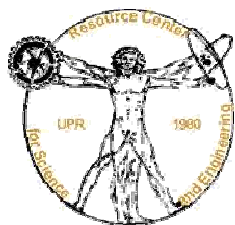


# 28<sup>th</sup> Puerto Rico Interdisciplinary Scientific Meeting



## 43<sup>rd</sup> ACS Junior Technical Meeting

# PROGRAM 2008



43<sup>rd</sup> ACS Junior Technical Meeting  
28<sup>th</sup> Puerto Rico Interdisciplinary Scientific Meeting (PRISM)

University of Puerto Rico  
Arecibo Campus  
March 8, 2008

SPONSORED BY

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University of Puerto Rico – Arecibo Campus

**43<sup>rd</sup> ACS Junior Technical Meeting**  
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**ORGANIZING AND SCIENTIFIC COMMITTEES**

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Dr. Ana C. Piñero  
Ms. Ana M. Feliciano  
Prof. Javier Figueroa  
Ms. Liz Bultrón  
Mr. Hector Mendez  
Mr. David Vega  
Ms. Adalis Molina  
Ms. Jenny Rivera

UPR-Arecibo

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Dra. Gisela Cordero  
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**43<sup>rd</sup> ACS Junior Technical Meeting**  
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**INVITED SPEAKER**

**Descifrando las propiedades de las moléculas de la vida**

Angel E. García, “Constellation Professor for Biocomputation and Bioinformatics”,  
Departamento de Física, y Centro de Biotecnología y Estudios Interdisciplinarios,  
Rensselaer Polytechnic Institute, Troy, NY 12180

Se describirá cómo funciones básicas de una célula, esenciales para la vida, pueden ser descritas en términos de principios físicos, como son las fuerzas, la energía y la dinámica. El propósito de los estudios es entender, a nivel atómico y molecular, la dinámica de proteínas y ácidos nucleicos. Para estudiar estos sistemas utilizamos métodos computacionales basados en dinámica molecular. En la charla se describirán estudios del plegamiento (“folding”) de proteínas en agua y en membranas. También se describirán los procesos de transporte de un fragmento de una proteína de VIH a través de una membrana. Este proceso puede utilizarse para integrar proteínas a una célula e interferir con sus funciones normales, trastocando la salud de la misma.

Dr. García received a Ph.D. in Theoretical Physics from Cornell University. He is a fellow of the American Physical Society and a member of the Biophysical Society, the Protein Society, the AAAS, and the American Chemical Society. He received the Edward Bouchard prize of the American Physical Society in 2006. Dr. Garcia’s research interests are theoretical and computational aspects of the structure, dynamics and stability of biological molecules.

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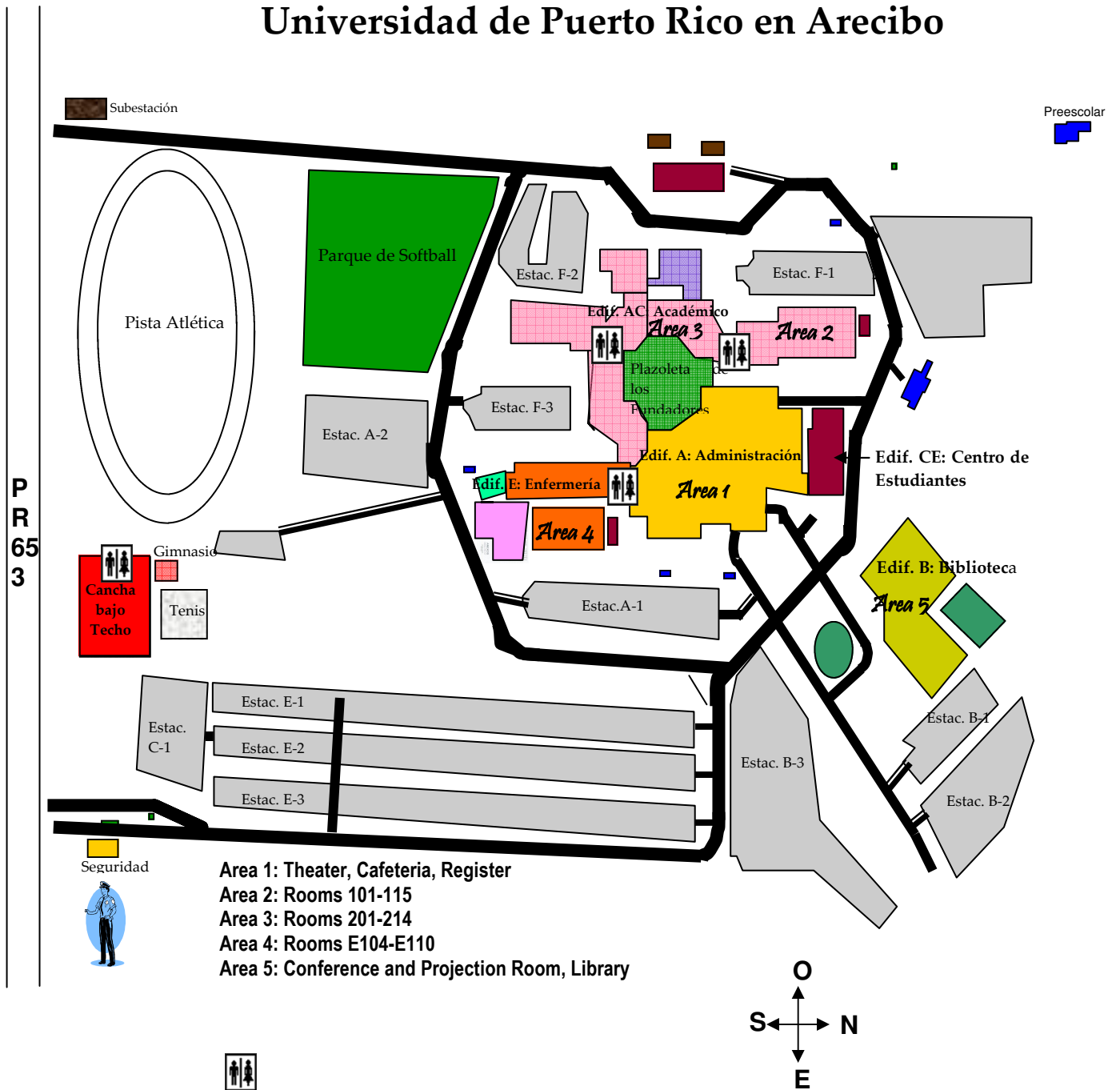
**PROGRAM**

<b>7:30 a.m. – 10:30 a.m.</b>	Registration / Breakfast (Lobby and Cafeteria)
<b>9:00 a.m. – 9:30 a.m.</b>	<b>Welcoming Remarks</b> (Theater) Dr. Maiella L. Ramos, Dean of Academic Affairs PR-LSAMP Liaison Officer University of Puerto Rico in Arecibo  Dr. Miguel Castro, President ACS Puerto Rico Chapter 2008  Dr. Manuel Gómez, Director University of Puerto Rico Resource Center for Science and Engineering  Dr. Edwin Hernández Vera, Chancellor University of Puerto Rico in Arecibo  Antonio García Padilla, Esq., President University of Puerto Rico
<b>9:30 a.m. – 9:45 a.m.</b>	<b>Presentation of Plenary Speaker</b> Dr. Manuel Gomez
<b>9:45 a.m. – 10:45 a.m.</b>	<b>Plenary Conference</b>
<b>10:45 a.m. – 11:00 a.m.</b>	Coffee Break (Lobby-Area 1)
<b>11:00 a.m. – 3:00 p.m.</b>	Late Registration (Lobby-Area 1)
<b>11:00 a.m. – 12:00 p.m.</b>	Concurrent Scientific Sessions (Area 2, 3, 4, 5 )
<b>11:30 a.m. – 1:30 p.m.</b>	Lunch –Cafeteria (Area 1)
<b>1:30 p.m. – 2:00 p.m.</b>	Poster Set-up (Theater-Area 1)
<b>1:45 p.m. – 3:25 p.m.</b>	Concurrent Scientific Sessions (Area 2, 3, 4, 5 )
<b>2:00 p.m. – 5:00 p.m.</b>	Poster Session (Theater)
<b>3:25 p.m. – 5:00 p.m.</b>	Reception (Theater-Area 1)

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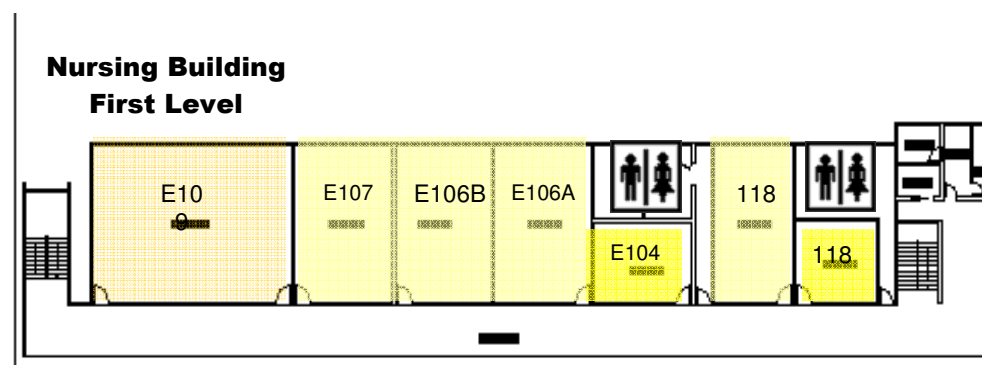
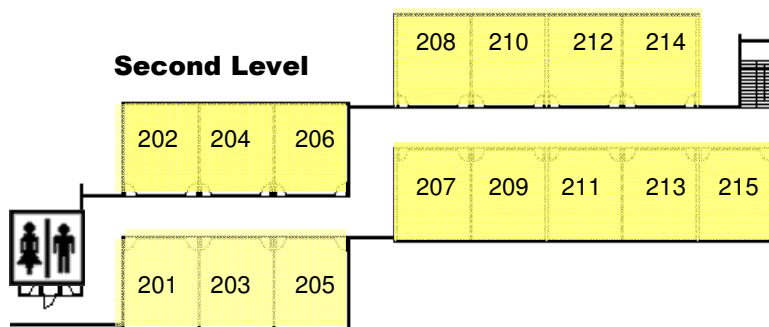
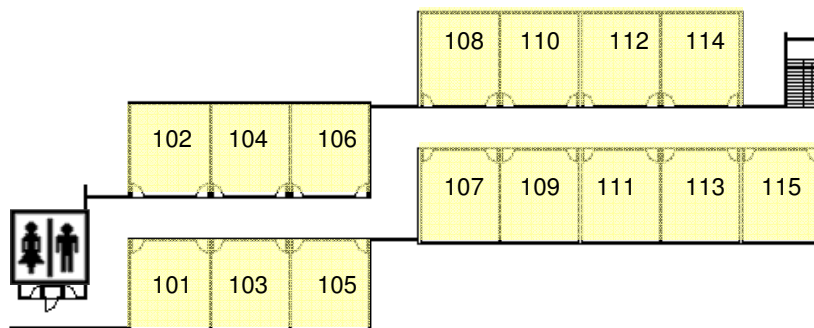
**MAP I**

**Universidad de Puerto Rico en Arecibo**



43<sup>rd</sup> ACS Junior Technical Meeting  
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University of Puerto Rico  
Arecibo Campus  
March 8, 2008

**MAP II**



## ORAL SESSIONS

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

# ***Agricultural Science***

**Session:** 01

**Room:** 113

**Moderator:** Prof. Concepción Rodríguez-UPR-Mayaguez

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Agricultural Sciences 01]</i> <b>Aponte, Deylen</b> <b>UPR-CAYEY</b>	<b><i>Effect of the distinct concentrations of hormones and studying the Development of the African Violet using Tissue Culture</i></b>
1:45PM → 2:05PM	<i>[Agricultural Sciences 02]</i> <b>Bermudez, Yara</b> <b>UPR-CAYEY</b>	<b><i>Population study of the termite species Reticulitermes lucifugu from the Termitidae family at two different sites at the UPR-Cayey</i></b>

# ***Chemistry***

**Session:** 01

**Room:** 102

**Moderator:** Prof. Néstor Velásquez-UPR-Arecibo

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Chemistry 01]</i> <b>Abel, Emely</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Chemical Reduction of Platinum on Diamond Nanoparticles for Fuel Cell Applications</i></b>
11:20AM → 11:40AM	<i>[Chemistry 02]</i> <b>Alvelo, Jesús G.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Preservation of protein stability upon dehydration with organic solvents</i></b>
11:40AM → 12:00PM	<i>[Chemistry 03]</i> <b>Amaro, Alexandra</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Synthesis of parthenolide analogs as anti-leukemia agents</i></b>

12:00MD -> 1:30PM

**Lunch Break**

**Moderator: Prof. Néstor Velásquez-UPR-Arecibo**

1:45PM -> 2:05PM

*[Chemistry 04]*  
**Andujar,Ivonne**  
**UPR-RIO PIEDRAS**

***Impact Of 8-Heteroaryl-2'-Deoxyguanosine analogues on G-Quadruplex formation***

2:05PM -> 2:25PM

*[Chemistry 05]*  
**Aúsua,Migray**  
**PUCPR**

***Determinacion de metales en el particulado del Aire en Guayama, Puerto Rico***

2:25PM -> 2:45PM

*[Chemistry 06]*  
**Báez,Pedro**  
**UPR-MAYAGUEZ**

***Development of a Sol-Gel Based Electrochemical Biosensor for the detection of Hydrogen Sulfide.***

2:45PM -> 3:05PM

*[Chemistry 07]*  
**Barbosa,Cindy**  
**UPR-RIO PIEDRAS**

***Chemosensing applications of Binuclear Platinum(II) complex intercalated into Zirconium Phosphate Layers***

3:05PM -> 3:25PM

*[Chemistry 08]*  
**Benitez,Jamaries**  
**UPR-MAYAGUEZ**

***Systematic Studies of the Total Suspended Particulate in Mayaguez, Puerto Rico***

**Session: 02**

**Room: 204**

**Moderator: Prof. Vanessa Montalvo-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Chemistry 09]</i> <b>Bermudez,Angel</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Pt/GC, Pt/CeO<sub>2</sub>/GC , Pt/Ru/GC and Pt/Ru/CeO<sub>2</sub>/GC Electrode Preparation in Order to Understand Role of CeO<sub>2</sub> in Methanol Oxidation: An Electrochemical Study.</i></b>
11:20AM -> 11:40AM	<i>[Chemistry 10]</i> <b>Burgos,Melisa</b> <b>UPR-MAYAGUEZ</b>	<b><i>Expression and Purification of Recombinant Hemoglobin II from the clam <i>Lucina pectinata</i></i></b>
11:40AM -> 12:00PM	<i>[Chemistry 11]</i> <b>Butler,Madeline</b> <b>UPR-ARECIBO</b>	<b><i>Rio Grande de Arecibo Chemical Parameters Determination</i></b>

12:00MD -> 1:30PM

**Lunch Break**

**Moderator: Prof. Carmelo García-UPR Humacao**

1:45PM ->2:05PM

*[Chemistry 12]*  
**Camacho-Soto,Karla**  
**UPR-RIO PIEDRAS**

***Synthesis and Characterization of Dendronized 8-Aryl-2'-Deoxyguanosine Derivatives***

2:05PM -> 2:25PM

*[Chemistry 13]*  
**Capellan,Ivelisse**  
**UPR-RIO PIEDRAS**

***Intercalation of Methylene Blue in Zirconium Phosphates***

2:25PM -> 2:45PM

*[Chemistry 14]*  
**Caraballo,Cynthia**  
**UPR-MAYAGUEZ**

***Environmental impact of acid rain episodes in the Island of Puerto Rico***

2:45PM -> 3:05PM

*[Chemistry 15]*  
**Carrero,Zunamys**  
**UPR-MAYAGUEZ**

***Bulk Density and Concentration Analysis for Different APAP Formulations Using NIR Spectroscopy***

3:05PM - >3:25PM

*[Chemistry 16]*  
**Chamoun,Ana**  
**UPR-MAYAGUEZ**

***Synthesis of Gold Nanorods at Different Aspect Ratio for Surface-Enhanced Raman Spectroscopy (SERS) Applications***

**Session: 03**

**Room: 205**

**Moderator: Prof. Angel Montes-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Chemistry 17]</i> <b>Collazo,Aura L.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Host-Guest Properties of Self-Assembled Dendrimers</i></b>
11:20AM ->11:40AM	<i>[Chemistry 18]</i> <b>Cruz,Jose</b> <b>UPR-MAYAGUEZ</b>	<b><i>Rates and Mechanisms of [60] Fullerene Dissociation from Vaska's Complex</i></b>
11:40AM ->12:00PM	<i>[Chemistry 19]</i> <b>Cruz-Ramírez de Arellano,Daniel</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Synthesis and Supramolecular Properties of 8-Arylguanine-N9-Acetic Acid Derivatives</i></b>

12:00MD -> 1:30PM

**Lunch Break**

**Moderator: Prof. Angel Montes-UPR-Arecibo**

1:45PM -> 2:05PM

*[Chemistry 20]*  
**David, Amanda**  
**UPR-RIO PIEDRAS**

***Encapsulation of Insulin into Inorganic Layered Materials Envisioned as***

2:05PM -> 2:25PM

*[Chemistry 21]*  
**De la Torre, Sonia**  
**UPR-RIO PIEDRAS**

***A Greener Approach for Oxidations Reactions***

2:25PM -> 2:45PM

*[Chemistry 22]*  
**Del Moral, Giana**  
**UPR-HUMACAO**

***Study of gold surface modified with Mercapto Compounds***

2:45PM -> 3:05PM

*[Chemistry 23]*  
**Del Pilar, Joselyn**  
**UPR-RIO PIEDRAS**

***Electrochemical DNA Biosensor Arrays Using Funcionalized Polystyrene Films***

3:05PM -> 3:25PM

*[Chemistry 24]*  
**Delgado, Yamixa**  
**UPR-HUMACAO**

***Active-site electron paramagnetic resonance studies of subtilisin Carlsberg dissolved and suspended in 1,4-dioxane: relationship between enzyme activity and flexibility.***

**Session: 04**

**Room: 105**

**Moderator: Prof. Emiliano García-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:00AM	<i>[Chemistry 25]</i> <b>Diaz, Veronica</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Intercalation of an Octanuclear Iron Pyrazolate in a Zirconium Phosphate Framework</i></b>
11:20AM -> 11:40AM	<i>[Chemistry 26]</i> <b>Fonseca, José</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Direct Methanol Fuel Cells Parameters Optimization</i></b>
11:40AM -> 12:00PM	<i>[Chemistry 27]</i> <b>Fragoso, Ivonne</b> <b>UPR-RIO PIEDRAS</b>	<b><i>A novel methodology to determine the presence of <math>\beta</math>-N-methylamino-L-alanine neurotoxin in natural waters.</i></b>

12:00MD -> 1:30PM

**Lunch Break**

**Moderator: Prof. Emiliano García-UPR-Arecibo**

1:45PM -> 2:05PM

*[Chemistry 28]*  
**Fuentes, Josie**  
**UPR-HUMACAO**

***Singlet State Energy of Phenothizines***

2:05PM -> 2:25PM

*[Chemistry 29]*  
**Hernández, Dionne**  
**UPR-RIO PIEDRAS**

***Photophysics And Photochemistry of Imipramine, Desimipramine and Clomipramine in several solvents: a Fluorescence, 266 Nm Laser Flash and theoretical study***

2:25PM -> 2:45PM

*[Chemistry 30]*  
**Hidalgo, Migdalia**  
**UPR-MAYAGUEZ**

***Sorption of VOCs and PAHs onto crumb rubber from aqueous solutions***

2:45PM -> 3:05PM

*[Chemistry 31]*  
**Ibarra, Kristal**  
**UPR-RIO PIEDRAS**

***Can We See the Impact of Anthropogenic Pollution in El Yunque National Forest?***

3:05PM -> 3:25PM

*[Chemistry 32]*  
**Karry, Krizia**  
**UPR-MAYAGUEZ**

***Near-Infrared Spectroscopy as a reliable method for the detection of Physical and Chemical property changes***

**Session: 05**

**Room: 108**

**Moderator: Prof. Ivonne Fernández-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Chemistry 33]</i> <b>Kuilan, Laurimer</b> <b>UPR-RIO PIEDRAS</b>	<b><i>The Analysis of Pharmaceutical Compounds in Natural Waters by High Performance Liquid Chromatography (HPLC-PDA)</i></b>
11:20AM -> 11:40AM	<i>[Chemistry 34]</i> <b>Laboy, Kristie</b> <b>UPR-MAYAGUEZ</b>	<b><i>Evaluation of GEL strip homogeneity using</i></b>

11:40AM → 12:00PM	<i>[Chemistry 35]</i> <b>Lajara,Mirta</b> <b>UPR-MAYAGUEZ</b>	<b><i>Chemical composition of the fragrance of the flower of “Sansevieria Trifasciata Laurenti” by SPME/GC-MS: perfume applications</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Maiella L. Ramos-UPR-Arecibo</b>	
1:45PM → 2:05PM	<i>[Chemistry 36]</i> <b>Latorre,Elena</b> <b>UPR-MAYAGUEZ</b>	<b><i>Synthesis of Fluorescent Nanoparticles for Use as Biosensors</i></b>
2:05PM → 2:25PM	<i>[Chemistry 37]</i> <b>Leon,Joshua</b> <b>UPR-MAYAGUEZ</b>	<b><i>Analysis of low content drug tablets by transmission near infrared spectroscopy. selection of calibration ranges according to multivariate detection and quantitation limits of PLS models</i></b>
2:25PM → 2:45PM	<i>[Chemistry 38]</i> <b>Lopez,Rebeca</b> <b>UPR-MAYAGUEZ</b>	<b><i>Characterization of the Chemical Composition of the flower fragrance of “Sansevieria Cylindric” plant by SPME/GC-MS: Perfume Applications</i></b>
2:45PM → 3:05PM	<i>[Chemistry 39]</i> <b>Lorenzo,Camille</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Platinum deposits on carbon films prepared by supercritical CO2 methods</i></b>
3:05PM → 3:25PM	<i>[Chemistry 40]</i> <b>Lugo,Leyda</b> <b>PUCPR</b>	<b><i>Electron transfer kinetic study of Quinonoid compounds influenced by the presence of bismuth in solution at platinum polycrystalline electrodes, in acid electrolyte.</i></b>

**Session: 06**

**Room: 208**

**Moderator: Prof. Zwinda Rivera-UIPR-San Germán**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Chemistry 41]</i> <b>Marcano, Aileen</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Electrochemical Characterization of 1-ferrocenyl-3-(p-nitrophenyl)prop-2-en-1-one</i></b>
11:20AM → 11:40AM	<i>[Chemistry 42]</i> <b>Marchany, Darya</b> <b>UPR-MAYAGUEZ</b>	<b><i>Crystallization of sulfhemoglobin</i></b>
11:40AM → 12:00PM	<i>[Chemistry 43]</i> <b>Márquez, Eduardo A.</b> <b>UPR-MAYAGUEZ</b>	<b><i>Synthesis of a Clavilier-type Pt(100) Single Crystal Electrode</i></b>

12:00MD -> 1:30PM

**Lunch Break**

**Moderator: Prof. Zwinda Rivera-UIPR-San Germán**

1:45PM → 2:05PM	<i>[Chemistry 44]</i> <b>Martinez, Michelle</b> <b>UPR-RIO PIEDRAS</b>	<b><i>DNA-AC1/70 complex Crystallization</i></b>
2:05PM → 2:25PM	<i>[Chemistry 45]</i> <b>Mateo, Daniel</b> <b>UPR-MAYAGUEZ</b>	<b><i>Determination of the rate constant of the oxidation of copper ion with Hydrogen peroxide in presence of KCl using cyclic voltammetric techniques</i></b>
2:25PM → 2:45PM	<i>[Chemistry 46]</i> <b>Melendez Gonzalez, Hector J</b> <b>UPR-HUMACAO</b>	<b><i>Efficient Synthesis of Enantiopure Primary Amines via the Asymmetric Reduction of Oximes Ether using the Spiroborate Ester / Borane System as Catalyst.</i></b>
2:45PM → 3:05PM	<i>[Chemistry 47]</i> <b>Merced, Francisco</b> <b>UPR-HUMACAO</b>	<b><i>Synthesis of Highly Enantiopure Chroman-4 and Thiochroman-4-Amines by the Catalytic Reduction of Oxime O-Benzyl Ethers using the Novel Spiroborate Ester / Borane System</i></b>

3:05PM → 3:25PM

*[Chemistry 48]*  
**Miller,Andrismery**  
**UPR-RIO PIEDRAS**

***Characterization of ferrocene derivatives intercalated in zirconium phosphate layers***

**Session: 07**

**Room: 209**

**Moderator: Prof. Rolando Tremont-UPR-Humacao**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Chemistry 49]</i> <b>Molina-Calzada,Anna</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Optimization of the Derivatization Step for the Analysis of Pharmaceutical Compounds in Natural Waters of Puerto Rico with Gas Chromatography/Mass Spectrometry (GC-MS)</i></b>
11:20AM → 11:40AM	<i>[Chemistry 50]</i> <b>Morales,Keyla F.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Cleavage of epoxides with functionalized alkynylaluminum reagents</i></b>
11:40AM → 12:00PM	<i>[Chemistry 51]</i> <b>Nieves,Abner</b> <b>UPR-MAYAGUEZ</b>	<b><i>The study between the reaction of Hbl(FeIII) with H2S.</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Rolando Tremont-UPR-Humacao</b>	
1:45PM → 2:05PM	<i>[Chemistry 52]</i> <b>Ojeda,Geovannie</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Detection of FAEEs in skin surface lipids as biomarkers of ethanol consumption in alcoholics, social drinkers, sporadic drinkers and teeotalaters using a methodology based on microwave-assisted extraction followed by solid phase micro extraction and gas c</i></b>
2:05PM → 2:25PM	<i>[Chemistry 53]</i> <b>Oquendo,Luis</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Self-Assembled Dendrimers Based on 8-Aryl-2'-Deoxyguanosine Derivatives: Synthesis &amp; Thermosensitive Properties</i></b>

2:25PM → 2:45PM	<i>[Chemistry 54]</i> <b>Ortiz, Katia</b> <b>UPR-MAYAGUEZ</b>	<b><i>Cloning of hCen2 F5W mutant into an expression vector containing hsf1</i></b>
2:45PM → 3:05PM	<i>[Chemistry 55]</i> <b>Otero, Ariel</b> <b>UPR-CAYEY</b>	<b><i>Green Oxidation of Alcohols to Aldehydes and Ketones</i></b>
3:05PM → 3:25PM	<i>[Chemistry 56]</i> <b>Pagan Miranda, Coral</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Deposition of Carbon Nanotubes of DNA and Mercaptohexanol Self-Assembled Monolayers</i></b>

**Session: 08**

**Room: E-104**

**Moderator: Prof. Rosa Brito Gómez-UIPR Recinto Metropolitano**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Chemistry 57]</i> <b>Pérez, Riviam</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Intercalation of cisplatin in inorganic layers complexes</i></b>
11:20AM → 11:40AM	<i>[Chemistry 58]</i> <b>Perez, Zulmarie</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Biotesting of Caribbean Sponges for Antituberculosis Bioactivity</i></b>
11:40AM → 12:00PM	<i>[Chemistry 59]</i> <b>Pietri, Frances</b> <b>UPR-MAYAGUEZ</b>	<b><i>Determining the limit of H<sub>2</sub>S needed in the reaction of Hbl(FeIII)H<sub>2</sub>S + e<sup>-</sup> → Hbl(FeII) + H<sub>2</sub>S (deliver) for the formation of the deoxy product</i></b>

12:00MD → 1:30PM

**Lunch Break**

**Moderator: Prof. Rosa Brito Gómez-UIPR Recinto Metropolitano**

1:45PM → 2:05PM	<i>[Chemistry 61]</i> <b>Ramos, Anjuli</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Photophysical behavior of 1,3- and 1,6-dinitropyrene in solution</i></b>
2:05PM → 2:25PM	<i>[Chemistry 60]</i> <b>Ramos, Carmen</b> <b>UPR-ARECIBO</b>	<b><i>Bacterial Inhibition starting from brown algae: Padina gymnospora</i></b>
2:25PM → 2:45PM	<i>[Chemistry 62]</i>	<b><i>Platinum surfaces modified with</i></b>

	<b>Reyes, Evlin</b> <b>UIA-METRO</b>	<b><i>3-mercaptopropionic acid, and 16-Mercaptohexadecanoic acid at different conditions: An electrochemical study</i></b>
2:45PM -> 3:05PM	<i>[Chemistry 63]</i> <b>Rios-Pagan, Annette</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Electrochemical Sensing of DNA Chemically Attached to Self-Assembled Monolayers on Gold Substrates</i></b>
3:05PM -> 3:25PM	<i>[Chemistry 64]</i> <b>Rivera, Adriana</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Synthesis of the 5-pentacosynoic and 9-pentacosynoic Acids</i></b>

**Session: 09**

**Room: E-106A**

**Moderator: Prof. Fernando Herrera-UPR Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Chemistry 65]</i> <b>Rivera, Christian</b> <b>UPR-MAYAGUEZ</b>	<b><i>Reactivity of hydrogen sulfide with immobilized hemoglobin in a matrix of Tetramethylortosilicate</i></b>
11:20AM -> 11:40AM	<i>[Chemistry 66]</i> <b>Rivera, Danisha M.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Second generation epoxide based methodology: The use of oxygenated alkynyl aluminum reagents as epoxide cleaving agents</i></b>
11:40AM -> 12:00PM	<i>[Chemistry 67]</i> <b>Rivera, Izarys</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Increasing the stability of proteins by covalent modification with poly(ethylene) glycol</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Fernando Herrera-UPR Arecibo</b>		
1:45PM -> 2:05PM	<i>[Chemistry 68]</i> <b>Rivera-Negrón, Jose Roberto</b> <b>UPR-MAYAGUEZ</b>	<b><i>Characterization of Volatile Organic Compounds in Drinking Water supplies in Puerto Rico by SPME/GC-MS</i></b>

2:05PM → 2:25PM	<i>[Chemistry 69]</i> <b>Rivera-Vélez, Nelson E.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Study of Ionic Strength Effect on Non-Covalent DNA-CNT Composite Formation</i></b>
2:25PM → 2:45PM	<i>[Chemistry 70]</i> <b>Rodriguez, Gabriel G.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>DNA Electrochemical Bio-Sensor Support Using Pt Nano-Particles on Carbon Black</i></b>
2:45PM → 3:05PM	<i>[Chemistry 71]</i> <b>Rodriguez, Josiris</b> <b>UPR-MAYAGUEZ</b>	<b><i>Oxidation of hemoglobins II and III from the clam <i>Lucina Pectinata</i></i></b>
3:05PM → 3:25PM	<i>[Chemistry 72]</i> <b>Rosa, Kellymar</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Grignard-Based Epoxide Coupling Methodology: Application to Polypropionate Synthesis</i></b>

**Session: 10**

**Room: 201**

**Moderator: Prof. Fabio Alape-UPR Humacao**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Chemistry 73]</i> <b>Rosado, Arelys</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Design, Construction and Analytical Characterization of a DNA Sensor for the Detection of Salmonella</i></b>
11:20AM → 11:40AM	<i>[Chemistry 74]</i> <b>Santiago, Jorge</b> <b>UPR-MAYAGUEZ</b>	<b><i>Protein expression and isolation of recombinant Human SFI1</i></b>
11:40AM → 12:00PM	<i>[Chemistry 75]</i> <b>Santiago, Miguel</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Development of ssDNA covalently modified with Polyvinylferrocene for electrochemical detection and isolation of a specific DNA sequence.</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Fabio Alape-UPR Humacao</b>	
1:45PM → 2:05PM	<i>[Chemistry 76]</i>	<b><i>Characterization of the wetting</i></b>

	<b>Sepulveda, Melyorise</b> <b>UPR-MAYAGUEZ</b>	<i>transition using replica exchange Monte Carlo</i>
2:05PM → 2:25PM	<i>[Chemistry 77]</i> <b>Silva, Diana</b> <b>UPR-RIO PIEDRAS</b>	<i>Total synthesis of the novel (5Z,9Z)-2-methoxy-5,9-octadecadienoic acid</i>
2:25PM → 2:45PM	<i>[Chemistry 78]</i> <b>Sosa, Brian</b> <b>UPR-RIO PIEDRAS</b>	<i>Encapsulation of horseradish peroxidase nano-particles in poly(lactic-co-glycolic) acid microspheres</i>
2:45PM → 3:05PM	<i>[Chemistry 79]</i> <b>Soto-Feliciano, Yadira M.</b> <b>UPR-MAYAGUEZ</b>	<i>Detection of DNA nucleotides using Surface-Enhanced Raman Spectroscopy (SERS) on Gold Nanorods</i>
3:05PM → 3:25PM	<i>[Chemistry 80]</i> <b>Sotomayor, Janice</b> <b>PUCPR</b>	<i>Identification of cytochrome P450 isoenzymes present in Cho Cells treated with Bay Laurel extracts</i>

**Session: 11**

**Room: 211**

**Moderator: Prof. Cándida Peña-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Chemistry 81]</i> <b>Suarez, Ginamaria</b> <b>UPR-MAYAGUEZ</b>	<i>Phytoremediation of soils with TNT by Rubia tinctorum</i>
11:20AM → 11:40AM	<i>[Chemistry 82]</i> <b>Torres, Rafael E</b> <b>UPR-RIO PIEDRAS</b>	<i>Room-Temperature Luminescence of Platinum(II) Complexes Intercalated into Zirconium Phosphate Layers</i>
11:40AM → 12:00PM	<i>[Chemistry 83]</i> <b>Torres, Zally</b> <b>UPR-HUMACAO</b>	<i>Thermal denaturation of subtilisin C. in Acetonitrile/H<sub>2</sub>O mixtures</i>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Cándida Peña-UPR-Arecibo</b>	
1:45PM → 2:05PM	<i>[Chemistry 84]</i>	<i>Asymmetric Borane Reduction</i>

	<b>Torruellas, Carilyn</b> <b>UPR-HUMACAO</b>	<i>of 2-Chloro Acetophenone Catalyzed by the Spiroborate Ester Derived from (S)-Diphenyl Prolinol</i>
2:05PM → 2:25PM	<i>[Chemistry 85]</i> <b>Valle, Carlos</b> <b>UPR-RIO PIEDRAS</b>	<i>Photophysical Characterization of 1-nitropyrene in Different Solvents</i>
2:25PM → 2:45PM	<i>[Chemistry 86]</i> <b>Vargas, Wandylis</b> <b>UPR-MAYAGUEZ</b>	<i>Evaluation of Strain and Shear Effects in Pharmaceutical Lubricated Blends using Near Infrared Spectroscopy</i>
2:45PM → 3:05PM	<i>[Chemistry 87]</i> <b>Vargas-Barbosa, Nella Marie</b> <b>UPR-RIO PIEDRAS</b>	<i>Carbon Nanotubes Covalently Attached on Gold as Substrate for Electrochemical DNA Sensing</i>
3:05PM → 3:25PM	<i>[Chemistry 88]</i> <b>Vazquez, Cindybeth</b> <b>UPR-HUMACAO</b>	<i>Highly Enantioselective Reduction of Thiofuranyl Ketones and Thiochromanones with Borane and the Spiroborate Ester derived from (S)-Diphenyl Prolinol as Catalyst</i>

**Session: 12**

**Room: 113**

**Moderator: Prof. Sylka Torres-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:20AM → 11:40AM	<i>[Chemistry 89]</i> <b>Vázquez, Soleyl</b> <b>UPR-RIO PIEDRAS</b>	<i>Total Synthesis of the novel 2,6- docosadiynoic acid</i>
11:40AM → 12:00PM	<i>[Chemistry 90]</i> <b>Velez, Denisse</b> <b>UPR-RIO PIEDRAS</b>	<i>Formation of protein nanoparticles by the use of methyl-β-cyclodextrin</i>
12:00MD → 1:30PM		<b>Lunch Break</b>
2:05PM → 2:25PM	<i>[Chemistry 91]</i> <b>Vélez, Pedro J.</b>	<i>Análisis de Metales en las aguas subterráneas</i>

	<b>PUCPR</b>	<i>circundantes al vertedero de Desperdicios Sólidos de Guayama, Puerto Rico</i>
2:25PM → 2:45PM	<i>[Chemistry 92]</i> <b>Villanueva Birriel,Cecille UPR-RIO PIEDRAS</b>	<i>Physical and Radiative Properties of Aerosol Particles in the Caribbean: Influence of African Dust and Volcanic Ash from the Soufrière Hills Volcano</i>
2:45PM → 3:05PM	<i>[Chemistry 93]</i> <b>Zayas,Francisco UPR-MAYAGUEZ</b>	<i>Synthesis of Fluorescent Nanoparticles for Use as Biosensors</i>

## **Computer Science**

**Session: 01**

**Room: 115**

**Moderator: Prof. Edward Latorre-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
1:45PM → 2:05PM	<i>[Computer Sciences 01]</i> <b>Alicea,Emmanuel UIA-BAYAMON</b>	<i>Linux-Based Computer Cluster for High-Performance Processing</i>
2:05PM → 2:25PM	<i>[Computer Sciences 02]</i> <b>Diaz,Humberto UPR-MAYAGUEZ</b>	<i>Game Engine Development for the Integration of CS Teaching Modules</i>
2:25PM → 2:45PM	<i>[Computer Sciences 03]</i> <b>Merced Serrano,Myrna UPR-HUMACAO</b>	<i>Improving Usability of Molecular Dynamics Simulation Software</i>
2:45PM → 3:05PM	<i>[Computer Sciences 04]</i> <b>Rios,Miguel UPR-MAYAGUEZ</b>	<i>Design and Development of a Web--based Monitoring System for Photovoltaic Applications</i>
3:05PM → 3:25PM	<i>[Computer Sciences 05]</i> <b>Rivera,Axel UPR-HUMACAO</b>	<i>A Methodology to determine the number of Clusters in unsupervised Hyperspectral image classification</i>

# ***Education***

**Session:** 01

**Room:** Conference Room, Library

**Moderator:** Prof. Ivette Martínez-UPR-Arecibo

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
2:05PM → 2:25PM	<i>[Education 01]</i> <b>Ramos,Rafael</b> <b>UPR-RIO PIEDRAS</b>	<b><i>The use of the Evaluation portfolio in the organic chemistry laboratory as an Assessment technique</i></b>
2:45PM → 3:05PM	<i>[Education 02]</i> <b>Rodriguez,Lisabel</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Using a Dynamic Simulation Environment to Improve General Chemistry Concepts Learning.</i></b>

# ***Electronics***

**Session:** 01

**Room:** Conference Room, Library

**Moderator:** Prof. Carlos Maldonado-UPR-Arecibo

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
2:25PM → 2:45PM	<i>[Electronics 01]</i> <b>Carballo,Jonathan</b> <b>UPR-BAYAMON</b>	<b><i>Controlling a Robotic Arm using a Microcontroller and the Protocol TCP-IP</i></b>
3:05PM → 3:25PM	<i>[Electronics 02]</i> <b>Villafañe,Marisel</b> <b>UPR-BAYAMON</b>	<b><i>Dynamic Simulation of Biological Black Holes in Neural Circuits</i></b>

# Engineering

**Session:** 01

**Room:** 109

**Moderator:** Prof. Hirohito Torres-UPR-Arecibo

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Engineering 22]</i> <b>Rivera,Jeffrey</b> <b>UPR-MAYAGUEZ</b>	<b><i>Dynamic model of Residential Photovoltaic Energy production in PR Part 1: Model assumptions and purposes</i></b>
11:20AM -> 11:40AM	<i>[Engineering 06]</i> <b>Cora,Armando</b> <b>UPR-MAYAGUEZ</b>	<b><i>Dynamic model of Residential Photovoltaic Energy production in PR</i></b>
11:40AM -> 12:00PM	<i>[Engineering 27]</i> <b>Román,Tania</b> <b>UPR-BAYAMON</b>	<b><i>Dynamic model of Residential Photovoltaic Energy production in PR</i></b>

12:00MD -> 1:30PM

**Lunch Break**

**Moderator:** Prof. Hirohito Torres-UPR-Arecibo

1:45PM -> 2:05PM	<i>[Engineering 01]</i> <b>Ares,Samuel</b> <b>UPR-MAYAGUEZ</b>	<b><i>Parametric Characterization of Planar Micro-Pore Single-Cell Electroporation</i></b>
2:05PM -> 2:25PM	<i>[Engineering 02]</i> <b>Avilés-Barreto,Sonia L.</b> <b>UPR-MAYAGUEZ</b>	<b><i>Rheology of Silica Nanoparticles Dispersions in a Polymer Matrix</i></b>
2:25PM -> 2:45PM	<i>[Engineering 03]</i> <b>Cantres,Ninoshka</b> <b>UPR-MAYAGUEZ</b>	<b><i>Is it possible to use recycled metallic matrix composites for new applications?</i></b>
2:45PM -> 3:05PM	<i>[Engineering 04]</i> <b>Carrasquillo,Ronald</b> <b>UPR-MAYAGUEZ</b>	<b><i>Influence of centrifugal casting processing parameters on the distribution of reinforcing particles in aluminum matrix composites</i></b>
3:05PM -> 3:25PM	<i>[Engineering 05]</i> <b>Cedeno,Felix</b> <b>UPR-MAYAGUEZ</b>	<b><i>Low Power Consumption Software for Cochlear Implants</i></b>

**Session: 02**

**Room: 110**

**Moderator: Prof. Eduardo Perez-UIPR-Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Engineering 07]</i> <b>Cortes,Angel</b> <b>UPR-MAYAGUEZ</b>	<b><i>Synthesis and Characterization of Dextran Coated Mn/Zn-Ferrite Nanoparticles for Cancer Treatment Applications</i></b>
11:20AM -> 11:40AM	<i>[Engineering 08]</i> <b>Cruz,Benjamin</b> <b>UPR-MAYAGUEZ</b>	<b><i>Pressure Drop Across a Pin Fin Array</i></b>
11:40AM -> 12:00PM	<i>[Engineering 9]</i> <b>Duarte,Pablo</b> <b>UPR-MAYAGUEZ</b>	<b><i>Denitrification of Zeolite Cancrinite for the Templated Synthesis of Nanostructures.</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Hien Vo-UIPR-Bayamon</b>		
1:45PM -> 2:05PM	<i>[Engineering 10]</i> <b>Encarnacion,Luis G.</b> <b>UPR-MAYAGUEZ</b>	<b><i>Generation of Light Continous from Transparent Media</i></b>
2:05PM -> 2:25PM	<i>[Engineering 11]</i> <b>Espinal,Ana</b> <b>UIA-BAYAMON</b>	<b><i>Aspect Angle Variations of Stimulated Radio Emissions from the Ionosphere</i></b>
2:25PM -> 2:45PM	<i>[Engineering 12]</i> <b>Ferreira,Manuel</b> <b>UPR-MAYAGUEZ</b>	<b><i>Laboratory Modules Design: Learning Object-Oriented Programming with Computer Graphics</i></b>
2:45PM -> 3:05PM	<i>[Engineering 13]</i> <b>Maldonado,Darlene</b> <b>UIA-BAYAMON</b>	<b><i>Comparison of critical and underdense generation of Langmuir turbulence</i></b>
3:05PM -> 3:25PM	<i>[Engineering 14]</i> <b>Martinez,Vonmarie</b> <b>UPR-MAYAGUEZ</b>	<b><i>How magnetic properties change with temperature, looking for a macro model to explain such observation.</i></b>

**Session: 03**

**Room: 210**

**Moderator: Prof. Jaime Yeckle-UIPR Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Engineering 15]</i> <b>Mendoza,Riquelmi</b> <b>UPR-MAYAGUEZ</b>	<b><i>Zirconium and Vanadium Particles in Al-B Composites by Centrifugal Casting</i></b>
11:20AM -> 11:40AM	<i>[Engineering 16]</i> <b>Morales,Ramon</b> <b>UIA-BAYAMON</b>	<b><i>Ambiente de simulacion para estudiantes de Ingenieria, matemáticas y ciencias</i></b>
11:40AM -> 12:00PM	<i>[Engineering 17]</i> <b>Morales-</b> <b>Quinones,Barbara</b> <b>UPR-MAYAGUEZ</b>	<b><i>Data Collection Protocol for the Quantitative Analysis of CS1/2 Programming Lab Effectiveness</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Rafael Canales-UIPR-Bayamon</b>		
1:45PM -> 2:05PM	<i>[Engineering 18]</i> <b>Pérez,Annette</b> <b>UPR-MAYAGUEZ</b>	<b><i>Stiffness of fly-ash concrete mixes</i></b>
2:05PM -> 2:25PM	<i>[Engineering 19]</i> <b>Plaza,Nayomi</b> <b>UPR-MAYAGUEZ</b>	<b><i>Pin-On-Disk Construction for Tribological Characterization of Al Matrix Composites</i></b>
2:25PM -> 2:45PM	<i>[Engineering 20]</i> <b>Ramirez Beltran,Manuel</b> <b>A.</b> <b>UPR-MAYAGUEZ</b>	<b><i>Two-Way Shaped Memory Alloy for an Adaptive Wing Design</i></b>
2:45PM -> 3:05PM	<i>[Engineering 21]</i> <b>Rios,Angel</b> <b>UPR-MAYAGUEZ</b>	<b><i>Controlling Firmware for a Micro Gas Chromatograph with Low Power Constraints</i></b>
3:05PM -> 3:25PM	<i>[Engineering 23]</i> <b>Rivera,Anibal</b> <b>PUCPR</b>	<b><i>A Data Vector Synchronization Algorithm for NASA's L-band Imaging Scatterometer</i></b>

**Session: 04**

**Room: 214**

**Moderator: Prof. Caroline González-UIPR Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Engineering 25]</i> <b>Rodriguez, Antonio</b> <b>TURABO UNIVERSITY</b>	<b><i>C++ Program for Generating Inner TetraCast™ Structure for Investment Casting Filled Models</i></b>
11:20AM -> 11:40AM	<i>[Engineering 24]</i> <b>Rodriguez, Christie</b> <b>UPR-MAYAGUEZ</b>	<b><i>Chill-plate effect on the solidification process of Al-B-Cu and Al-B-Mg composites</i></b>
11:40AM -> 12:00PM	<i>[Engineering 26]</i> <b>Rodriguez-Ruiz, Israel</b> <b>UPR-MAYAGUEZ</b>	<b><i>Low-temperature aqueous synthesis of ZnO micro- and nanorods</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Reinaldo Soto-UPR-Arecibo</b>		
1:45PM -> 2:05PM	<i>[Engineering 28]</i> <b>Sanchez, Christian</b> <b>UPR-MAYAGUEZ</b>	<b><i>Abundance Estimation Algorithms Using NVIDIA® CUDA™</i></b>
2:05PM -> 2:25PM	<i>[Engineering 29]</i> <b>Santiago, Orlando</b> <b>UPR-MAYAGUEZ</b>	<b><i>Validation of the Hydro Estimator for Puerto Rico Climatic Conditions</i></b>
2:25PM -> 2:45PM	<i>[Engineering 30]</i> <b>Tirado, Guillermo</b> <b>UPR-MAYAGUEZ</b>	<b><i>Structural Characterization and optical properties of Er doped Eu2O3 and Gd2O3 nano powders</i></b>
2:45PM -> 3:05PM	<i>[Engineering 31]</i> <b>Toro, Jaime</b> <b>UPR-MAYAGUEZ</b>	<b><i>V-Shaped Ribs-Turbulated Cooling</i></b>
3:05PM -> 3:25PM	<i>[Engineering 32]</i> <b>Torres, Jelisa</b> <b>UPR-MAYAGUEZ</b>	<b><i>Thermal characterization of a metastable aluminum-boride phase</i></b>

**Session: 05**

**Room: 115**

**Moderator: Prof. Brett Isham-UIPR Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Engineering 33]</i> <b>Vazquezteell,Reynaldo</b> <b>DR. PEDRO PEREA</b> <b>FAJARDO</b>	<b><i>Evaluation of two silicon sources for Al-Sn-Si alloys manufacturing using directional solidification</i></b>
11:20AM -> 11:40AM	<i>[Engineering 34]</i> <b>Vega,Elvin</b> <b>UIA-BAYAMON</b>	<b><i>Linux-Based Computer Cluster for High-Performance Processing</i></b>
11:40AM -> 12:00PM	<i>[Engineering 35]</i> <b>Zayas,Yashira</b> <b>UPR-MAYAGUEZ</b>	<b><i>A Study of the behavior of magnetite nanoparticles coated with fluorescent-thermoreponsive polymers for Magnetic Fluid Hyperthermia (MFH)</i></b>
12:00MD -> 1:30PM		<b>Lunch Break</b>

## ***Environmental Sciences***

**Session: 01**

**Room: 103**

**Moderator: Prof. Julio Ortiz-UPR-Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Enviromental Sciences 01]</i> <b>Acevedo,Jean Marie</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Development of Methods for the detection of Enterophages and Their Prevalence in Sewage</i></b>
11:20AM -> 11:40AM	<i>[Enviromental Sciences 02]</i> <b>Almodóvar,Laura</b> <b>UPR-MAYAGUEZ</b>	<b><i>Heavy Metal Removal in Water Treatment Plants in Mayagüez and Adjuntas</i></b>

11:40AM → 12:00PM	<i>[Environmental Sciences 03]</i> <b>Claudio, Jennifer</b> <b>PUCPR</b>	<b><i>Molecular Characterization of Dryas iulia iulia</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Nitza Díaz-UPR Bayamon</b>	
1:45PM → 2:05PM	<i>[Environmental Sciences 04]</i> <b>Crespo, Janet</b> <b>UPR-AGUADILLA</b>	<b><i>An Assessment of the Spatial Variability of the Physicochemical Parameters of Caño Madre Vieja, Aguadilla in the Rainy Season</i></b>
2:05PM → 2:25PM	<i>[Environmental Sciences 05]</i> <b>De la Cruz, Cynthia</b> <b>UIA-METRO</b>	<b><i>Biological activity of phenoxybenzyl dichlorovinyl dimethyl cyclopropane carboxylate against Allium cepa.</i></b>
2:25PM → 2:45PM	<i>[Environmental Sciences 06]</i> <b>Del Valle, Aixa</b> <b>UPR-MAYAGUEZ</b>	<b><i>Removal of Cd (II) Ions with Recycled Crumb Rubber</i></b>
2:45PM → 3:05PM	<i>[Environmental Sciences 07]</i> <b>Delgado, Diana</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Forecasting honeybee production in Puerto Rico under scenarios of climate change</i></b>
3:05PM → 3:25PM	<i>[Environmental Sciences 08]</i> <b>Freytes, Ileana</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Effects of water quality on seagrass community productivity and biodiversity in NE Puerto Rico</i></b>

**Session: 02**

**Room: E-106B**

**Moderator: Prof. Selimar Malavé-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Environmental Sciences 09]</i> <b>Fuentes Martínez, Paul M.</b> <b>UIA-BAYAMON</b>	<b><i>Ambient Concentrations and Dry Deposition Fluxes of Trace Elements in Puerto Rico</i></b>

11:20AM → 11:40AM	<i>[Environmental Sciences 10]</i> <b>Hurtado, Nilbeth</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Molecular Identification of Mycorrhizal Fungi in the Orchid <i>Oeceoclades maculata</i></i></b>
11:40AM → 12:00PM	<i>[Environmental Sciences 11]</i> <b>Jaiman, Rosa</b> <b>PUCPR</b>	<b><i>Molecular Characterization of <i>Dryas iulia iulia</i></i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Evelyn Cepeda-UPR-Arecibo</b>	
1:45PM → 2:05PM	<i>[Environmental Sciences 12]</i> <b>López, Alexandra</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Is an Invasive Grass causing Biotic Homogenization in Mona Island Reserve?</i></b>
2:05PM → 2:25PM	<i>[Environmental Sciences 13]</i> <b>Lugo, Frances</b> <b>UNE</b>	<b><i>Chlorophyll concentration from bleached and healthy Hawaiian Corals</i></b>
2:25PM → 2:45PM	<i>[Environmental Sciences 14]</i> <b>Maldonado, Gabriel</b> <b>SCIENCE EDUCATION</b>	<b><i>Flower color variation in populations of <i>Spathoglottis plicata</i> and its relationship to reproductive success</i></b>
2:45PM → 3:05PM	<i>[Environmental Sciences 15]</i> <b>Marcano, Alexandra</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Longitudinal changes in the quality of dissolved organic carbon in three tropical watersheds</i></b>
3:05PM → 3:25PM	<i>[Environmental Sciences 16]</i> <b>Medina-Rodriguez, Lyra R</b> <b>UPR-MAYAGUEZ</b>	<b><i>Temporal and spatial variations of bacterial diversity in activated sludge bioreactors of two secondary wastewater treatment plants in Puerto Rico</i></b>

**Session: 03**

**Room: E-110**

**Moderator: Prof. Noelia Moyeno-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Environmental Sciences 17]</i> <b>Montalbán Mendoza, Mari Ana</b> <b>UIA-BAYAMON</b>	<b><i>Predation on Bats by Feral Cats at Culebrones Cave, Puerto Rico</i></b>
11:20AM -> 11:40AM	<i>[Environmental Sciences 18]</i> <b>Montalvo, Gabriel</b> <b>UPR-ARECIBO</b>	<b><i>The minimum concentration determination of isolated rizobacteria form aquatic plants, exposed to lead, chrome and cupper.</i></b>
11:40AM -> 12:00PM	<i>[Environmental Sciences 19]</i> <b>Montes, Nataly</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Development of Methods for the detection of Enterococcus Phages (Enterophages) and Their Prevalence in Sewage</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Edgardo Mercado-UPR-Arecibo</b>		
1:45PM -> 2:05PM	<i>[Environmental Sciences 20]</i> <b>Paez, Dianne</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Analysis of Maximum and Minimum Temperatures in Puerto Rico in the last 40 years.</i></b>
2:05PM -> 2:25PM	<i>[Environmental Sciences 21]</i> <b>Reyes-Rodríguez, Gabriel José</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Chemical Characterization of Clouds and Rainwater Collected in a Tropical Montane Cloud Forest in Puerto Rico under the Influence of Different Types of Air Masses</i></b>
2:25PM -> 2:45PM	<i>[Environmental Sciences 22]</i> <b>Sánchez, Josué</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Is an Invasive Grass causing Biotic Homogenization in Mona Island Reserve?</i></b>

2:45PM -> 3:05PM	<i>[Environmental Sciences 23]</i> <b>Santiago,Iliana</b> <b>TURABO UNIVERSITY</b>	<b><i>Crenarchaeal diversity within the Tropical Elfin Forest</i></b>
3:05PM -> 3:25PM	<i>[Environmental Sciences 24]</i> <b>Santiago,Victor</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Phylogeography and conservation genetics of <i>Tabebuia heterophylla</i> utilizing chloroplast DNA sequences</i></b>

**Session: 04**

**Room: Auditorium B**

**Moderator: Prof. Nitza Díaz-UPR-Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Environmental Sciences 25]</i> <b>Santos-Figueroa,Gilmarie</b> <b>UPR-RIO PIEDRAS</b>	<b><i>The size-resolved carbonaceous fraction in African dust particles over the caribbean during the 2007 summer months.</i></b>
11:20AM -> 11:40AM	<i>[Environmental Sciences 26]</i> <b>Torres,Nancy</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Genetic structure of <i>Apis Mellifera</i> in Puerto Rico</i></b>
11:40AM -> 12:00PM	<i>[Environmental Sciences 27]</i> <b>Torres,Victor</b> <b>UIA-BAYAMON</b>	<b><i>Development of a Hyper Accumulator System for Mercury Phytoremediation</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Sondra I. Vega-UPR-Arecibo</b>	
1:45PM -> 2:05PM	<i>[Environmental Sciences 28]</i> <b>Torres,Karylisa</b> <b>PUCPR</b>	<b><i>Chemical Relation Between <i>Dryas iulia</i> and <i>Passiflora</i> species</i></b>
2:05PM -> 2:25PM	<i>[Environmental Sciences 29]</i> <b>Torres,Auremar</b> <b>UPR-ARECIBO</b>	<b><i>Biorremediation of lead contaminated water using rhizobacteria isolated from aquatic plants</i></b>

2:25PM → 2:45PM	<i>[Environmental Sciences 30]</i> <b>Trinidad,Jason</b> <b>UIA-BAYAMON</b>	<b><i>Directional Asymmetry in Gentle Africanized Bees on an Island</i></b>
2:45PM → 3:05PM	<i>[Environmental Sciences 31]</i> <b>Garriga,Rocío</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Mycorrhizal fungi in the orchid <i>Oeceoclades maculata</i>: variation in site, season and plant age.</i></b>

## ***Geosciences***

**Session: 01**

**Room: Auditorium B**

**Moderator: Prof. Jose G. Arbelo-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
3:05PM → 3:25PM	<i>[Geosciences 01]</i> <b>Quintero,Raiza</b> <b>UPR-MAYAGUEZ</b>	<b><i>A petographic study of shocked minerals from the Vredefort Dome, South Africa</i></b>

## ***Life Sciences***

**Session: 01**

**Room: 104**

**Moderator: Prof. Edgardo Mercado-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Life Sciences 01]</i> <b>Abreu,Jose</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Tentacle regeneration in the sea cucumber <i>Holothuria glaberrima</i></i></b>
11:20AM → 11:40AM	<i>[Life Sciences 02]</i> <b>Agosto,Abby</b> <b>UPR-RIO PIEDRAS</b>	<b><i>An interaction between Mex67p and Upf1p at the terminal step of mRNA export facilitates mRNA translation</i></b>

11:40AM → 12:00PM	<i>[Life Sciences 03]</i> <b>Alonso-Rodríguez,Aura</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Impacts of exotic bamboo on earthworm communities in a tropical wet forest, Puerto Rico</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Julio Ortiz-UPR-Bayamon</b>		
1:45PM → 2:05PM	<i>[Life Sciences 04]</i> <b>Arroyo,Stephanie</b> <b>UNE</b>	<b><i>Expression of renin in H9C2 Cardiomyoblasts during differentiation</i></b>
2:05PM → 2:25PM	<i>[Life Sciences 05]</i> <b>Ballista,Joan</b> <b>UPR-BAYAMON</b>	<b><i>Infusion of Group I metabotropic glutamate receptor agonist within the basolateral complex produces anxiolytic-like effect in estrogen-treated female rats</i></b>
2:25PM → 2:45PM	<i>[Life Sciences 06]</i> <b>Berrios,Sharlene</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Cell Free Transcription Extract Derived from the Silkworm</i></b>
2:45PM → 3:05PM	<i>[Life Sciences 07]</i> <b>Berroa,Lissa</b> <b>PUCPR</b>	<b><i>An approach to study signal transduction through linker domain of histidine kinase in vitro</i></b>
3:05PM → 3:25PM	<i>[Life Sciences 08]</i> <b>Burgos,Hector</b> <b>UPR-AGUADILLA</b>	<b><i>Effect of UV Radiation Exposure on the Viability Rate of Artemia fransiscana Embryos</i></b>

**Session: 02**

**Room: 202**

**Moderator: Prof. Evelyn Cepeda-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Life Sciences 09]</i> <b>Caceres,Rita</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Population dynamics and nutritional value of epilithic algae in artificial rearing ponds associated to the reintroduction of the Puerto Rican crested toad (Bufo lemur) in Puerto Rico</i></b>

11:20AM → 11:40AM	<i>[Life Sciences 10]</i> <b>Caraballo,Nelson</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Extinction of Cocaine Seeking Behavior ,effect of Neurotensin receptor antagonist within the NAc and mPFC</i></b>
11:40AM → 12:00PM	<i>[Life Sciences 11]</i> <b>Cardona,Christopher</b> <b>UPR-AGUADILLA</b>	<b><i>Expression levels of photoprotective genes (PsbS, ZE, VDE) in diploid and tetraploid species of Glycine</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Migdalia Lopez-UPR-Arecibo</b>	
1:45PM → 2:05PM	<i>[Life Sciences 12]</i> <b>Carrasquillo, Lineysha</b> <b>UPR-HUMACAO</b>	<b><i>Phenotype microarray comparison of Bacillus subtilis 168 and FBC5 mutant impaired in calcium carbonate precipitation</i></b>
2:05PM → 2:25PM	<i>[Life Sciences 13]</i> <b>Cervantes,Godenee</b> <b>UNE</b>	<b><i>A gradient of airborne fungal spore concentrations from the Caribbean National Rain Forest towards the San Juan Metropolitan Area</i></b>
2:25PM → 2:45PM	<i>[Life Sciences 14]</i> <b>Colón,Daisy D.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Post-transcriptional regulation of human interleukin-3 mRNA by the adenosine/uridine Rich element</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 15]</i> <b>Cordero,Rochelle</b> <b>UPR-RIO PIEDRAS</b>	<b><i>A captive breeding program for three endangered Puerto Rican Eleutherodactylus: E. richmondi, E. locustus and E. wightmanae.</i></b>
3:05PM → 3:25PM	<i>[Life Sciences 16]</i> <b>Cordero-</b> <b>Hernández,José Manuel</b> <b>UPR-MAYAGUEZ</b>	<b><i>NF-IL6: a human factor implicated in monocyte differentiation in THP-1 cells</i></b>

**Session: 03**

**Room: 203**

**Moderator: Prof. Hugo Roman-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 17]</i> <b>Cruz,Johnny</b> <b>UPR-AGUADILLA</b>	<b><i>Thermal Resistance of the Artemia populations(cysts)of Puerto Rico: a molecular and physiological perspective</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 18]</i> <b>De Jesús,Noried</b> <b>UPR-PONCE</b>	<b><i>Understanding Avian Influenza Virus: Infection, Pathogenicity and Prevalence</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 19]</i> <b>Delgado Torres,Nayla</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Effects of Exercise on the CA3 Mossy Fiber Pathway of the Rodent Hippocampus</i></b>
12:00MD -> 1:30PM		<b>Lunch Break</b>
	<b>Moderator: Prof. Jaime Bonilla-UPR-Arecibo</b>	
1:45PM -> 2:05PM	<i>[Life Sciences 20]</i> <b>Diaz,Krizia</b> <b>UPR-MAYAGUEZ</b>	<b><i>Isolation and Characterization of Radiation Resistance microbes from Tropical Hypersaline Microbial Mats at the Cabo Rojo Salterns in Puerto Rico</i></b>
2:05PM -> 2:25PM	<i>[Life Sciences 21]</i> <b>Díaz Latorre,Edgardo L.</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Woody plant diversity in tropical forest patches of different ages in a region threatened by urban development</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 22]</i> <b>Fernández,Rafael</b> <b>UIA-BAYAMON</b>	<b><i>Division of labor in the little fire ant <i>Wasmannia auropunctata</i></i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 23]</i> <b>Figueroa,Josi M</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Noise effects in anuran and bird community in the urban mogotes in Puerto Rico</i></b>
3:05PM -> 3:25PM	<i>[Life Sciences 24]</i> <b>Figueroa-</b> <b>Nieves,Vilmarie</b> <b>UIA-BAYAMON</b>	<b><i>Reduced aggressive behavior of fire ants (<i>Solenopsis invicta</i>) in Puerto Rico</i></b>

**Session: 04**

**Room: 106**

**Moderator: Prof. Mari Luz Acevedo-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 25]</i> <b>Figuerola,Cielo</b> <b>UPR-MAYAGUEZ</b>	<b><i>Distribution and Abundance of the Green and Black Dart-Poison Frog (<i>Dendrobates auratus</i>): A Recently Introduced Species at the La Selva Biological Station?</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 26]</i> <b>Flores,Jaime</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Cell division during early stages of intestinal regeneration</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 27]</i> <b>Gomez-Moreno,Ramon</b> <b>UPR-BAYAMON</b>	<b><i>Molecular Survey Reveals Novel Groups of the Archaea and Sulfate Reducers in Non-extreme Environments at El Yunque Forest</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Eugenio Santiago-UPR-Rio Piedras</b>		
1:45PM -> 2:05PM	<i>[Life Sciences 28]</i> <b>González,Bárbara</b> <b>UIA-BAYAMON</b>	<b><i>An ABCG homologue gene in multi-drug resistant <i>Plasmodium yoelii</i></i></b>
2:05PM -> 2:25PM	<i>Life Sciences 29]</i> <b>Guzman,Monica</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Are glial cells present in the Echinoderm Nervous System?</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 30]</i> <b>Irizarry,Luis</b> <b>PUCPR</b>	<b><i>Comparative behavior and density study of anolis species in urban and suburban areas.</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 31]</i> <b>Irizarry-Vargas,Victor</b> <b>UPR-MAYAGUEZ</b>	<b><i>The Metal and Radiation Resistant Geo-Microbes in Soils of Puerto Rico</i></b>
3:05PM -> 3:25PM	<i>[Life Sciences 32]</i> <b>Jimenez,Elaine</b> <b>UPR-AGUADILLA</b>	<b><i>Analysis of Heat Shock Proteins in <i>Artemia franciscana</i> cysts after exposure to thermal stress environment.</i></b>

**Session: 05**

**Room: 107**

**Moderator: Prof. Jorge Corchado-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 33]</i> <b>Jimenez, Esther A.</b> <b>PUCPR</b>	<b><i>Estudio de mariposas en áreas perturbadas y menos perturbadas de Puerto Rico.</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 33]</i> <b>Kouros, Cyrus</b> <b>UPR-BAYAMON</b>	<b><i>Temporal distribution of brachyuran crab larvae during a tidal cycle in a small estuary in Puerto Rico</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 34]</i> <b>Lebron, Luis</b> <b>UNE</b>	<b><i>Determination of Antimicrobial Resistance Profiles of Enterococcus sp. isolated from west coast public recreational waters in Puerto Rico.</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Jorge Corchado-UPR-Arecibo</b>		
1:45PM -> 2:05PM	<i>[Life Sciences 35]</i> <b>Leon, Lorna</b> <b>UIA-METRO</b>	<b><i>Fast Biogas production using cellulolytic, fermentative and methanogenic bacterias.</i></b>
2:05PM -> 2:25PM	<i>[Life Sciences 36]</i> <b>Lopez, Ana V</b> <b>PUCPR</b>	<b><i>Efectos de la extinción del miedo en la fosforilación de ERK en la corteza prefrontal.</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 37]</i> <b>Lou, Sheng Fong</b> <b>UPR-BAYAMON</b>	<b><i>Temporal Distribution of Cardisoma guanhumi larvae in a small estuary in Puerto Rico</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 38]</i> <b>Lozada, Michelle</b> <b>UPR-MAYAGUEZ</b>	<b><i>Study of the Infectious Capability of the Plus (+) and Minus (-) Strands of Parvovirus Lull</i></b>
3:05PM -> 3:25PM	<i>[Life Sciences 39]</i> <b>Magly, Idennys</b> <b>UNE</b>	<b><i>Development of an ELISA to measure Dengue-4 antibody responses</i></b>

**Session: 06**

**Room: 206**

**Moderator: Prof. Eugenio Santiago-UPR-Rio Piedras**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 40]</i> <b>Matos,Felix</b> <b>UPR-PONCE</b>	<b><i>Glutamate transporters are differentially expressed in the hippocampus during the early stages of a one-day spatial learning task</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 41]</i> <b>Mendez,Natasha</b> <b>UPR-AGUADILLA</b>	<b><i>Thermal resistance of the Artemia franciscana larvae populations of Puerto Rico and San Francisco Bay</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 42]</i> <b>Monserate,Wilfred C.</b> <b>UPR-HUMACAO</b>	<b><i>Técnicas para incrementar la germinación del Mangle de Botón (Conocarpus erectus)</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Patricia Burrowes-UPR-Rio Piedras</b>		
1:45PM -> 2:05PM	<i>[Life Sciences 43]</i> <b>Montalvo,Alexandra</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Role of metabotropic glutamate receptors within the nucleus accumbens shell during Environment - Elicited Cocaine Conditioning</i></b>
2:05PM -> 2:25PM	<i>[Life Sciences 44]</i> <b>Montalvo,Janitza</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Role of the Anxiolytic Effects of Oxytocin on Environmental-Elicited Cocaine-Conditioning</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 45]</i> <b>Moreno,Lorna</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Effect of Megathyrsus maximus on Soil and Plant Communities of Mona Island Reserve</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 46]</i> <b>Ocaña,Adriana</b> <b>UPR-HUMACAO</b>	<b><i>Use of GIS in the establishment of a marine invertebrates' data base</i></b>
3:05PM -> 3:25PM	<i>[Life Sciences 47]</i> <b>Ortiz,Yakelin</b> <b>UPR-ARECIBO</b>	<b><i>Characterization of possible endocrine disruptor effects of various environmental contaminants on the MCF-7 and 293T cell lines</i></b>

**Session: 07**

**Room: 207**

**Moderator: Prof. Ivan Ferrer-UIPR-Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 48]</i> <b>Ortiz, Vanessa</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Response of Eleutherodactylus coqui to Batrachochytrium dendrobatidis inoculations in a live ex-situ experiment.</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 49]</i> <b>Otero-Negrón, Aurora</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Prolonged Extinction Training Enhances the Reconsolidation of Conditioned Memory in Tone Fear Extinction</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 50]</i> <b>Otero, Beatriz</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Efecto de la historia de uso de tierra para las comunidades de anfibios y aves en Puerto Rico</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Noelia Moyeno-UPR-Arecibo</b>		
1:45PM -> 2:05PM	<i>[Life Sciences 51]</i> <b>Otero, Yanitza</b> <b>UPR-ARECIBO</b>	<b><i>Planetary Habitability Under Dynamics Temperatures</i></b>
2:05PM -> 2:25PM	<i>[Life Sciences 52]</i> <b>Padilla, Elizabeth</b> <b>UIA-BAYAMON</b>	<b><i>Blood Characteristics, Heart Mass, and Wing Morphology of Antillean Bats</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 53]</i> <b>Perez, Enmanuel</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Characterization of Symbiodinium symbiont diversity in natural and experimentally translocated samples of Montastrea corals</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 54]</i> <b>Perez, Maria de Lourdes</b> <b>UPR-MAYAGUEZ</b>	<b><i>Amerindian mitochondrial DNA sequence haplotypes in the Dominican Republic: a look at Thaino rehistory.</i></b>
3:05PM -> 3:25PM	<i>[Life Sciences 55]</i> <b>Ramirez, Sharissa</b> <b>Victoria</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Interacciones Acústicas: Respuesta de Eleutherodactylus coqui a la presencia de Eleutherodactylus portoricensis</i></b>

**Session: 08**

**Room: 101**

**Moderator: Prof. Patricia Burrowes-UPR-Rio Piedras**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 56]</i> <b>Ríos,Leslimar</b> <b>UPR-RIO PIEDRAS</b>	<b><i>p16 INK4a polymorphism: Association with Tumor Progression in Head and Neck Cancer.</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 57]</i> <b>Rivera,Carlos</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Ontogeny of gecko eyes – Are they asymmetrical, paedomorphic or both?</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 58]</i> <b>Rivera,Fátima</b> <b>UPR-RIO PIEDRAS</b>	<b><i>On the role of Arginine Vasopressin (AVP) and Oxytocin (OT) on environment-elicited cocaine-conditioning</i></b>
12:00MD -> 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Sandra Maldonado-UPR-Mayaguez</b>		
1:45PM -> 2:05PM	<i>[Life Sciences 59]</i> <b>Rivera,Glorimar</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Carnosic acid inhibits proliferation and enhances myeloid differentiation in NB4 cells, a human leukemia cell line</i></b>
2:05PM -> 2:25PM	<i>[Life Sciences 60]</i> <b>Rivera,Neysha</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Effects of land use on the diversity of aquatic invertebrates in puerto rican streams</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 61]</i> <b>Rivera,Silkia</b> <b>UIA-BAYAMON</b>	<b><i>Chronic exposure of human macrophages to morphine and methadone induces a putative tolerant/dependent state.</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 62]</i> <b>Rivera-Cruz,Angélica</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Temporal analysis of muscle dedifferentiation and regeneration in the sea cucumber <i>Holothuria glaberrima</i></i></b>
3:05PM -> 3:25PM	<i>[Life Sciences 63]</i> <b>Rodríguez,Luis</b> <b>UPR-PONCE</b>	<b><i>Pattern of Genetic Variation of the <i>Corallimorpharia Ricordea florida</i></i></b>

**Session: 09**

**Room: 114**

**Moderator: Prof. Ivonne Colon-UPR-Aguadilla**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM -> 11:20AM	<i>[Life Sciences 64]</i> <b>Roman,Roberto</b> <b>UPR-MAYAGUEZ</b>	<b><i>Endophytic fungi diversity in the sea grass beds of Thalassia testudinum from Cabo Rojo, Lajas, and Vieques Island</i></b>
11:20AM -> 11:40AM	<i>[Life Sciences 65]</i> <b>Ruiz,Rosa</b> <b>UPR-HUMACAO</b>	<b><i>A Biomathematical Two-Mutation Carcinogenesis Model</i></b>
11:40AM -> 12:00PM	<i>[Life Sciences 66]</i> <b>Santa,Victor</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Patterns of Endemicity of the Melastomataceae of Puerto Rico</i></b>
12:00MD -> 1:30PM		<b>Lunch Break</b>
	<b>Moderator: Prof. Luz M. Santiago-UPR-Arecibo</b>	
1:45PM -> 2:05PM	<i>[Life Sciences 67]</i> <b>Santiago,Cristine</b> <b>UPR-CAYEY</b>	<b><i>Host Species Characterization of Lepanthes rupestris Stimson at Quebrada Sonadora in the Caribbean National Forest</i></b>
2:05PM -> 2:25PM	<i>[Life Sciences 68]</i> <b>Santiago,Francisco</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Changes in the spherulocytes subpopulation during intestine regeneration of Holothuria glaberrima</i></b>
2:25PM -> 2:45PM	<i>[Life Sciences 69]</i> <b>Serrano Negron,Yazmin</b> <b>PUCPR</b>	<b><i>The Genetic Basis for Variation in Taste Perception in a Natural Population of Drosophila melanogaster</i></b>
2:45PM -> 3:05PM	<i>[Life Sciences 70]</i> <b>Soto,Kristina</b> <b>UPR-MAYAGUEZ</b>	<b><i>Purple Non-Sulfur Anoxyphototrophs Bacteria isolated from Tropical Hypersaline Microbial Mats of the dry season at the Cabo Rojo Salterns of Puerto Rico</i></b>

3:05PM → 3:25PM

[Life Sciences 71]  
Torres,Laura  
UPR-CAYEY

***El Verde Field Station Herbarium:  
creating electronic access***

**Session: 10**

**Room: 213**

**Moderator: Prof. Sondra I. Vega-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	[Life Sciences 72] Torres,Daniel UNE	<b><i>Effect of Valeriana officinalis Extracts in [3H]Glu Binding</i></b>
11:20AM → 11:40AM	[Life Sciences 73] Torres,Betzaida UIA-METRO	<b><i>Lifecycle of the parasite class trematoda Paraphistomonas cervis</i></b>
11:40AM → 12:00PM	[Life Sciences 74] Torres,Marialis UPR-CAYEY	<b><i>Microsatellites primer design and optimization for Lepanthes rupestris Stimson.</i></b>
12:00MD → 1:30PM		<b>Lunch Break</b>
	<b>Moderator: Prof. Ivonne Colon-UPR-Aguadilla</b>	
1:45PM → 2:05PM	[Life Sciences 75] Ubiles,Alichy UPR-HUMACAO	<b><i>Sobre el anidamiento del Zumbador de Pecho Azul</i></b>
2:05PM → 2:25PM	[Life Sciences 76] Vazquez,Vilmarie UIA-BAYAMON	<b><i>Guarding behavior of gentle Africanized honey bees in Puerto Rico</i></b>
2:25PM → 2:45PM	[Life Sciences 77] Vázquez,Emmanuel UNE	<b><i>Microglial Activation and Migration after Insertion of Silicon Microelectrodes in Rodent Brain Slices</i></b>
2:45PM → 3:05PM	[Life Sciences 78] Vega,Janiabeth UPR-ARECIBO	<b><i>Comparative Analysis of the Toxicity of Chlorpyrifos, Diazinon, Carbaryl and Malthion in terms of Induction of Apoptosis in the Cell Line H4IIE.</i></b>

3:05PM → 3:25PM

*[Life Sciences 79]*  
**Vélez,Frances**  
**UPR-RIO PIEDRAS**

***Genetic Anthropology of Epilepsy  
in Puertorricans***

**Session: 11**

**Room: Room Projection, Library**

**Moderator: Prof. Orlando Gonzalez-UPR-Bayamon**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
1:45PM → 2:05PM	<i>[Life Sciences 83]</i> <b>Sanchez-Rivera, Francisco J.</b> <b>UPR-MAYAGUEZ</b>	<b><i>Molecular comparison of Anoxygenic Phototrophic Bacteria (APBs) in Two Hypersaline Microbial mats at the Cabo Rojo Salterns of Puerto Rico</i></b>
2:05PM → 2:25PM	<i>[Life Sciences 80]</i> <b>Vélez,Namyr</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Machado Joseph Disease</i></b>
2:25PM → 2:45PM	<i>[Life Sciences 81]</i> <b>Vicente,Marysol</b> <b>UIA-BAYAMON</b>	<b><i>Plant tissue culture and regeneration of the plant nicotiana tabacum</i></b>
2:45PM → 3:05PM	<i>[Life Sciences 82]</i> <b>Vignoni,Yanina</b> <b>UPR-AGUADILLA</b>	<b><i>Characterization of volatile compounds responsible for the flavors and fragrances of tropical fruits using SPME and GC/MS technique</i></b>

## ***Mathematics***

**Session: 01**

**Room: Conference Room, Library**

**Moderator: Prof. Jose F. Candelaria-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Mathematics 03]</i> <b>Rivera,Vicente</b> <b>UPR-HUMACAO</b>	<b><i>Study of Electronic Properties of Carbon Nanotubes</i></b>

11:20AM → 11:40AM	<i>[Mathematics 01]</i> <b>Almodóvar,Edgard</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Foundations of Mathematics in Music</i></b>
11:40AM → 12:00PM	<i>[Mathematics 02]</i> <b>Cruz,Yesenia</b> <b>UPR-HUMACAO</b>	<b><i>On the construction of State Transfer Matrices of Close Simple Path for Modeling Linear Polymers</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Jose F. Candelaria-UPR-Arecibo</b>	
1:45PM → 2:05PM	<i>[Mathematics 04]</i> <b>Sierra,Liesmarie</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Alfombras Persas</i></b>

## ***Physics***

**Session: 01**

**Room: 111**

**Moderator: Prof. Guillermo Nery-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Physics 01]</i> <b>Bobea,Milena</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Structure and optical properties of nanocrystalline ZnO thin films grown on Si (100)</i></b>
11:20AM → 11:40AM	<i>[Physics 02]</i> <b>Calderon,Jean</b> <b>UPR-CAYEY</b>	<b><i>Electron Beam Litography for Building Devices and for Nanostructure Characterization</i></b>
11:40AM → 12:00PM	<i>[Physics 03]</i> <b>Carpena,Jennifer</b> <b>UPR-RIO PIEDRAS</b>	<b><i>The Synthesis and Study of Luminescent Silica Gel and Silicon Nanostructures for Biomarking</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
	<b>Moderator: Prof. Guillermo Nery-UPR-Arecibo</b>	
1:45PM → 2:05PM	<i>[Physics 04]</i> <b>Centeno,Diana C.</b> <b>UPR-HUMACAO</b>	<b><i>Measurement of position angle and separation of selected binary stars using the NURO Telescope</i></b>

2:05PM → 2:25PM	<i>[Physics 05]</i> <b>Delgado,David</b> <b>UPR-HUMACAO</b>	<b><i>The Gaussian Curvature of a Magnetized Charged Black Hole Event Horizon</i></b>
2:25PM → 2:45PM	<i>[Physics 06]</i> <b>Franco,Eframir</b> <b>UPR-HUMACAO</b>	<b><i>Binary stars observation report 2006</i></b>
2:45PM → 3:05PM	<i>[Physics 07]</i> <b>Garcia,Camille</b> <b>UPR-HUMACAO</b>	<b><i>A Biomathematical Model to Estimate the Carcinogenic Effects of Cosmic Rays on Astronauts.</i></b>
3:05PM → 3:25PM	<i>[Physics 08]</i> <b>Gonzalez,Belenni</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Preliminary result for growth and characterization of cBN films</i></b>

**Session: 02**

**Room: 112**

**Moderator: Prof. Neftali S. Rivera-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Physics 09]</i> <b>Hernandez,Darimar</b> <b>UPR-CAYEY</b>	<b><i>Deposition of Hydroxyapatite Coatings by rf Sputtering</i></b>
11:20AM → 11:40AM	<i>[Physics 10]</i> <b>Lozada,Charles</b> <b>UPR-HUMACAO</b>	<b><i>New Computation of the Electron Temperature of Carina Nebulae</i></b>
11:40AM → 12:00PM	<i>[Physics 11]</i> <b>Montalvo,Stephanie</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Design and construction of a modified electric-arc facility for continuous production of SWCNTs of controlled diameter</i></b>

12:00MD → 1:30PM

**Lunch Break**

**Moderator: Prof. Neftali S. Rivera-UPR-Arecibo**

1:45PM → 2:05PM	<i>[Physics 12]</i> <b>Morales,Kristle</b> <b>UPR-HUMACAO</b>	<b><i>Calculation of the plate scale of the NURO telescope using data on the separation of binary stars</i></b>
2:05PM → 2:25PM	<i>[Physics 13]</i> <b>Ortiz,Keyla</b> <b>UPR-HUMACAO</b>	<b><i>Exact Solutions of a Bio-Mathematical Carcinogenesis Model</i></b>

2:25PM → 2:45PM	<i>[Physics 14]</i> <b>Ramos, Kevin</b> <b>UPR-HUMACAO</b>	<b><i>Binary Stars Observation Report</i></b> <b><i>May 2007</i></b>
2:45PM → 3:05PM	<i>[Physics 15]</i> <b>Rivera, Leonardo</b> <b>UPR- HUMACAO</b>	<b><i>Observational report on position</i></b> <b><i>angle and separation of stars</i></b> <b><i>observed on September 2007</i></b>
3:05PM → 3:25PM	<i>[Physics 16]</i> <b>Rivera, Luis Enrique</b> <b>UPR- HUMACAO</b>	<b><i>Continuum Emissions at 1.4 GHz</i></b> <b><i>in Carina Nebulae</i></b>

**Session: 03**

**Room: 107**

**Moderator: Prof. Carlos Perez-UPR-Arecibo**

<b>Time</b>	<b>Speaker and affiliation</b>	<b>Title</b>
11:00AM → 11:20AM	<i>[Physics 17]</i> <b>Rivera, Adamari</b> <b>UPR-CAYEY</b>	<b><i>Synthesis and Characterization of</i></b> <b><i>Zinc Oxide Structures</i></b>
11:20AM → 11:40AM	<i>[Physics 18]</i> <b>Rivera, Ricardo</b> <b>UPR-CAYEY</b>	<b><i>Controlled Morphology of Cupper</i></b> <b><i>Oxide Whiskers Grown on TEM</i></b> <b><i>Grids</i></b>
11:40AM → 12:00PM	<i>[Physics 19]</i> <b>Rodriguez, Samelys</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Biosensing properties of</i></b> <b><i>nanodiamond</i></b>
12:00MD → 1:30PM	<b>Lunch Break</b>	
<b>Moderator: Prof. Carlos Perez-UPR-Arecibo</b>		
1:45PM → 2:05PM	<i>[Physics 20]</i> <b>Rojas, Richard</b> <b>UPR- HUMACAO</b>	<b><i>Field effect devices and sensors</i></b> <b><i>based on electrospun polymer</i></b> <b><i>assisted tin oxide nanofibers</i></b>
2:05PM → 2:25PM	<i>[Physics 21]</i> <b>Santiago, Nitza</b> <b>UPR- HUMACAO</b>	<b><i>The Ionized Warp Layer at the</i></b> <b><i>Southern Hemisphere</i></b>
2:25PM → 2:45PM	<i>[Physics 22]</i> <b>Torres, Nesty Ray</b> <b>UPR-RIO PIEDRAS</b>	<b><i>Growth and Characterization of</i></b> <b><i>Nanosensing Tungsten Oxide</i></b> <b><i>Materials</i></b>

2:45PM -> 3:05PM

*[Physics 23]*  
**Torres, Loraine**  
**UPR-RIO PIEDRAS**

***Carbon nanotrees for biosensing***

**43<sup>rd</sup> ACS Junior Technical Meeting  
28<sup>th</sup> Puerto Rico Interdisciplinary Scientific Meeting (PRISM)**

**ABSTRACTS FOR POSTER SESSIONS**  
(Arranged in alphabetical order by field and presenter's last name)

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

# Chemistry

[Chemistry-01]

**Alicea, Ismael, UPR-RIO PIEDRAS;** Castillo, Betzaida, Chemistry, UPR-Rio Piedras; Pagán, Miraida, Chemistry, UPR-Rio Piedras; Barletta, Gabriel, Chemistry, UPR-Humacao

***Enzyme Storage Stability In Organic Solvents: Alpha-Chymotrypsin As A Case Study***

[Chemistry-02]

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

***Self-formation of Nanostructures from Palladium-Cobalt Precursor on HOPG***

[Chemistry-03]

**Aviles, Edward, UPR-RIO PIEDRAS;** Aviles, Edward, Chemistry, University of Puerto Rico; Marrero, Jeffry, Chemistry, University of Puerto Rico; Rodriguez, Abimael, Chemistry, University of Puerto Rico

***Chemical Modifications and Biological Evaluation of Marine Natural Products from the Caribbean Sponge Hymeniacidon sp.***

[Chemistry-04]

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

***Synthesis And Supramolecular Properties Of Dendronized 8-Aryl-2'-Deoxyguanosine Analogues***

[Chemistry-05]

**Cardona, Rocío del A., UPR-RIO PIEDRAS;** Cardona-Couvertier, Rocío del A.; Montes, Ingrid; Guadalupe, Ana R.; Chemistry, University of Puerto Rico, Rio Piedras Campus

***UV-Visible Characterization of 1-ferrocenyl-3-(p-nitrophenyl)prop-2-en-1-one: Toward Labels Construction***

*[Chemistry-06]*

**Cartagena, Michelle M, UPR-RIO PIEDRAS;** Carballeira, Nestor M., Chemistry Department, UPR Rio Piedras; Vazquez, Soleyl, Chemistry Department, UPR Rio Piedras

***Total Synthesis Of The Novel 2,6-docosadiynoic acid***

*[Chemistry-07]*

**Casañas, Barbara, UPR-RIO PIEDRAS;** Santiago, Mitk'El B.; Morales, Mara; Miller, Andrismary; Montes, Ingrid; Colón, Jorge L.; Department of Chemistry, UPR-Rio Piedras

***Chemical And Electrochemical Characterization Of Ferrocene Derivatives Intercalated Into Inorganic Layered Materials Of Zirconium Phosphate***

*[Chemistry-08]*

**Contés-de Jesús, Enid, UPR-RIO PIEDRAS;** Santiago-de Jesus, Diana; Cabrera, Carlos R.; Chemistry Department, University of Puerto Rico - Rio Piedras Campus

***Single Wall Carbon Nanotubes As Support For Electrodeposited Platinum Nanoclusters***

*[Chemistry-09]*

**Das, Soma, UPR-RIO PIEDRAS;** Chakraborty Indranil, Department of Chemistry, University of Puerto Rico, San Juan, PR 00931; Raptis Raphael, Department of Chemistry, University of Puerto Rico

***Water-Soluble Fe<sub>8</sub>-Clusters as Potential MRI Contrast Agents***

*[Chemistry-10]*

**Echevarría, Ileabett, UPR-RIO PIEDRAS;** Daunert, Sylvia, Department of Chemistry, University of Kentucky; Moschou, Elizabeth, Department of Chemistry, University of Kentucky; Turner, Kendrick, Department of Chemistry, University of Kentucky

***Development Of Glucose-Responsive Hydrogels Based On A Genetically Engineered Dimer Of Glucose Binding Protein (GBP)***

*[Chemistry-11]*

**Enríquez, Yanira, UPR-RIO PIEDRAS;** Rivera Rivero, Christia M.; Guadalupe, Ana R.; Montes, Ingrid; Chemistry Department, UPR Rio Piedras Campus

***Spectrophotometric Characterization of Novel Ferrocene Derivatives***

*[Chemistry-12]*

**Feliciano, Ileana, UPR-RIO PIEDRAS;** Caban, Miguel & Cabrera, Carlos R.;  
Chemistry, UPR Rio Piedras

***Covalent Immobilization of Alcohol Dehydrogenase in L-Cysteine Self Assembled Monolayer over Palladium Surface***

*[Chemistry-13]*

**Feliciano, Raquel, UPR-MAYAGUEZ;** Ferrer, Edmy & Castro, Miguel; Chemistry,  
UPRM

***The Effect of NO<sub>2</sub> In Fluorescence Quantum Dots and Blinking Behavior***

*[Chemistry-14]*

**Flores, Giselle, UPR-RIO PIEDRAS;** Sola, Ricardo, Chemistry, UPR Rio Piedras;  
Almenas, Mariangely, Biology, UPR Rio Piedras, Griebenow, Kai, Chemistry, UPR Rio  
Piedras

***Mechanism of Moisture Induced Solid Phase Aggregation of Pharmaceutical Proteins***

*[Chemistry-15]*

**García, María del Mar, UPR-RIO PIEDRAS;** Cardona, Rocío; Montes, Ingrid;;  
Guadalupe, Ana R.; Chemistry Graduate Program, UPR-RP

***Cyclic Voltammetry Studies of Ferrocene Derivatives***

*[Chemistry-16]*

**García, Marilyn, UPR-RIO PIEDRAS;** García-Arriaga, Marilyn; Hoblely, Gerard; Rivera,  
José M.; University of Puerto Rico, Río Piedras Campus, Chemistry Dept.

***Synthesis and Self-Assembly of a Guanine Derivative in Aqueous Media***

*[Chemistry-17]*

**Guzman, Rolando, UPR-RIO PIEDRAS;** Carlos R. Cabrera, Chemistry, University of  
Puerto Rico; Esteban R. Fachini, Chemistry, University of Puerto Rico

***Influence Of Ceria On Commercial Platinum Based Catalysts For Methanol Oxidation***

*[Chemistry-18]*

**Hernández, Griselle, UPR-RIO PIEDRAS**

***Polymer Modified Glassy Carbon Electrode for Determination for Fe(II) Ions***

*[Chemistry-19]*

**Martin, Mariana, UPR-RIO PIEDRAS;** Gubala, Vladimir; Rivera, Jose M.; Department of Chemistry, University of Puerto Rico, Río Piedras Campus

***Supramolecular Structure and Thermal Stability of 8-Aryl-2'- deoxyguanosine Analogues in the Presence of Different Metal Cations***

*[Chemistry-20]*

**Montalvo-Ortiz, Brenda Liz, UPR-RIO PIEDRAS;** Sosa, Brian, Chemistry, UPR-Rio Piedras; Vélez, Denisse, Chemistry, UPR-Rio Piedras; Griebenow, Kai, Chemistry, UPR-Rio Piedras

***Protein Co-Lyophilization With Methyl- $\alpha$ -Cyclodextrin Generates Spherical Protein Nano-Particles***

*[Chemistry-21]*

**Montano, Rubenier, UPR-RIO PIEDRAS;** Raptis, Raphael G., UPR-Rio Piedras

***The Use of Molecular Precursors for the Preparation of Pd/Co and Pd/Cu-Alloy Nanoparticles***

*[Chemistry-21]*

**Morales, Moraima, UPR-RIO PIEDRAS;** Chevres, Migdalia, Department of Biochemistry, School of Medicine, University of Puerto Rico; Chorna, Nataliya E., Department of Chemistry, Rio Piedras Campus, University of Puerto Rico, San Juan, Puerto Rico; González, Fernando A., Department of Chemistry, Rio Piedras Campus, University of Puerto Rico, San Juan, Puerto Rico

***Low Serum Conditions Cause Upregulation of P2X7 Receptor In Human SH-SY5Y Neuroblastoma Cells***

[Chemistry-22]

**Morales, Mara, UPR-RIO PIEDRAS;** Casana, Barbara, Chemistry, UPR; Montes, Ingrid, Chemistry, UPR

***Synthesis Of Ferrocenyl Alkenes Compounds***

[Chemistry-23]

**Morales-García, Flavia, UPR-RIO PIEDRAS;** Mayol-Bracero, Olga L., Institute for Tropical Ecosystem Studies, University of Puerto Rico, San Juan, Puerto Rico; Metzger, Swen, Department of Atmospheric Chemistry, Max Planck Institute for Chemistry, Mainz, Germany; Lelieveld, Jos, Department of Atmospheric Chemistry, Max Planck Institute for Chemistry, Mainz, Germany

***Hygroscopicity of atmospheric particles in the Caribbean***

[Chemistry-24]

**Nieves, Karinel, UPR-RIO PIEDRAS;** Haberaecker, Walter; Buchan, Zachery; Koreeda, Masato, Chemistry and Medicinal Chemistry, University of Michigan

***Hydration of Alkynes: Gold (I) and Mercury (II)- Catalized Transformations of Alkynes into Alkanones***

[Chemistry-25]

**Otaño, Myrna, UPR-RIO PIEDRAS;** Cruz, Alejandra, Chemistry, UPR- Rio Piedras; Díaz, Cristina, Chemistry, UPR-Rio Piedras; Montes Ingrid, PhD., Chemistry, UPR-Rio Piedras, Guadalupe, Ana PhD., Chemistry, UPR - Rio Piedras

***Synthesis and Characterization of Ferrocenyl Chalcones***

[Chemistry-26]

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

***Encapsulation Of Different Formulations Of Subtilisin Carlsberg Using The Solid In Oil In Oil (S/O/O) Encapsulation Technique***

[Chemistry-27]

**Pagan, Miraida, UPR-RIO PIEDRAS;** Sola, Ricardo J., Chemistry, UPR-Rio Piedras; Griebenow, Kai, Chemistry, UPR-Rio Piedras

***Influence Of Modulated Protein Structural Flexibility On The Stability And Function Of Subtilisin-Like Proteases***

*[Chemistry-28]*

**Parga, Kenia, UPR-RIO PIEDRAS;** Raptis, Raphael, Graduate Dept. of Chemistry, University of Puerto Rico-RP

***Synthesis of targeted-MRI contrast agents***

*[Chemistry-29]*

**Quiñones, Jennifer, UPR-RIO PIEDRAS;** Anna Molina; Laurimer Kuilan; Osvaldo Rosario, University of Puerto Rico, Río Piedras Campus, Chemistry Department

***Development of Method for the Analysis of Pharmaceutical Compounds in Natural Waters***

*[Chemistry-30]*

**Rentas, Jaileen, UPR-RIO PIEDRAS;** Prieto, J. A., Chemistry, UPR-Rio Piedras

***Epoxide Based Methodology For The Elaboration Two Precursor Fragments For The Synthesis Of The Scytophycin C Polypropionate Chain***

*[Chemistry-31]*

**Rivera, Eladio, UPR-RIO PIEDRAS;** Cindy Barbosa, University of Puerto Rico, Río Piedras; Rafael Torres, University of Puerto Rico, Río Piedras; Jorge L. Colón, University of Puerto Rico, Río Piedras, Tyler W. Green, University of Cincinnati, Ohio; William B. Connick, University of Cincinnati, Ohio

***Chemosensing Applications Of Binuclear Platinum(II) Complex Intercalated Into Zirconium Phosphate Layers***

*[Chemistry-32]*

**Rivera, María Del C., UPR-RIO PIEDRAS;** Ivonne Andujar de Sanctis, Chemistry, University of Puerto Rico-Río Piedras; Vladimir Gubala, Senior Research Officer, Biomedical Diagnostics Institute at Dublin City University; Gerard Hopley, Chemistry, University of Puerto Rico-Río Piedras, José M. Rivera-Ortíz, Chemistry, University of Puerto Rico-Río Piedras

***Insights On The Self-Assembly Of 8-Heteroaryl-2'-Deoxyguanosine Derivatives***

[Chemistry-33]

**Sanchez-Pomales, Germanie, UPR-RIO PIEDRAS;** Santiago-Rodriguez, Lenibel, Department of Chemistry, UPR-Rio Piedras; Rivera-Velez, Nelson E., Department of Chemistry, UPR-Rio Piedras; Pagan-Miranda, Coral, Department of Chemistry, UPR-Rio Piedras, Cabrera, Carlos R., Department of Chemistry, UPR-Rio Piedras

***Non-Covalently Functionalized Carbon Nanotubes Assembled On Gold Surfaces***

[Chemistry-34]

**Santiago, Diana, UPR-RIO PIEDRAS;** Rodríguez-Calero, Gabriel G., Chemistry, UPR-Río Piedras; López, Diana, General Science, UPR-Río Piedras

***Electrochemical, Chemical and Physical Characterization of Pt/C Nano-Catalysts***

[Chemistry-35]

**Suazo, Dámaris, UPR-RIO PIEDRAS;** Cabrera, Carlos R., Chemistry Department, University of Puerto Rico-Rio Piedras Campus

***Platinum Surface Decorated with Ruthenium a Model for Methanol Oxidation***

[Chemistry-36]

**Valentin, Elizabeth, UPR-RIO PIEDRAS;** Prieto, Jose A., Department of Chemistry, University of Puerto Rico, Rio Piedras; Rosa, Kellymar, Department of Chemistry, University of Puerto Rico, Rio Piedras

***Convergent Epoxide-Based Polypropionate Synthesis***

[Chemistry-37]

**Vallejo, Pamela, UPR-RIO PIEDRAS;** Gioda, Adriana, Chemistry Department, UPR; Mayol-Bracero, Olga, Chemistry Department, UPR

***The influence of African dust particles on the chemical composition of rainwater at El Verde, Puerto Rico: Evaluation of the NADP historical data from 1985 to 2007***

[Chemistry-38]

**WU, JAVIER, UPR-RIO PIEDRAS;** Wu, Javier, Physics, UPR Rio Piedras; Cabrera, Carlos, Chemistry, UPR Rio Piedras

***Mechanical Study Of Pt Thin Film Electrode For Fuel Cell Applications***

# Education

*[Education-01]*

**Fajardo, Johanna, UPR-RIO PIEDRAS;** Cabello, Charlotte; Ramos, Rafael; Pruna, Linnette; Montes, Ingrid; Ph.D., Chemistry/ Natural sciences

***How The Affective Aspects Of Students With Different Learning Styles Influence Their Achievement In The Organic Chemistry Course***

# Engineering

*[Engineering-01]*

**Barrera, Carola, UPR-MAYAGUEZ;** Herrera, Adriana, Department of Chemical Engineering, University of Puerto Rico, Mayagüez; Latorre, Magda, Department of Chemical Engineering, University of Puerto Rico, Mayagüez; Rinaldi, Carlos, Department of Chemical Engineering, University of Puerto Rico, Mayagüez, Torres-Lugo, Madeline, Department of Chemical Engineering, University of Puerto Rico

***Surface Modification of Magnetic Nanoparticles with Poly(ethylene) oxide***

*[Engineering-02]*

**Calero, Victoria, UPR-MAYAGUEZ;** Rinaldi Carlos, Ing. Quimica, UPRM

***Ligand Exchange Using Alkylsilanes On Oleic Acid-Cobalt Ferrite Nanoparticles***

*[Engineering-03]*

**Cameron, Ana Raquel, UPR-MAYAGUEZ**

***Electrorheological properties of poly (ethylene glycol)/ silica suspensions***

*[Engineering-04]*

**Cordoba, Maria F., UPR-MAYAGUEZ;** Sepulveda, Nelson, Electrical and Computer Engineering, UPR Mayaguez

***Design, Fabrication And Testing Of A Vanadium Dioxide Microwave Switch***

*[Engineering-05]*

**Giordano, Mauricio, UPR-MAYAGUEZ;** Gutierrez, Gustavo, Mechanical Engineering Department, UPRM

***Study of the Bioheat Equation Using Monte Carlo Simulations For Local Magnetic Hyperthermia***

*[Engineering-06]*

**Gomez, Rodney, PUPR**

***Techniques for Determining the Relative Weights of Spatial Harmonics Induced in Truncated Periodic Structures***

*[Engineering-07]*

**Herrera, Adriana, UPR-MAYAGUEZ;** Barrera, Carola; Ayala, Vanessa; Latorre, Magda; Torres-Lugo, Madeline; Rinaldi, Carlos; Chemical Engineering, UPR-Mayaguez

***Magnetite Nanoparticles Coated with Aminopropyl-silane and Carboxymethyl-dextran for Cancer Treatment.***

*[Engineering-08]*

**Hidalgo-Hernandez, Ruth, UPR-MAYAGUEZ;** Callejo-Canal, Alberto, Engineering Science and Materials Dept., UPRM; Plaza-Rodrigues, Nayomi, Mechanical Engineering Dept., UPRM

***Micro- Characterization of Al-B-Cu-Mg Composites subject to Mechanical Wear and Abrasion***

*[Engineering-09]*

**Huertas, Javier, UPR-MAYAGUEZ;** Quiñones, Leonel, Chemical Engineering, UPR-Mayaguez; Martínez-Iñesta, María, Chemical Engineering, UPR-Mayaguez

***Monte Carlo Simulations of the Adsorption of Platinum and Nickel Ions in Cancrinite and Mordenite Zeolites for the Templated Synthesis of Metal Nanowires***

*[Engineering-10]*

**Lugo, Katherine, PUPR;** Gomez, Rodney A., Electrical Engineering, PUPR; Farahat, Nader, Electrical Engineering, PUPR

***FDTD Analysis of an Antenna Covered by a Dielectric Woodpile EBG Superstrate***

*[Engineering-11]*

**Mondragon, Maria Victoria, UPR-MAYAGUEZ;** Godoy, Luis A.; Acosta, Felipe; Pando, Miguel; Civil Engineering; UPR Mayaguez

***Computer Simulation of Interphase Damage in Composites***

*[Engineering-12]*

**Obando, Juan, UPR-MAYAGUEZ;** Pando, Miguel, Dept of Civil Engineering, UPR Mayaguez; Suarez, Marcelo, Dept of Mechanical Engineering, UPR Mayaguez; Acosta, Felipe, Civil Engineering and Surveying, UPR Mayaguez, Godoy, Luis, Civil Engineering and Surveying, UPR Mayaguez

***A Micromechanics Study of the Environmental Degradation Effects on the Mechanical Properties of Glass Fiber Reinforced Polymers***

*[Engineering-13]*

**Obregón, Luis Guillermo, UPR-MAYAGUEZ;** Velazquez Figueroa, Carlos, University of Puerto Rico-Mayaguez, Chemical Engineering Dept

***Experiments on Granular Mixing Due to Shear Stress in a Cavity***

*[Engineering-14]*

**Quinones, Leonel, UPR-MAYAGUEZ;** Huertas Javier, Chemical Engineering-University of Puerto Rico Mayaguez; Martínez-Iñesta María, Chemical Engineering-University of Puerto Rico Mayaguez

***Synthesis and Characterization of Templated Ni Nanowires using Zeolites***

*[Engineering-15]*

**Reyes, Damian, UPR-MAYAGUEZ;** Estremera, Miguel A., Chemical Engineering; Mendez, Rafael, Chemical Engineering

***Bifunctional Materials for the Catalytic Conversion of Cellulose into Soluble Feedstocks: A Sustainable Source of Renewable Biorefinery Feedstock***

*[Engineering-16]*

**Rivera, Sindia, M., UPR-MAYAGUEZ;** Arturo J. Hernandez-Maldonado, Chemical Engineering, UPRM-Mayaguez

***Nickel II Grafted MCM-41: A Novel Sorbent for the Removal of Naproxen from Water***

*[Engineering-17]*

**Rivera-Ramos, Milton E., UPR-MAYAGUEZ;** Hernández-Maldonado, Arturo J., Chemical Engineering, UPR-Mayaguez

***Separation of CO<sub>2</sub> from Light Gases Mixtures using Ion-Exchanged***

*[Engineering-18]*

**Rodriguez, Hector, UPR-MAYAGUEZ;** Latorre, Magda, Chemical Engineering; Rinaldi, Carlos, Chemical Engineering; Torres-Lugo, Madeline, Chemical Engineering

***Studies of Ferrite Based Magnetic Nanoparticle Transport Mechanisms and Magnetocytolysis Effects on a Model Cell Culture***

*[Engineering-19]*

**Roman, Ruth, UPR-MAYAGUEZ;** Mejia, Irene, Acosta, Felipe; Pando, Miguel, Godoy, Luis; Dept of Civil Engineering and Surveying, UPR Mayaguez

***Environmental Effects on Deformation, Strength, and Degradation of Glass Fiber Reinforced Polymers***

*[Engineering-20]*

**Ruiz, Gerardo, UPR-MAYAGUEZ;** Sridhar, Lakshmi, Chemical Engineering, UPRM

***Design and Analysis in Modeling Reactive Separation Processes***

*[Engineering-21]*

**Santos, Nilmarie, UPR-MAYAGUEZ;** Janet Méndez, Chemical Engineering, UPR-Mayaguez; Margarita Licha, PhD, Chemical Engineering, UPR-Mayaguez; Madeline Torres-Lugo, PhD, Chemical Engineering, UPR-Mayaguez

***Examination of the Effects of PEG-Rich Matrixes in Multi Drug Resistance-Associated Protein (MRP) and Multi Drug Resistance (MDR) Substrates Transport Utilizing the CACO-2 Cell Model***

*[Engineering-22]*

**Sola, Juan, UPR-MAYAGUEZ;** Couvertier, Isidoro, ECE Department, UPR-Mayaguez

***A Protocol Offload Framework Applied to a TCP Offload Engine and Web Traffic***

*[Engineering-23]*

**Soto, Denisse, UPR-MAYAGUEZ;** Rinaldi, Carlos, Chemical Engineering, UPR-Mayaguez

***Brownian Dynamics Simulation of Simultaneous Brownian and Neel Relaxation Mechanisms in Ferrofluids***

## ***Environmental Sciences***

*[Enviromental Sciences-01]*

**Betancourt, Luz Stella, TURABO UNIV;** Dr Cesar Lozano, Environmental Chemistry , Doctoral Program, School Science and Technology, Turabo University

***Characterization Of Heavy Metal In The Leachate Of Two Municipal Solid Waste Disposal Landfills Of Puerto Rico And Evaluation Of Its Groundwater Impact***

*[Enviromental Sciences-02]*

**Bonilla-Rivera, Carmen E., TURABO UNIV;** Perez-Jimenez, Jose R

***Diversity and Abundance of sulfate-reducing bacteria in the Elfin Forest in Puerto Rico***

*[Enviromental Sciences-03]*

**Burgos, Sofia, UPR-RIO PIEDRAS;** Ramirez, Alonso; Institute for Tropical Ecosystem Studies, University of Puerto Rico, San Juan, Puerto Rico

***Biodiversity And Ecosystem Function In Tropical Streams: Watershed Land Use Effects And Benthic Biofilms Communities***

*[Environmental Sciences-04]*

**Cardona Cardona, Vanessa, UPR-MAYAGUEZ;** Rios Velazquez, Carlos, Biology, University of Puerto Rico Mayaguez

***First report of Vogesella sp. in Puerto Rico***

*[Environmental Sciences-05]*

**Hernandez, Pablo J, UPR-RIO PIEDRAS;** Omar Pérez-Reyez, Biology Department, University of Puerto Rico, Río Piedras Campus; L. Alonso Ramirez, Institute for Tropical Ecosystem Studies, University of Puerto Rico, Río Piedras Campus

***Biodiversity Of Benthic Macroinvertebrates In Puerto Rican Stream: The Effect Of Land Use***

*[Environmental Sciences-06]*

**Malavé, Josué, UPR-MAYAGUEZ;** Borglin E., Sharon, Center for Environmental Biotechnology, Lawrence Berkely National Lab, Berkely, CA; Rios-Velazquez, Carlos, University of Puerto Rico-Mayaguez; Biology Dept.; Hazen, Terry, Center for Environmental Biotechnology, Lawrence Berkely National Lab, Berkely, CA

***Study of Microbial Community Structure Using Phospholipid Fatty Acid Analysis (PLFA) on Chromium Contaminated Site Before Lactate Injection***

*[Environmental Sciences-07]*

**Maldonado, Yaritza, UPR-MAYAGUEZ;** Rodriguez Rodriguez Nydia J., Marine Sciences Department; Zaidi Baqar R., Marine Sciences Department, UPR-Mayaguez

***Distribution of Polyaromatic Hydrocarbon (PAH's) Degrading Bacteria in coastal sediments of Puerto Rico***

*[Environmental Sciences-08]*

**Padilla, Luis, UPR-MAYAGUEZ;** Mendez,Rafael, Natural Sciences Department, UPR-Carolina; Matos,Israel, National Weather Service

***Regional Analysis of Heavy Precipitation over Puerto Rico during 1975-2005***

*[Environmental Sciences-09]*

**Padilla-Luciano, Yeira, UPR-MAYAGUEZ;** Bogere, Moses N., Department of Chemical Engineering, University of Puerto Rico, Mayaguez; Ogden, Kimberly, Department of Chemical and Environmental Engineering, University of Arizona

***Bioremediation of Copper from Chemical Mechanical Planarization (CMP) Wastewater***

*[Environmental Sciences-10]*

**Rodriguez, Nydia, UPR-MAYAGUEZ;** Baqar R. Zaidi, Marine Sciences Department, UPR Mayaguez

***Patterns of Multiple Antibiotic Resistant of Enterococcus species in waters and sediments of Barceloneta-Manatí, Puerto Rico***

*[Environmental Sciences-11]*

**Silva, Jessica, UPR-RIO PIEDRAS;** Abelleira, Oscar, Biología, Universidad de Puerto Rico; USDA-FS; Lugo, Ariel, Biología, Universidad de Puerto Rico; USDA-FS

***Castilla elastica in a Secondary Forest of Puerto Rico***

*[Environmental Sciences-12]*

**Silva, Jessica, UPR-RIO PIEDRAS;** Martinez, Noraida & Aide, Mitchell; Biology Dept, UPR Rio Piedras

***Structure, Density and Plant Species Composition of Secondary Forests in Vieques, Puerto Rico***

## ***Geosciences***

*[Geosciences-01]*

**Cuevas, David, UPR-MAYAGUEZ;** Sherman, Clark, Dept. Marine Sciences, UPR-Mayaguez; Ramirez, Wilson, Dept. Geology, UPR-Mayaguez; Hubbard, Dennis, Dept. Geology, Oberlin College, Oberlin OH

***The Mid-Holocene Cañada Honda Fossil Reef Of The Enriquillo Basin, Southwestern Dominican Republic: Evidence For Coral Growth And Reef Accretion At Great Depth And High Siltation Prior To Anthropogenic Disturbance***

# ***Life Sciences***

*[Life Sciences-01]*

**Acevedo, Julio, UPR-MAYAGUEZ;** Maldonado Ramírez, Sandra L., PhD., Department of Biology, University of Puerto Rico, Mayagüez, P.R.

***Temporal Distribution of mycelial fungi in the industrial zone at Mayagüez, Puerto Rico***

*[Life Sciences-02]*

**Conde-Costas, Carlos, UPR-RIO PIEDRAS;** Jorge Ortiz-Zayas; University of Puerto Rico, Río Piedras

***Nitrogen Dynamics in a Tropical Cave Stream***

*[Life Sciences-03]*

**Delgado, Manuel, UPR-RIO PIEDRAS;** Lugo-Chinchilla, Ana, Department of Natural Sciences, Interamerican University; Lizardo, Luis, University of Puerto Rico, Biology Department; Morales, Irmarié, University of Puerto Rico, Biology Department, Robles, Yarelis, Department of Natural Sciences, Interamerican University; Bruno, Nimaris, University of Puerto Rico, Biology Department; Renaud, Fernando L, University of Puerto Rico, Biology Department

***Chronic Exposure Of Human Macrophages In Vitro To Morphine And Methadone Induces A Putative Tolerant/Dependent State***

*[Life Sciences-04]*

**González, Rosalyn, UPR-RIO PIEDRAS;** Clarivel Lasalde; Alfredo León; Carlos I. González; Department of Biology, University of Puerto Rico-Río Piedras Campus

***Effects of Upf1 Phosphorilation Mutants In Saccharomyces Cerevisiae Nonsense-Mediated Mrna Decay (NMD) Pathway***

*[Life Sciences-05]*

**Loperena, Yaliz, UPR-MAYAGUEZ;** Ruiz-Acevedo, Alejandro, Rios-Velazquez, Carlos; Biology Dept, UPR Mayaguez

***Isolation of Peptides that Recognize Cryptococcus gattii Using T7 Phage Display of Human's Brain and Lungs cDNA Libraries***

*[Life Sciences-06]*

**Lozada, Chad, UPR-MAYAGUEZ;** Ballantine, David L.

***Phylogeny of Rhodymeniales (Rhodophyta) reported from Puerto Rico***

*[Life Sciences-07]*

**Olivera, Lening, Ponce School of Medicine;** Mueller, Devin, Departments of Psychiatry and Anatomy and Neurobiology, University of Puerto Rico School of Medicine, San Juan, Puerto Rico ; Pine, Daniel, Section on Development and Affective Neuroscience, National Institute of Mental Health Intramural Research Program, Bethesda, MD; Quirk, Gregory, Departments of Psychiatry and Anatomy and Neurobiology, University of Puerto Rico School of Medicine, San Juan, Puerto Rico 00931

***The Effects Of Amphetamine And Yohimbine On Extinction Of Auditory Fear Conditioning***

*[Life Sciences-08]*

**Pantoja-Feliciano, Ida Gisela, UPR-RIO PIEDRAS;** Pérez, María Egleé, Universidad de Puerto Rico, Río Piedras; Vargas Pinto, Greta, Hospital Boliviano Japonés, Sucre, Bolivia; Domínguez-Bello, María Gloria, Universidad de Puerto Rico, Río Piedras

***Gender Differences in Antibiotic Resistance in a Rural Community in Bolivia***

*[Life Sciences-09]*

**Perez Casanova, Antonio, Ponce School of Medicine;** Rivera Amill, Vanessa, Microbiology, Ponce School of Medicine; Noel, Richard, Biochemistry, Ponce School of Medicine; Hussain, Kasim, Pharmacology, Ponce School of Medicine, Kumar, Anil, Pharmacology, University of Missouri-Kansas City School of Pharmacy

***Alcohol Abuse & Oxidative Stress In Macaque Model Aids***

*[Life Sciences-10]*

**Rodriguez, Carlos A., UPR-RIO PIEDRAS;** Alberto Lopez, Manejo, UMET; Dr. Rafael Joglar, Biology, UPR-RP; Hector J. Claudio, Derechos, UPR-RP

***Green Iguanas (Iguana iguana) in Puerto Rico: Is it Time for Management***

*[Life Sciences-11]*

**Ruiz, Francheska, UPR-RIO PIEDRAS;** Rios, Neftalí, Biology, UPR-Humacao

***Is There Parental Care In Eleutherodactylus Juanariveroi? The Evolutionary Significance***

*[Life Sciences-12]*

**Torres, Hernán, UPR-MAYAGUEZ;** Schizas, Nikolaos, Marine Sciences, UPR-Mayaguez

***Sympatric Mitochondrial Lineages in Two Marine Benthic Species With Different Life Histories***

*[Life Sciences-13]*

**Vega, Juan, UPR-MAYAGUEZ;** Santos Yelixa, Biology UPR-Mayaguez; Ríos-Velazquez Carlos, Biology UPR-Mayaguez

***The Ability Of Anoxigenic Purple Non-Sulfur Phototrophic Bacteria Isolated From Bromeliad's Phytotelmata To Grow In Biodiesel As Sole Carbon Source***

## ***Mathematics***

*[Mathematics-01]*

**Hernandez, Mariely, UPR-RIO PIEDRAS;** Dra. María Egleé Pérez ; University of Puerto Rico at Rio Piedras, Department of Mathematics

***Statistical Methods For Conservation Of Species***

*[Mathematics-02]*

**Pinero, Fernando, UPR-RIO PIEDRAS**

***Some Applications of Coding Theory***

# Physics

[Physics-01]

**Arias, Melvin, UPR-RIO PIEDRAS;** Pantojas, Victor, Department of Physics-Mathematics, University of Puerto Rico at Cayey; Rivera, Adamari, Department of Physics-Mathematics, University of Puerto Rico at Cayey; Rodriguez, Diego, Department of Physics, University of Puerto Rico at Río Piedras, Santiago, Jorge., Department of Electrical and System Engineering, University of Pennsylvania

***Scanning Probe Microscopy for the characterization of fibers and other morphologies***

[Physics-02]

**Arroyo, Edwin, UPR-RIO PIEDRAS;** S. Basu, Department of Physics, University of Puerto Rico Rio Piedras; Fouad Aliev, Department of Physics, University of Puerto Rico Rio Piedras

***Relaxation Process and Phase Transitions in Nanoconfined Liquid Crystals***

[Physics-03]

**Betancourt, Jesuan, UPR-RIO PIEDRAS;** Fonseca, Luis F, Physics Department, University of Puerto Rico Rio Piedras; Zypman, Fredy R, Physics Department, Yeshiva University, New York

***Mechanical Spectroscopy Of Radiation-Induced Surface Roughness in SiO<sub>2</sub> Nanorods***

[Physics-04]

**Biaggi, Azlin, UPR-RIO PIEDRAS;** Sola, Francisco, Physics, UPR-Rio Piedras; Resto, Oscar, Physics, UPR-Rio Piedras; Fonseca, Luis F., Physics, UPR-Rio Piedras, Gonzalez-Berrios, Adolfo, Physics, UPR-Cayey; De Jesus, Joel, Physics, UPR-Rio Piedras; Morell, Gerardo, Physics, UPR-Rio Piedras

***Nanocrystalline Silicon as the Light Emitting Component of a Field Emission Display Device***

[Physics-05]

**Burgos, Juan, UPR-RIO PIEDRAS;** Zelevinsky, Vladimir, Department of Physics and Astronomy

***Unstable Quantum Systems Coupled Via Continuum And Super Radiance***

*[Physics-06]*

**Colon, Luis M, UPR-RIO PIEDRAS**

***Foundations towards understanding Gravitation Theories and General Relativity***

*[Physics-07]*

**Correa, Margarita, UPR-RIO PIEDRAS; Kumar Ashok; Katiyar Ram; Physics, UPR-RP**

***Strain Induced Relaxor Behavior in  $PbSc_{0.5}Nb_{0.25}Ta_{0.25}O_3$  Thin Films: A Comparison With The Nanoceramics***

*[Physics-08]*

**Escobar, Mauricio José, UPR-MAYAGUEZ; Escobar Medina, Mauricio Jose, Physics, UPR-Mayaguez; Kim, Yong-Jihn, Physics, UPR-Mayaguez**

***Tracing The Evolution Of Two Energy Gaps Of  $MgB_2$  With Increasing Disorder***

*[Physics-09]*

**Isidro, Gloria Maria, UPR-RIO PIEDRAS; Alonso, Jose, AO/NAIC; Pantoja, Carmen A., UPR-RRP; Bartus, Paul, UPR-RRP**

***Touching the Moon and the Stars-Workshop***

*[Physics-10]*

**Karan, Naba, UPR-RIO PIEDRAS; Saavedra Jose. J; Pradhan D; Melgerajo Ricardo; Thomas; Reji; Department of Physics, University of Puerto Rico**

***Structural and Electrochemical Characrization of Chemical Solution Derived  $LiMn_{0.5}Ni_{0.5}O_2$***

*[Physics-11]*

**Lopez, Ivan Joel, UPR-RIO PIEDRAS; Dolidze, Vladimir; Aliev, Fouad; Department of Physics, UPR-RP**

***Interfacial And Random Field Effects In Polymers Filled With Nanoparticles***

*[Physics-12]*

**Medina, Olga, UPR-RIO PIEDRAS;** Morell Gerardo, Física, UPR - RIO PIEDRAS; Avalos Javier, Física, UPR - RIO PIEDRAS; Weiner Brad, Química, UPR - RIO PIEDRAS, Merced Triana, Ciencia y Tecnología, Universidad Metropolitana; Rodríguez Samely, Física, UPR - RIO PIEDRAS

***Ellipsometric Characterization of E. Coli and C. Xerosis Bacteria Films on Nanocomposite Carbon Surfaces***

*[Physics-13]*

**Mendoza, Frank, UPR-RIO PIEDRAS;** Fernandez Felix, Physics UPR-MAYAGUEZ; Mendoza Frank, Physics UPR-RIO PIEDRAS

***Electrical Properties of VO<sub>2</sub> Thin Films Grown By PLD***

*[Physics-14]*

**Mosquera Vargas, Edgar E, UPR-RIO PIEDRAS;** Marín, Carlos; Department of Physics, University of Puerto Rico-Rio Piedras

***Using Raman Spectroscopy to Detect Early-Nucleation Nanosize Phases in Freezing Liquids of n-Alkanes, C<sub>12</sub> – C<sub>16</sub>***

*[Physics-15]*

**Nocua, Jose, UPR-RIO PIEDRAS;** Morell, Gerardo, Institute for Functional Nanomaterials, Depto Fisica

***Synthesis And Characterization of Stoichiometric Boron Nitride Nanostructures***

*[Physics-16]*

**Ortega, Nora Patricia, UPR-RIO PIEDRAS;** Kumar Ashok, Department of Physics - University of Puerto Rico; Katiyar Ram S., Department of Physics - University of Puerto Rico

***Multilayer Pb(Zr,Ti)O<sub>3</sub> /CoFe<sub>2</sub>O<sub>4</sub> Epitaxially Thin Films***

*[Physics-17]*

**Perez, Kenneth, UPR-RIO PIEDRAS;** Fonseca, Luis, Universidad de Puerto Rico, Recinto de Rio Piedras

***Photoluminescence studies of Si particles embedded in ZrN and Al<sub>2</sub>O<sub>3</sub> matrices***

*[Physics-18]*

**Samanta, Kousik, UPR-RIO PIEDRAS;** Bhattacharya Pijush, Department of Physics, Fisk University, Nashville TN 37209; Katiyar Ram, Department of Physics, University of Puerto Rico, San Juan, PR 00931; Rettori Carlos, Instituto de Fisica "Gleb Wataghin," UNICAMP, 13083-970, Campinas-SP, Brazil, Rao K V, Department of Material Science, Royal Institute of Technology, Stockholm, Sweden

***Room Temperature Ferromagnetism In Nano-Crystalline Dilute Magnetic Semiconductor Zn<sub>1-x</sub>Mnx Thin Films***

*[Physics-19]*

**Sanchez, Jorge, UPR-MAYAGUEZ;** Rinaldi Carlos; Department of Chemical Engineering, University of Puerto Rico, Mayagüez

***Rotational Brownian Motion of Non-interacting Magnetic Ellipsoids in D.C. and A.C. Magnetic Fields***

*[Physics-20]*

**Sola, Francisco, UPR-RIO PIEDRAS;** Resto, Oscar, Physics, UPR-Rio Piedras; Biaggi-Labiosa, Azlin, Physics, UPR-Rio Piedras; Fonseca, Luis F., Physics, UPR-Rio Piedras

***Growth and Characterization of Graphite like a-C:H nanostructures Arrays***

*[Physics-21]*

**UPPIREDDI, KISHORE, UPR-RIO PIEDRAS;** Brad R Weiner, IFN; Dept of Chemistry, UPR-RIO PIEDRAS; Gerardo Morell, IFN; Dept of Physics, UPR-RIO PIEDRAS

***Spectroscopic ellipsometry studies of ultrananocrystalline diamond deposited by DC plasma assisted HFCVD***

*[Physics-22]*

**Valentin, Luis, UPR-RIO PIEDRAS;** Fonseca Luis, Physics, UPR-Rio Piedras; Resto Oscar, Physics, UPR-Rio Piedras

***Synthesis and field emission properties of CrSi<sub>2</sub> nanowires.***

*[Physics-23]*

**YILMAZ, HULUSI, UPR-RIO PIEDRAS;** Park, Yumi, Schools of Material Engineering, Purdue University; Strachan, Alejandro, Schools of Material Engineering, Purdue University; Morell, Gerardo, Dept. of Physics, University of Puerto Rico

***Reactive Force Field Parametrization of Group IV-A Elements***