia I., Dept. of Crops and Agroenvironmental Sciences

[Agricultural Sciences 01]

Identification of Oidium Neolycopersici, A Powdery Mildew of Tomato Using Scanning Electron Microscopy and DNA analysis

Chemistry

Arroyo-Ramirez, Lisandra, UPR-RIO PIEDRAS; Raptis, Raphael G., Chemistry, UPR-Rio Piedras; Cabrera, Carlos R., Chemistry, UPR-Rio Piedras

[Chemistry 01]

Palladium and Palladium-Cobalt Catalysts for the Oxygen Reduction Reaction with High Methanol Tolerance

Aviles, Edward, UPR-RIO PIEDRAS; Aviles, Edward, Chemistry, University of Puerto Rico; Rodriguez, Abimael, Chemistry, University of Puerto Rico; Mayer, Alejandro, Pharmacology, Midwestern University, Chaudhri, S., Pharmacology, Midwestern University; Hall, M.L., Pharmacology, Midwestern University

[Chemistry 02]

Marine Sponge Hymeniacidon SP. Amphilectane Metabolites Potently Inhibit Rat Brain Microglia Thromboxane B2 Generation

Bailon, Sonia, UPR-MAYAGUEZ; Perales-Perez, Oscar, Engineering Science & Materials, UPRM; Singh, Surinder, Engineering Science & Materials, UPR-Mayaguez

[Chemistry 03]

Effect of Doping on the Structural and Optical Properties of Microwave-Assisted Synthesis of ZnSe@ZnS Core-Shell Quantum Dots

BALAGUERA, MARCIA, UPR-MAYAGUEZ; Perales, Oscar, Department of Engineering Science and Materials. University of Puerto Rico-Mayagüez; Maharj, Tomar, Department of Physics, University of Puerto Rico-Mayagüez, Hernandez, Samuel, Chemistry, University of Puerto Rico-Mayagüez

[Chemistry 04]

Low Temperature Aqueous Synthesis of ZnO Nanorods for Enhanced Raman Spectroscopy

Betancourt, José, UPR-RIO PIEDRAS; Jose M. Rivera, Department of Chemistry, University of Puerto Rico, Río Piedras Campus

[Chemistry 05]

Host-Guest Recognition inside Nanoglobules from Thermoresponsive Supramolecules

Casañas, Barbara, UPR-RIO PIEDRAS; Barbosa, Cindy, Department of Chemistry, UPR-RP; Colón, Jorge L., Department of Chemistry, UPR-Río Piedras

[Chemistry 06]

Zirconium Phosphates for use in Bionanotechnology

Cedeño-Mattei, Yarilyn, UPR-MAYAGUEZ; Perales-Perez, Oscar, Engineering Science & Materials, UPR-Mayaguez; Uwakweh, Oswald N.C., Engineering Science & Materials, UPR-Mayaguez; Xin, Yan, Magnet Science & Technology Division, National High Magnetic Field Laboratory

[Chemistry 07]

Colossal Room-Temperature Coercivity in Size-Selected Cobalt Ferrite Nanocrystals

Contés, Enid, UPR-RIO PIEDRAS; Li, Jing, NASA Ames, Moffet Field, CA; Cabrera, Carlos, Chemistry Dept, UPR Río Piedras

[Chemistry 08]

Methane Detection Using Functionalized Carbon Nanotubes Based Sensors

Cunci, Lisandro, UPR-RIO PIEDRAS; Scibioh, Aulice, Department of Chemistry, University of Puerto Rico; Cabrera, Carlos, Department of Chemistry, University of Puerto Rico

[Chemistry 09]

Diamond Doping and Preparation of Supported Catalysts for the Oxygen Evolution Reaction

.

del Hoyo, Natalie, UPR-RIO PIEDRAS; Báez Pagán, Carlos, Chemistry Department, UPR-RP; Quesada, Orestes, Physics Sciences Department, UPR-RP, Lasalde, José A., Biology Department, UPR-Rio Piedras

[Chemistry 10]

Modulation of the Nicotinic Acetylcholine Receptor Function by Cholesterol

Delgado, Yamixa, UPR-RIO PIEDRAS; Castillo, Betzaida, Department of Chemistry, University of Puerto Rico, Río Piedras Campus; Barletta, Gabriel, Department of Chemistry, University of Puerto Rico, Humacao; Griebenow, Kai, Department of Chemistry, University of Puerto Rico, Río Piedras Campus

[Chemistry 11]

In Vitro and in Silico Enantioselective Transesterification Catalysis by Nanosized Serine Protease Subtilisin Carlsberg in Tetrahydrofuran (THF)

Enríquez, Yanira, UPR-RIO PIEDRAS; Ana R. Guadalupe, Department of Chemistry, University of Puerto Rico, Río Piedras Campus; Yashira Negrón, Department of Chemistry, University of Puerto Rico, Río Piedras Campus

[Chemistry 12]

Development of an Electrochemical Biosensor for the detection of Pseudomonas aeruginosa

Feliciano, Ileana, UPR-RIO PIEDRAS; Nicolau, Eduardo, Chemistry, UPR Rio Piedras; Zavala, Zarixia, Biochemistry, UPR Rio Piedras; Zulic, Zana, Chemistry, St. Louis University, Minter, Shelley, Chemistry, St. Louis University; Cabrera, Carlos, Chemistry, UPR Rio Piedras

[Chemistry 13]

Expression, Purification and Characterization of PQQ-dependent Alcohol Dehydrogenase from Gluconobacter and use in L-cysteine monolayer on Palladium Surface

Figuroa, Cindy, UPR-RIO PIEDRAS; Dr. Peter Faller, Biochemistry, CNRS/Laboratoire de Chimie, Toulouse, France

[Chemistry 14]

Interaction Between DAHK and HSA with A β -Cull: Understanding Alzheimer's Disease

García, Marilyn, UPR-RIO PIEDRAS; Rivera-Sanchez, Maria del C., Chemistry, UPR-Rio Piedras; Hopley, Gerard, Chemistry, UPR-Rio Piedras; Rivera, José M., Chemistry, UPR-Rio Piedras

[Chemistry 15]

Structure Elucidation and Mechanism of Self-Assembled Guanosine Analogues

García Maldonado, María del Mar, UPR-RIO PIEDRAS; Hernández Borrero, Liz, Chemistry, University of Puerto Rico, Río Piedras Campus; Guadalupe, Ana R., Chemistry, University of Puerto Rico, Río Piedras Campus

[Chemistry 16]

Cyclic Voltammetry and UV-Visible Spectroscopy of Meldola's Blue at Different Ionic Strengths and pHs

Guzman, Rolando, UPR-RIO PIEDRAS; Cabrera, Carlos, Chemistry, UPR-Rio Piedras

[Chemistry 17]

PtCeHg/C Electrocatalysts Prepared by Impregnation Method for Direct Alcohol Electro-Oxidation

Martin-Hidalgo, Mariana, UPR-RIO PIEDRAS; González, Fernando, Department of Chemistry, University Of Puerto Rico, Río Piedras Campus; Rivera, José M., Department of Chemistry, University Of Puerto Rico, Río Piedras Campus

[Chemistry 18]

Modulating the Structure and Properties of Supramolecular Quadruplexes Using Metal Cations

Mendez, Jessica, UPR-RIO PIEDRAS; Monteagudo, Alina, Chemistry, University of Puerto Rico; Griebenow, Kai, Chemistry, University of Puerto Rico

[Chemistry 19]

Covalent Immobilization of Modified Enzyme into Mesoporous Silica Particles for Drug Delivery Applications

Montano, Rubenier, UPR-RIO PIEDRAS; Raptis, Rapahel G., Chemistry, UPR-Rio Piedras

[Chemistry 20]

Modification of [Fe8(i4-O)4(pz)12Cl4] Towards Developing Luminescent Complexes

Negron, Luis, UPR-RIO PIEDRAS; Rivera, José M., Department of Chemistry, University of Puerto Rico-Río Piedras

[Chemistry 21]

8-Aryl-2'-Deoxyguanosine dinucleosides for the Development of Robust Self-Assembled Dendrimers

Pacheco, Yamaris, UPR-RIO PIEDRAS; Griebenow, Kai, Chemistry, UPR-Rio Piedras

[Chemistry 22]

Nanoparticulate Protein Formulations

Pagan, Miraida, UPR-RIO PIEDRAS; Sola, Ricardo, Chemistry, UPR-Río Piedras; Griebenow, Kai, Chemistry, UPR-Río Piedras

[Chemistry 23]

Chemical Protein Glycosylation: Method to Prevent Protein Instabilities on Biosensor Application

Pena, Sandra, UPR-MAYAGUEZ; Rivera ,Luis, Chemistry,UPR Mayaguez; Singh, Surinder, Engineering Science and Materials, UPR Mayaguez, Perales, Oscar, Engineering Science and Materials , UPR Mayaguez; Oyola, Oscar, Chemistry, UPR Mayaguez

[Chemistry 24]

Development of an Analytical Method for the Production and Measurement of Singlet Oxygen

Rivera, Luis, UPR-RIO PIEDRAS; Betancourt, José E., Chemistry, UPR Rio Piedras; Rivera, José M., Chemistry, UPR Rio Piedras

[Chemistry 25]

Discrete Hexadecameric Fluorescent Multifunctional Self-Assembled Dendrimers in Aqueous Media

Rivera-Sánchez, María Del C., UPR-RIO PIEDRAS; Rivera, José M., Chemistry, UPR-Río Piedras

[Chemistry 26]

Supramolecular and Optical Properties of 8-Heteroaromatic-2'-Deoxyguanosine Derivatives

Rivera-Vélez, Nelson E., UPR-RIO PIEDRAS; Montañez, Efraín, Chemistry Department, University of Puerto Rico-Río Piedras; Scibioh, Aulice, Chemistry Department, University of Puerto Rico-Río Piedras; Cabrera, Carlos R., Chemistry Department, University of Puerto Rico-Río Piedras

[Chemistry 27]

Preparation and Characterization of Unsupported Iridium, and Platinum Oxides Nanoelectrocatalysts for the Oxygen Evolution Reaction by the Rotating Disk Slurry Electrode Method

Rivero, Kennett, UPR-RIO PIEDRAS; Chakraborty, Indranil, Chemistry, UPR Rio Piedras; Raptis, Raphael G., Chemistry, UPR Rio Piedras

[Chemistry 28]

Heterobimetallic Clusters Containing a Redox-Active Fe₄O₄ Cubane Core

Rodriguez, Idaliz, UPR-RIO PIEDRAS; Robles, Emily, Chemistry Department, UPR-RP; Raptis, Raphael G., Chemistry Department, UPR-Rio Piedras

[Chemistry 29]

Dendritic Redox-Active Fe₄O₄-Core Complexes

Santana, Juan A., UPR-RIO PIEDRAS; Ishikawa, Yasuyuki, Department of Chemistry, University of Puerto Rico-Rio Piedras

[Chemistry 30]

Density-Functional Theory Study of O₂ Adsorption on Platinum Electrode Under Electrochemical Conditions

Santos-Figueroa, Gilmarie, UPR-RIO PIEDRAS; Gioda, Adriana, Department of Chemistry, University of Puerto Rico; Mayol-Bracero, Olga L., Institute for Tropical Ecosystem Studies, University of Puerto Rico

[Chemistry 31]

The Size-Resolved Carbonaceous Fraction of African Dust Particles over the Caribbean

Silva, Diana, UPR-RIO PIEDRAS; Rivera, José M., Chemistry, University of Puerto Rico-Río Piedras

[Chemistry 32]

Synthesis and Supramolecular Properties of Fluorescent 8-Chalcone-2'-deoxyguanosine Derivatives

Torres, Zally, UPR-RIO PIEDRAS; Velazquez, Stephanie, UPR-Humacao; Barletta, Gabriel, UPR-Humacao

[Chemistry 33]

Thermal Stability of the Serine Protease Subtilisin Carlsberg in Organic Solvents/ H₂O Mixtures

Education

Caceres, Rita, UPR-RIO PIEDRAS; Ortiz-Zayas, Jorge, Institute for Tropical Ecosystem Studies; María E. Thiele, Escuela Intermedia Manuel Martín Monserrate, Santa Isabel

[Education 01]

Protecting the Puerto Rican Crested Toad: An Education and Outreach Program

Morales-García, Flavia, UPR-RIO PIEDRAS; Otero-Montañez, James K., Escuela Secundaria Especializada en Ciencias, Matemáticas y Tecnología (CIMATEC), Municipio Autónomo de Caguas; Soto-García, Lydia L., Institute for Tropical Ecosystem Studies and Department of Chemistry, University of Puerto Rico, Río Piedras Campus; López-Alvarado, Iván J., Department of Physics, University of Puerto Rico, Río Piedras Campus; Mayol-Bracero, Olga L., Institute for Tropical Ecosystem Studies, University of Puerto Rico, Río Piedras Campus; Mayol, Ana R., Institute for Functional Nanomaterials, University of Puerto Rico, Río Piedras Campus; Álvarez, Héctor J., College of Education, University of Puerto Rico, Río Piedras Campus

[Education 02]

Atmospheric Chemistry Research as a Tool to Augment Students' Scientific Inquiry

Engineering

Anaya, Nelson, UPR-MAYAGUEZ; Been, Katherine

[Engineering 01]

Polymer-aided Alcohol Flushing to Enhance TCE remediation: Effect of Methanol Concentrations and Contact Times

Avilés-Barreto, Sonia L., UPR-MAYAGUEZ

[Engineering 02]

Effect of Sulfonation Level and Counter Ion Substitution on the Water Swelling and Proton Conductivity of Poly(styrene-isobutylene-styrene) Membranes

Barajas, Ulises, UPR-MAYAGUEZ; Barajas, Ulises, Ingenieria Civil y Agrimensura, Universidad de Puerto Rico: UPR-Mayaguez

[Engineering 03]

Methodologies for the Analysis of Prestressed and Preflex Bridges Superstructures

Blagg, Amanda, UPR-MAYAGUEZ; Valentin, Ricky, Mechanical Engineering, UPRM; Perales, Oscar, General Engineering, UPR-Mayaguez

[Engineering 04]

Optimization of Electrospun Chitin Fibers for Arsenic Adsorption

Buitrago, Fabiola, UPR-MAYAGUEZ; Figueroa, Alberto, Civil Engineering and Surveying, UPR Mayaguez

[Engineering 05]

Statistical Analysis of Red Light Running Events at Signalized Intersections in Puerto Rico

Calero, Carlos, UPR-MAYAGUEZ; Albert figueroa, Ingenieria Civil, UPR-Mayaguez

[Engineering 06]

Quality of Service Measures for Special Demand-Response Transit Services

Cameron, Ana Raquel, UPR-MAYAGUEZ; Alexandra Breban, Department of Chemical Engineering, University of Puerto Rico, Mayagüez; Aldo Acevedo-Rullán, Department of Chemical Engineering, University of Puerto Rico, Mayagüez

[Engineering 07]

Phase Behavior of Carboxylated MWCNT Dispersions in Liquid Crystalline Polymer Solutions: Rheology and POM

Chavez, Ermides, UPR-MAYAGUEZ; Lopez, Neshma, Department of Chemical Engineering, University of Puerto Rico Mayaguez Campus; Uwakweh, Oswald, Department of Engineering Science and Materials

[Engineering 08]

Mosbauer Spectroscopic Measurements of Mechano-Chemical Syntheses of ZnFe₂O₄

Concepcion, Daniel, UPR-MAYAGUEZ; Hwang, Sangchul, Civil Engineering, UPRM;
Juan Falcón, Civil Engineering, UPR-Mayaguez

[Engineering 09]

Engagement of UPRM Engineering in Sustainable Water Treatment Technologies

Cortes, Natalia, UPR-MAYAGUEZ; De Jesús Padilla, Xavier F., Mechanical Engineering, University of Puerto Rico-Mayagüez; Calderón, Hermes E., Civil Engineering & Surveying, University of Puerto Rico-Mayagüez; Suárez, O. Marcelo, Engineering Science & Materials, University of Puerto Rico-Mayagüez

[Engineering 10]

Thermomechanical Characterization of AL-CU-MG Composites Reinforced with Diboride Particles

Cruz, Alvin, UPR-MAYAGUEZ; Díaz, Ruben, Mechanical Engineering, UPR-Mayaguez

[Engineering 11]

Single Particle Isolation by Pressure Difference in a μ -fluidic Channel

Feliciano, Jeannette, UPR-MAYAGUEZ; Sodhi, Manbir, Industrial and Systems Engineering, URI

[Engineering 12]

Driver Eye Movements during merging maneuvers into Incoming Highway Traffic

Florian, Vivian, UPR-MAYAGUEZ; Acevedo, Aldo

[Engineering 13]

Surfactant Effect on the Solution Rheology and Casted Film Properties of Griseofulvin Loaded HPMC

Gamez, Liliana, UPR-MAYAGUEZ; Martínez María, Department of Chemical Engineering

[Engineering 14]

Platinum Clusters Synthesis Process Study By X-Ray Driffraction

Garcia, Glorimar, UPR-MAYAGUEZ; Oscar Perales-Perez, Department of Engineering Science and Materials, University of Puerto Rico, Mayagüez Campus

[Engineering 15]

Ag-based Nanofluids for High-Thermal Conductivity Applications

Gorbea, Ivelisse, UPR-MAYAGUEZ; Valdes, Didier, Civil Engineering and Surveying, UPR Mayaguez

[Engineering 16]

Assessment of Land Use Transport Modeling Frameworks to Analyze Mass Transit Alternatives in Puerto Rico

Hidalgo-Hernandez, Ruth, UPR-MAYAGUEZ; Plaza, Nayomi, Mechanical Engineering, University of Puerto Rico-Mayaguez Campus; Suarez, O. Marcelo, Engineering Science and Materials, University of Puerto Rico-Mayaguez Campus

[Engineering 17]

Tribological Characterization of Al-Cu-Mg-B Composites Subject to Mechanical Wear

Huertas-Miranda, Javier A., UPR-MAYAGUEZ; Marínez-Iñesta, María M., Chemical Engineering, UPR-Mayagüez

[Engineering 18]

Studies of the Combined Effect of Si/Al and Temperature on the Templated Synthesis of Platinum Nanostructures in Mordenite

Mera, Daniel, UPR-MAYAGUEZ; Santiago, Nayda, Electrical and Computer Engineering, University of Puerto Rico, Mayaguez Campus

[Engineering 19]

Low Power Software Techniques for Real Time Operating Systems

Miranda, Felix Gabriel, UPR-MAYAGUEZ; Aldo Acevedo, Department of Chemical Engineering, University of Puerto Rico at Mayaguez

[Engineering 20]

Characterization Studies of Nematic Co-Polymer PHBA-PET Extruded Nanocomposites

Nieves, Alvin, UPR-MAYAGUEZ

[Engineering 21]

SnowFlake Expansion

Polanco, Maximo, UPR-MAYAGUEZ

[Engineering 22]

Vehicle Headway Management on Rhode Island Highways.

Quinones, Leonel, UPR-MAYAGUEZ; Martínez-Iñesta, Maria M., Engineering Department, University of Puerto Rico Mayagüez

[Engineering 23]

Synthesis of Platinum Nanostructures in Zeolite Mordenite Using a Solid-State Reduction Method

Ramos, Glorimar, UPR-MAYAGUEZ; Santiago, Paulette, Chemical Engineering, UPR-Mayaguez; Manzano, Roberto, Mechanical Engineering, UPR-Mayaguez; Suárez, O.Marcelo, Department of Engineering Science & Materials, UPR-Mayaguez

[Engineering 24]

Fabrication of Functionally Graded Aluminum-Based Targets for Sputtering Deposition of Hybrid Composites

Reyes, Damian, UPR-MAYAGUEZ; Carrasquillo, Ronald, Chemical Engineering, UPR-Mayaguez; Marquez, Carmen P., Chemical Engineering, UPR-Mayaguez; Morales, Pedro, Chemical Engineering, UPR-Mayaguez, Cardona, Nelson, Chemical Engineering, UPR-Mayaguez

[Engineering 25]

Catalytic Performance and Stability of Bifunctional Materials for the Conversion of Cellulose into Renewable Biorefinery Feedstocks

Rico, Zaida E., UPR-MAYAGUEZ

[Engineering 26]

Organizational Factors in Transit Services

Rivera, Lillian, UPR-MAYAGUEZ; Padilla, Ingrid, Civil Engineering, RUM

[Engineering 27]

Fate and Transport of DNT and TNT around an Improvised Explosive Device in an Urban Watershed Physical Model

Rojas, Norberto Jose, UPR-MAYAGUEZ; Rojas, Norberto, Civil Engineering, UPRM; Lopez, Ricardo, Civil Engineering, UPR-Mayaguez

[Engineering 28]

Analytical Model of the Behavior of Reinforced Concrete Corner Joints With Substandard Reinforcing Details

Sanchez, Matilde Luz, UPR-MAYAGUEZ; Isaza, Clara E., Facultad de Biología, Universidad Autónoma de Nuevo León; Castro, Jose, Industrial Engineering and Welding Systems, Ohio State University; Cabrera-Ríos, Mauricio, Industrial Engineering Department, University of Puerto Rico-Mayaguez

[Engineering 29]

Biomarker Search as a Multiple Criteria Optimization Problem

Sierra, Sergio, UPR-MAYAGUEZ; Acosta, Giovanni, Chemical Engineering, UPRM; Rinaldi, Carlos, Chemical Engineering, UPR-Mayaguez

[Engineering 30]

Study of Fe-Co Nanoparticles Modified with Polyethylene Glycol Suspended in Polymer Melts

Soto, Denisse, UPR-MAYAGUEZ; Rinaldi, Carlos, University of Puerto Rico at Mayaguez

[Engineering 31]

Magnetorheology in Dilute Ferrofluids: Comparison of Direct Particle Simulations and Continuum Level Models, and Scaling Laws

Toro, Jaime, UPR-MAYAGUEZ; Cruz, Benjamin, University of Puerto Rico Mayaguez; Leonardi, Stefano, University of Puerto Rico Mayaguez

[Engineering 32]

DNS of Turbulent Channel Flow with V-Shape Turbulators

Uribe, Victor, UPR-MAYAGUEZ; Alberto M. Figueroa Medina, Professor Civil Engineering; Victor M. Uribe Florez, Ph.D Student Transportation

[Engineering 33]

Behavioral Factors and Preferences Toward Transportation Transit Use of Residents in Urban Metropolitan Areas

Vega, Ana, UPR-MAYAGUEZ; Valentin, Ricky, Ingenieria Mecanica , UPRM;
Singh,Surrender, Ingenieria General; Velasco, Andres, Ingenieria Mecanica , UPRM,
Blagg, Amanda, Ingenieria Mecanica , UPR-Mayaguez

[Engineering 34]

Electrochemical Response Of Carbon Supports For Biocatalytic Electrodes

Environmental Sciences

Alamo, Luis, UPR-MAYAGUEZ; Román, Félix R., Department of Chemistry,
University of Puerto Rico at Mayaguez, PR; Perales-Perez, Oscar, Department of
Engineering Science & Materials, University of Puerto Rico at Mayaguez; Santos-
Santori, Lizette, Scientific Research Center, Pontifical Catholic University of Puerto
Rico, Ponce, PR, Morales, Daisy, Scientific Research Center, Pontifical Catholic
University of Puerto Rico, Ponce

[Enviromental Sciences 01]

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*Quantification of Organic and Inorganic Species in the Air particulate at Guayama,
Puerto Rico*

Delgado, Diana, UPR-RIO PIEDRAS; Arce-Nazario, Rafael; Restrepo, Carla

[Enviromental Sciences 02]

Understanding Exotic Vine's Spread Through Network Analysis

Sanchez, Diana, UPR-MAYAGUEZ; Roman, Felix, Chemistry, UPR Mayaguez
Campus; Perales, Oscar, Department of Engineering Science and Materials, UPR
Mayaguez Campus

[Enviromental Sciences 03]

*Se(IV) and Se(VI) Removal from Aqueous Solutions using Dried Sludge and Modified
Ca-Alginate Beads as Sorbents*

Torres, Irimar, UPR-MAYAGUEZ; Adel Gonzalez, University of Puerto Rico at Mayaguez; Christian Castro, University of Puerto Rico at Mayaguez; Lynn Williamson, University of Wisconsin Madison, Heather Allen, University of Wisconsin Madison; Lilliam Casillas, University of Puerto Rico Humacao; Carlos Rios-Velazquez, University of Puerto Rico at Mayaguez

[Environmental Sciences 04]

Generation of Large-Insert Metagenomic Libraries from Tropical Hypersaline Microbial Mats on the Dry and Rainy Seasons and their Screening for Antibiotic Resistance

Alvarez, Derry, UIA-BAYAMON; González, Barbara, Ciencias Naturales y Matematicas, UIA-Bayamón; Ruiz, Oscar, Ciencias Naturales y Matematicas

[Environmental Sciences 05]

Development of a Bio-Hydrogen Production System in Algae Chloroplasts

Escobar, Zalleris, UPR-MAYAGUEZ; Lugo, Yahaira, Ingenieria Civil, UPR-Mayaguez; Hwang Sangchul, Ingenieria Civil, UPR-Mayaguez

[Environmental Sciences 06]

Influence of Manufactured Coal Ash Agreggates Used for Daily Covers on Landfill Leachate Characteristics

Herrera, Gloria, UPR-MAYAGUEZ; Castañer, De Choudens Jeylisse, Chemical Engineering; Hernández, Samuel P., Chemistry

[Environmental Sciences 07]

Photocatalytic Degradation of Explosives Using Iron Oxide as Photocatalyst

Irizarry, Ivelisse, TURABO UNIV; Sharon A. Cantrell, Universidad del Turabo

[Environmental Sciences 08]

Bacterial Endophytes of Cocoloba Uvifera in Cabo Rojo, Puerto Rico

Rivera, Héctor, UPR-RIO PIEDRAS; Mayol-Bracero, Olga L., Institute of Tropical Ecosystems Studies, UPR Río Piedras; Ogren, John A., Earth System Research Lab, NOAA; Sheridan, Patrick, Earth System Research Lab, NOAA, Andrews, Elisabeth, Earth System Research Lab, NOAA

[Environmental Sciences 09]

Physical and Radiative Properties of Aerosol Particles across the Caribbean Basin: A Comparison Between the Clean and Perturbed African Dust and Volcanic Ash Air Masses

Sandra, Correa, UPR-MAYAGUEZ; Jean K. Rivera, UPRM; Nancy M. Soto, UPR-Mayaguez

[Environmental Sciences 10]

Caribbean plants using for Remediation of Aqueous Medium

Sierra, Maria del Pilar, UPR-MAYAGUEZ; Figueroa Matias; Nolberto, Chemical Engineering, UPR Mayaguez

[Environmental Sciences 11]

Comprehensive Utilization of Coffee Processing Waste: A Feasibility Study

Geosciences

Ruidiaz, Cyd, UPR-MAYAGUEZ

[Geosciences 01]

Reef Characterization and Coral Identification in a Unit of the Lares Limestone (Late Oligocene) Exposed in Road Pr-111, Between Salto Collazo and the Intersection with Road PR # 445.

Life Sciences

Acevedo, Jean Marie, UPR-MEDICAL SCIENCE CAMPUS; Ortiz-Correa, Zacha, Biology, Ciencias Naturales; Díaz-Ríos, Manuel, Anatomy and Neurobiology, Medical Sciences Campus

[Life Sciences 01]

Localization of Choline Acetyltransferase-Like Immunoreactivity in Interneurons of the Mouse Spinal Cord

Agosto, Ibis, UNE; J. Barreto-Estrada, UPR-RCM; Roig-Lopez, JL, Science and Technology, UNE; Ortiz-Pineda, P, Science and Technology, UNE, Brito-Vargas P, Science and Technology, UNE; Vizcarrondo-Martinez G, UNE; Fernandez M., Science and Technology, UNE

[Life Sciences 02]

Microarray Expression Profile of the Hypothalamic Neuroendocrine Cell Line GT1-7 Under Exposure to Class I Androgen Analog Testosterone Propionate

Conde-Costas, Carlos, UPR-RIO PIEDRAS; Ortiz-Zayas, Jorge, Biology, UPR-Rio Piedras

[Life Sciences 03]

Nitrogen Dynamics in a Tropical Cave Stream

Figuerola, Cielo, UPR-RIO PIEDRAS; Meléndez-Ackerman, Elvia, Institute for Tropical Ecosystems Studies, University of Puerto Rico at Río Piedras

[Life Sciences 04]

*Evaluation of Potential Demographic Differences in the Subpopulations of the Mona Island Iguana *Cyclura Cornuta Stejnegeri* Across Different Forest Types in Mona Island, Puerto Rico*

Fumero, Jose J., UPR-RIO PIEDRAS; Elvia J. Melendez-Ackerman, Institute for Tropical Ecosystem Studies

[Life Sciences 05]

*Effects of Nectar Robbing Bananaquits on Flower Nectar, Pollinator Behavior and Plant Reproductive Success of *Pitcairnia angustifolia**

Laguna, Jessenia Yaris, UPR-RIO PIEDRAS; Cruz Muñoz, Ambar Roselyn, 1Department of Biology, University of Puerto Rico-Rio Piedras; Castro, Edgardo, 1Department of Biology, University of Puerto Rico-Rio Piedras; Santos Soto, Iván, 1Department of Biology, University of Puerto Rico-Rio Piedras; Soto, Yarelis, 1Department of Biology, University of Puerto Rico-Rio Piedras; Colón Cesario, Melissa, 2Department of Biology, University of Puerto Rico, Humacao; Peña de Ortiz, Sandra, 1Department of Biology, University of Puerto Rico-Rio Piedras

[Life Sciences 06]

DNA Recombination, Remote Memory and Hippocampal Synaptic Plasticity.

Malavé, Josué, UPR-MAYAGUEZ; Malave, Josue, University of Puerto Rico, Mayaguez; Carlos Rios Velazquez, University of Puerto Rico, Mayaguez; Rebecca Fry, Massachusetts Institute of Technology, Leona D. Samson, Massachusetts Institute of Technology

[Life Sciences 07]

*Development of a High-Throughput System to Globally Monitor the Dynamics of Sub-cellular Localization of a *Saccharomyces cerevisiae* Proteome Upon Exposure to an Alkylating Agent*

Martinez-Rivera, Noraida, UPR-RIO PIEDRAS; Torres-Vazquez, Irma, Biological Imaging Group, University of Puerto Rico-Rio Piedras; Serrano-Velez, Jose L., Biological Imaging Group, University of Puerto Rico-Rio Piedras; Rosa-Molinar, Eduardo, Biological Imaging Group, University of Puerto Rico-Rio Piedras

[Life Sciences 08]

*Immunohistochemical Characterization of a Gonadotrophin-Releasing Hormone 1 (GnRH-I) Neuronal System within the Ventral Spinal Cord in the Sexually Dimorphic Internal Fertilizing Teleost Fish, *Gambusia**

Nogueras, Carlos J., UPR-RIO PIEDRAS; Daniel Caballero-Rivera, Jessica Oyola-Cintrón; Orestes Quesada, José A. Lasalde-Dominicci

[Life Sciences 09]

C418W-nAChR as a Model to Study the Role of Lipid-Protein Interactions in Channel Clustering and Postsynapse Stability at the Neuromuscular Junction

Ocasio Torres, María, UPR-RIO PIEDRAS; Ocasio Torres, María E, Biology, UPR-RP; Sabat, Alberto, Biology, UPR-RP; Giray, Tugrul, Biology, UPR-Rio Piedras

[Life Sciences 10]

Long Rostrum as a Defense Mechanism for Xiphocaris Elongata

Ruiz, Francheska, UPR-RIO PIEDRAS; Tremblay, Raymond, University of Puerto Rico Humacao

[Life Sciences 11]

Population Dynamic of Eleutherodactylus Antillensis in Two Habitat Types

Ruiz, Hector, UPR-MAYAGUEZ; Ballantine, David, Marine Science, UPR-Mayaguez

[Life Sciences 12]

Dynamics of Shelf Edge Coral Reef-Associated Macroalgae at La Parguera, Puerto Rico

Santos, Sylmar, UPR-RIO PIEDRAS; Ramirez, Alonso, Biología, Universidad de Puerto Rico - Rio Piedras

[Life Sciences 13]

Life History, Population Structure, and Movement of Gobid Fishes in Tropical Urban and Non-Urban Watersheds

Seda Miró, Jasmine, UPR-MAYAGUEZ; Rosado, William, Marine Sciences, UPR-Mayaguez; Govind, Nadathur, Marine Sciences, UPR-Mayaguez

[Life Sciences 14]

Genetic Variation and Phenotypic Heterogeneity in Response to Cobalt(II) Among Strains of the Marine Yeast Debaryomyces Hansenii

Soler-Figueroa, Brenda María, UPR-MAYAGUEZ; Otero-Morales, Ernesto, Marine Science Department, University of Puerto Rico, Mayaguez

[Life Sciences 15]

Pyrodinium Bahamense var. Bahamense and Ceratium Furca var. Hircus Growth Rates and Bloom Dynamics at Bahía Fosforescente, La Parguera

Soto, Kristina, UPR-MAYAGUEZ; De Jesus-Cruz, Moises, Biology Department, University of Puerto Rico- Mayaguez; Casillas-Martinez, Lilliam, Biology Department, University of Puerto Rico- Humacao; Visscher, Pieter T., Marine Science Department, University of Connecticut, Rios-Velazquez, Carlos, Biology Department, University of Puerto Rico- Mayaguez

[Life Sciences 16]

Purple Non-Sulfur Anoxygenotrophs Bacteria isolated from Tropical Hypersaline Microbial Mats of the dry season at the Cabo Rojo Salterns of Puerto Rico

Mathematics

Almodóvar, Edgard, UPR-RIO PIEDRAS

[Mathematics 01]

Statistical Analysis of Egg Ecllosion from Clutch Size of Eretmochelys imbricata

Cardona, Gloriell, UPR-RIO PIEDRAS; Pérez, María-Eglée, Department of Mathematics, University of Puerto Rico Rio Piedras

[Mathematics 02]

Relationship Between Climatic Variables and The Incidence of Dengue in Ponce, Puerto Rico from 2003 to 2009

Pinero, Fernando, UPR-RIO PIEDRAS; Janwa, Heeralal, Department of Mathematics-UPR-Rio Piedras

[Mathematics 03]

Norm-Trace Codes and Subfield Subcodes For Deep Space Communications

Physics

Bobea, Milena, UPR-RIO PIEDRAS; Torres, Guillermo, Department of Physics - University of Puerto Rico, Rio Piedras Campus; Palai, Ratnakar, Department of Physics - University of Puerto Rico, Rio Piedras Campus

[Physics 01]

Application of the Magnetoelectric Effect to Exchange Bias in Fe/Cr₂O₃ and Ni/Cr₂O₃ heterostructures

Carpena, Jennifer, UPR-RIO PIEDRAS; Fonseca, Luis, Physics Department, UPR-Rio Piedras; Valentin, Luis, Physics Department, UPR-Rio Piedras; Yang, Dachi, Physics Department, UPR-Rio Piedras

[Physics 02]

Development of Expertise in In-Situ Experiments of Nanostructures

Correa, Margarita, UPR-RIO PIEDRAS; Kumar Ashok, Physics and Institute for Functional Nanomaterials, University of Puerto Rico; Katiyar Ram, Physics and Institute for Functional Nanomaterials, University of Puerto Rico

[Physics 03]

Study of Dielectric and Ferroelectric Properties of Perovskite Thin Films Grown by Pulsed Laser Deposition technique

Dussan, Sandra, UPR-RIO PIEDRAS; Ashok Kumar; Ram Katiyar, Physics, UPR-Rio Piedras

[Physics 04]

Multiferroic properties of artificially PZT/LSMO bi-layers

Galvez, Marco, UPR-MAYAGUEZ; Montes, Gina, Mechanical Engineering, University of Puerto Rico at Mayaguez; Perales, Oscar, Engineering Science and Materials, University of Puerto Rico at Mayaguez

[Physics 05]

Progress on the Synthesis and Characterization of Nanostructured Multifunctional Materials: BiFeO₃ and ZnO

Li, Fengyu, UPR-RIO PIEDRAS; Zhao, Jijun, School of Physics and Optoelectronic Technology, Dalian University of Technology; Wang, Lu, School of Physics and Optoelectronic Technology, Dalian University of Technology; Chen, Zhongfang, Department of Chemistry, University of Puerto Rico

[Physics 06]

Ab Initio Studies on Water Clusters

Lopez, Ivan Joel, UPR-RIO PIEDRAS; Dolidze, Vladimir, Department of Physics, UPRRP; Rivera, Manuel, Department of Physics, UPRRP; Rodriguez, Fabiola, Department of Chemistry, UPRRP; Martinez, Shirley, CIMATEC; Otero, James, CIMATEC; Aliev, Fouad, Department of Physics, UPRRP

[Physics 07]

Molecular Dynamics in Complex Systems

Medina, Olga, UPR-RIO PIEDRAS; Nocua, Jose Eneider, Fisica, UPR-Rio Piedras; Gomez, Ramon, Biologia, UPR-Bayamon; Montano, Daniel, Fisica, UPR-Rio Piedras; Avalos, Javier, UPR-Bayamon; Morell, Gerardo, Fisica, UPR-Rio Piedras; ,

[Physics 08]

Bacterial Behavior of Pseudomonas Aeruginosa on Micro and Nano diamond surface

Mendez, Hector G, UPR-MAYAGUEZ

[Physics 09]

Development of Pt Nanowires as Electrochemical Gas Sensors

Montalvo, Stephanie, UPR-RIO PIEDRAS; Valentin, Luis, Physics, UPR - Rio Piedras; Hernández, Janiece, Chemistry, UPR - Rio Piedras; Resto, Oscar, Physics, UPR - Rio Piedras

[Physics 10]

Transition Metal Silicide Nanorods for Spintronics Applications

Nocua, Jose, UPR-RIO PIEDRAS; Morell, Gerardo, Physics, UPR Rio Piedras

[Physics 11]

High-yield Synthesis of Stoichiometric Boron Nitride Nanostructures

Peng, Yan, UPR-RIO PIEDRAS; Boqian Yang, Department of Physics, University of Puerto Rico; M. Sajjad, Department of Physics, University of Puerto Rico; Peter X. Feng, Department of Physics, University of Puerto Rico

[Physics 12]

Structural Evolution of ZnO Thin Films with the Deposition Duration

Rivera, Adriana, UPR-RIO PIEDRAS; Wu, Javier, Department of Physics, UPR-RIO PIEDRAS; Palai, Ratnakar, Department of Physics, UPR-RIO PIEDRAS

[Physics 13]

Growth and Characterization of Ga_{1-x}Yb_xN Nanostructures Thin Films

SAJJAD, MUHAMMAD, UPR-RIO PIEDRAS; Zhang Hongxin, Physics, UPR; Peng Xiaoyan, Physics, UPR; Peter X. Feng, Physics, UPR-Rio Piedras

[Physics 14]

Synthesis of BN Nanostructure on Si and Mo substrates by Short Pulse Laser Plasma Deposition Technique

Sanchez, Dilsom Alberto, UPR-RIO PIEDRAS; Kumar, Ashok, Katiyar, Ram S.; Physics Dept, UPR Rio Piedras

[Physics 15]

Evidence of Multiferroic Properties at Room Temperature of Single-Phase Pb(Zr_{0.53}Ti_{0.47})_{1-x}(Fe_{0.50}Ta_{0.50})_xO₃ Thin Films

Tovar, Faiver, UPR-RIO PIEDRAS; Mosquera-Vargas , Edgar, Physics Department and Institute for Functional Nanomaterials, Universidad de Puerto Rico-Rio Piedras; Marin, Carlos, Engineering Department and Institute for Functional Nanomaterials, Universidad de Puerto Rico-Mayaguez

[Physics 16]

Vapor-Liquid-Solid Synthesis and characterization of Selenium-filled Single-Walled Carbon Nanotubes.

Urcia-Romero, Silvana, UPR-MAYAGUEZ; Perales-Pérez, Engineering Science and Materials; Gutierrez, Gustavo, Mechanical Engineering

[Physics 17]

Effect of Dy-Doping on the Structural and Magnetic Properties of Co-Zn Ferrite Nanocrystals for Magnetocaloric Applications

Valentin, Luis, UPR-RIO PIEDRAS; Hernandez Mayra, Chemistry UPR Rio Piedras; Fonseca Luis, Physics UPR Rio Piedras, Resto Oscar, Physics UPR Rio Piedras

[Physics 18]

Fabrication of Transition Metal Silicide and Oxides Nano- and for Thermal Sensors Applications

Velazquez, Rafael, UPR-RIO PIEDRAS

[Physics 19]

Study of growing microcrystalline Diamond on CrN coated Stainless Steel substrate

Zhang, Hongxin, UPR-RIO PIEDRAS; Xiaoyan Peng, Department of Physics and Institute for Functional Nanomaterials; Muhammad Sajjad, Department of Physics and Institute for Functional Nanomaterials; Peter Feng, Department of Physics and Institute for Functional Nanomaterials

[Physics 20]

Defects and Edge Reconstructions of Few-Layer Graphene