



CoHemis... Update

Overcoming through cooperation

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University of Puerto Rico at Mayagüez

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Second Symposium on Studies of the Past Being Held

The Past is the one thing in life that can be registered, studied, and, ultimately, used to understand the present and speculate on the future. With full knowledge of this reality, scientists from different disciplines presented their research concerning the path of humans throughout the history of the pre-Columbian Caribbean.

The Second Symposium on Studies of the Past was held on February 13th, 2009, at University of Puerto Rico's Mayagüez Campus (UPRM), as part of a collaboration of several organizations, among them the Molecular Archeology Program, Sciences and Engineering Applied to Studies of the Past (PAMCIAEP), the Center for Hemispherical Cooperation in Research and Education in Engineering and Applied Science (CoHemis), the Humanities Department, and the Chancellor's Office.

According to Dr. Juan C. Martínez Cruzado, the Symposium's coordinator, this educational event provides a medium for students to learn research alternatives and for the Campus professionals to present their work. "It is important to know our past. Facing that need, I believe that the Mayagüez Campus is the ideal



Above: The exhibit Archeological Samples of Pre-Columbian Cultures in Puerto Rico is a compilation of repaired and whole pieces, just like this vase.

platform for this type of event. Our University counts with excellent researchers, students, and teachers who have a lot to contribute in the fields of archeology and anthropol-

continues in page 3

New Collaboration between the University of West Indies and UPRM

Promoting collaboration between the countries of the Caribbean has been one of CoHemis' goals since its founding. This is the reason why when the presidents of the University of Puerto Rico (UPR) and the University of the West Indies (UWI) decided to launch a joint education and research project, it was natural for our Center to participate.

The effort began during the second half of 2008 with a series of visits to the three UWI campuses (Jamaica, Barbados and Trinidad) by a number of UPR professors. The multidisciplinary mission helped evaluate possible collaborations in areas such as long distance education, medicine and health, natural disasters, renewable energy, law, arts, the environment, agriculture,

public health, infrastructure, and many other interests that join Caribbean countries.

On November 10, 2008 a team visited the Cave Hill Campus in Barbados. The team was composed of Dr. Jorge I. Vélez-Arocho, Chancellor of UPR-Mayagüez Campus, Dr. Delia M. Camacho, Dean of Academic Affairs at UPR-Medical Sciences Campus, Dr. Roberto P. Aponte-Toro, Dean of UPR Law School, Dr. Fernando Gilbes-Santaella, Director of CoHemis, and Dr. Urayoán R. Walker-Ramos, Special Assistant to the UPRM Chancellor. This group held meetings with UWI professors and began talks to design a more concrete plan of collaboration between the campuses of both universities. The topics of most interest for the UPRM team were those of risk

continues in page 2

ON THIS EDITION: Collaboration with the University of West Indies ♦ ESPA ♦ Olé RUM/ Basque Country's University ♦ CoHemis UPRM SACNAS, Successful Nationally ♦ G40 Writing ♦ Biotechnology³ ♦ Astrobiology: Searching Signs of Life ♦ GeMS

COHEMIS CONSORTIUM: It's a network of institutions, universities, laboratories and other organizations that are united to the UPRM by means of agreements to collaborate in activities about science and technology. At the moment, the CoHemis Consortium consists of 49 institutions of the Hemisphere Occidental and Spain. This section is for publishing events related to the members of the consortium. If your institution is member and wishes to publish an article in future editions, please send the request to cohemis@ece.uprm.edu.

New Collaboration between the University of West Indies and ...

(from page 1)

management and natural disasters, renewable energy sources, and agriculture.

The participants were divided in various teams, which eased the planning of possible initiatives. After an intense exchange of ideas an agreement for two workshops, one on natural disasters and one on renewable energy, to take place in UPRM was reached. These workshops are an opportunity for teams of both institutions to get to know each other and develop joint proposals for the benefit of the region. It was also decided that CoHemis would play a major role in the planning and execution of these workshops.

Dr. Gilbes-Santaella thanked everyone for the opportunity and assured that he will closely follow every decision so that the proposed activities are a success. For his part, Dr. Vélez-Arocho stressed the institutional commitment to strengthen the collaborative ties between UPRM and UWI.

CoHemis is currently organizing the first workshop between UPR and UWI, on natural disaster management. It will take place at UPRM and will consist of presentations, group dynamics, and laboratory visits.

The participation of specialists in related areas from both institutions is expected, along with people from government institutions and the private sector. In future editions of *CoHemis...Update* we will have more information on this important effort.



UPRM delegation with UWI officials

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Cabon Transport in Rivers Using Remote Sensing

Surface measurements of dissolved organic carbon (DOC), colored dissolved organic matter (CDOM), salinity, and light reflected from the water have been obtained for a number of years at the Mississippi River's delta. These measurements have been empirically related to the Sea-viewing Wide Field-of-view Sensor (SeaWiFS) images for the development of models that allow researchers to obtain DOC concentrations and transport by using remote sensing. This was the main topic of a seminar by Dr. Carlos Del Castillo on February 17th, 2009 at the Eugene Francis Room of the University of Puerto Rico at Mayagüez (UPRM). This seminar is part of the effort that CoHemis began in 2003 with the initiative Remote Sensing and Geographical Information Systems (PRYSIG for Spanish).

Dr. Del Castillo is a graduate from our university and is currently a researcher at the Applied Physics Laboratory at Johns Hopkins University. Previously he had worked at NASA's Stennis Space Center in Mississippi. He obtained a Bachelor's degree in biology and a Master's degree in marine sciences from UPRM, and then he attended the University of South Florida where he obtained a Doctorate's degree in Chemical Oceanography specializing in CDOM dynamics. In 2004, Dr. Del Castillo was honored with the prestigious NASA Presi-

dential Early Career Award for Scientists and Engineers for his efforts in scientific advancement through remote sensing.

During the seminar, the multidisciplinary group of attendees learned about one of the most recent efforts to use satellite imagery for oceanic study and understanding the global carbon cycle. Dr. Del Castillo's visit to UPRM also helped to promote Johns Hopkins University's doctoral program. He interviewed a number of marine sciences and geology students who are considering the possibility of continuing their graduate studies at this prestigious university. For more information on this seminar please visit <http://cohemis.uprm.edu/prysig/cdc09/cdc09.html>.



From left to right: Dr. Carlos Del Castillo and Dr. Fernando Gilbes Santaella, CoHemis' Director

Second Symposium on Studies of the... (from page 1)

ogy,” said Martínez Cruzado. On his part, CoHemis’ director, Dr. Fernando Gilbes Santaella, stressed the need for promoting interdisciplinary research in archeology. “For CoHemis, this event is natural and necessary, for, if our purpose is to promote collaborative research, the Symposium conveys a message of awareness about this responsibility,” expressed Gilbes Santaella.

Many well known personalities from the field of research of the past attended the event, held at Room A of the General Library. One of them was Dr. Robert L. Carneiro, curator for the Anthropology Department of the American Museum of Natural History in New York, who shared his findings regarding the topic of chieftainship in Amazonian ethnic groups.

On related news, before the Symposium, at the Carlos E. Chardón Building Art Gallery, the exhibit Archeo-



The collection included axes, bottles, necklaces and amulets.

Enrique Laguerre and Irving Rouse. Currently, the collection is in the process of being donated to the Mayagüez Campus, a place that I find to be an ideal depository for such an effort,” he declared. The documenting of the Symposium will be the responsibility of Dr. Miriam González, professor in the Department of Hispanic Studies, who, in conjunction with the event’s organizers, students and professors will publish the event’s particulars. For More information on the event, please access our webpage: <http://cohemis.uprm.edu/espa>

UPRM Press Office Collaboration

By: Marta Yazmín García Nieves/ Fotos: Carlos Díaz



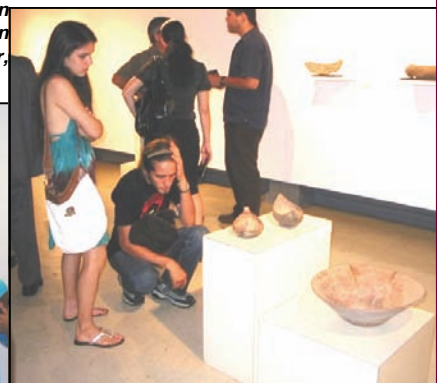
Recognized figures met at the event. From left to right: The archaeologist Juan Ortiz Aguiló, accompanied by doctors Jalil Sued Badillo, from the Department of Social Sciences of UPR-Rio Piedras; Robert L. Carneiro, American Museum of Natural History of New York; Edward Kurjack, Western Illinois University; and Juan C. Martínez Cruzado, Department of Biology at the UPRM.

logical Samples of pre-Columbian Cultures in Puerto Rico was held, presenting the collection supervised by archeologist José Efraín Irizarry Avilés. The collection consists of a representative sample collected for over fifty years, of whole and restored pieces of Puerto Rico’s West Indian past.

“The collection includes pieces from the salaloid tradition, Taíno culture and Monserrate style. It is a rich variety of hatchets, bowls, bottles, necklaces, and amulets. For me, it is very important to present this lifetime collection and work that has been valued by scholars like Ricardo Alegría, Loida Figueroa,



Below, from left to right: Dr. Moisés Orenge, Dean of Arts and Sciences College; Mr. José Efraín Irizarry Avilés, guardian of the archeological collection exhibited; and our Chancellor, Dr. Jorge I. Vélez Arocho



Above: Students admiring the pieces shown at the exhibition. It took place at the Art Gallery located in the Building Carlos E. Chardón at UPRM.

CoHemis Student Organization, Successful Locally and Nationally

The Society for the Advancement of Chicanos/ Latin@s and Native Americans in Science (SACNAS) awarded the 2007-2008 Chapter Role Model Award for Outstanding Professional Development and Teamwork to SACNAS's University of Puerto Rico at Mayagüez chapter (CoHemis-UPRM-SACNAS). This is a nationally recognized award honoring five chapters in five areas of knowledge: service, undergraduate and graduate research, professional development and teamwork, University support, and faculty leadership. Receiving this award means that our Institution is among the top five chapters in the US; specifically in the area of professional development and teamwork.

Another achievement is that this is CoHemis-UPRM-SACNAS first year, showing the talent and hard work of its members and directors. CoHemis-UPRM-SACNAS chapter spent last year developing a number of activities, among them: workshops on group psychology, teamwork, and ethics in research, job interviews and personal statement preparation. The chapter also held community service events such as participating in the Community Development Institute, and "Relevo Por La Vida". The chapter's president was Ms. Karen Díaz, who along with a team of undergraduate and graduate students from different disciplines took CoHemis-UPRM-SACNAS to the honor and recognition it now commands.

Current president, Ms. Jesabel Rivera De Jesús, has attended the SACNAS 2007-2008 National Convention in Salt Lake City, Utah to receive these honors. She, along with her team, also developed an ambitious work schedule, including community events, lectures and workshops such as freshman orientations; Adapting to Change, Study Habits; Graduate School Experience; Public Speaking; Orientation of pre-university students; and baseball games among others. In addition, the organization contributes in environmental conservation, recruiting new members and marketing without the use of paper or printers. They walk around the Campus talking to people and inviting them to join and to attend events. They also have e-mail campaigns and use their own wardrobes to advertise themselves.

This group of young people is enthusiastic, active, talented, creative, and dedicated to their studies and the advancement of their organization. With all their achievements, we can say they have an A+. For more information on CoHemis-UPRM-SACNAS please visit www.sacnas.org.



1) SACNAS and their counselor Dr. Carlos Ríos Velázquez in one of the initiation ceremony; 2) SACNAS members recruiting new members using the direct invitation; 3) They use their close to promote the chapter; 4) Baseball game, community service activity

Innovation and Quality Assurance: A Roadmap for Academic Excellence

CoHemis has joined an important initiative denominated TEC-CARIBE, which aligns itself perfectly to our mission and objectives. This is why University of Puerto Rico at Mayagüez (UPRM) Chancellor Dr. Jorge I. Vélez-Arocho appointed CoHemis as official liaison and initiative facilitator. Among these he coordinated a workshop titled *Innovation and Quality Assurance: a Roadmap for Excellence* held on October 22-23, 2008 at UPRM. We had the participation of 10 delegates from various member institutions of TEC-CARIBE, such as: the Technological University of Panama, Northern Colombia University, the Technological Institute of Santo Domingo, the Technological Institute of Costa Rica, Venezuela's Simón Bolívar University, and UPRM.

During those days, several meetings were held among Chancellors, Vice-chancellors, delegates from visiting institutions, and Office Directors from UPRM such as Institutional Planning, Graduate Studies, Assessment and Continuous Improvement among others. Dr. Miguel Escala, Chancellor of Santo Domingo Technological Institute commented, "We discussed the importance of TEC-CARIBE becoming well-known in all different aspects of our institutions. Our network involves its incorporation to institutional, strategic, quasi-strategic tasks, and the commitments of all chancellorships, and the support of all the projects' participants.

CoHemis will continue supporting TEC-CARIBE initiatives, which, undoubtedly, will allow the channeling of educational and research efforts towards the benefit of the Caribbean.



Welcome the Basque Country's University to Olé RUM

The University of the Basque Country in Euskera, Euskal Herriko Unibersitatea, is the public university of the Basque Country's Autonomous Communities. The university has three campuses and more than 32 faculties and schools. Every year more than 900 students from all over the world attend its exchange program. It is a bilingual school; therefore, although most of its courses are in Spanish, it also offers courses in Euskera, and the chance for exchange students to learn that language.

Although all the campuses have different faculties, and all of them have engineering, education, and business studies programs, each excels in different areas. The university as a whole is oriented towards modernization and the environment, having been recognized numerous times. CoHemis warmly welcomes the University of the Basque Country to the Program for Studies in Spain Olé RUM and invites all UPRM students to apply for studies in this university for a year or a semester through our program. For more information on this university, please visit www.ehu.es, and for more information about Olé RUM, please go to cohemis.uprm.edu/olerum

FIFE-BEAMS Alumni UPRM

FIFE-BEAMS Alumni UPRM (Fomenting Interaction of Faculty and Students of the Building Engagement and Attainment of Minority Students project) is an initiative developed by a faculty team of the Mayagüez Campus. It has the purpose of providing support, in any measure deemed appropriate, to our students throughout their academic journey and university life. The initiative began with the name Alumni 2011 and after many transformations, and with the purpose of helping more students; it is now called Alumni UPRM. As an integral part of FIFE/BEAMS, Alumni UPRM will help support interaction between faculty and students; improve the retention of our students and, above all, it will focus in developing personal, academic and professional aspects, looking towards the future and the attainment of goals and ideals. Alumni UPRM events will involve the development of student support groups of freshmen, professors and volunteer student mentors.

The goal is to organize at least three events each semester so these students can develop personal, academic and professional skills. At the beginning of Alumni 2011 and Alumni UPRM and after forming the student groups, some events were held, such as: *My Goals in Life*, where students prepared a personal life project model, related to their student life and professional future. Another event, *Planning my Academic Success*, in which students prepared a time management program, was also held. The goal was to creatively and dynamically generate experiences and initiatives for our students. The group tries to present a united front of professors who will serve

Continues in page 8

G4 Writing

Rethinking University Education: Statement of Values

As part of the events held in relation to our conferences *Rethinking University Education*, UPRM professors participated in lectures, workshops, and discussions about topics related to college education and our school's role in this issue.

During each meeting, teams were developed in order to look for different educational initiatives in support of the educational process and the school's community. As part of the follow-up meetings and in the process of creating a code of ethics, a committee was constituted with the purpose of dealing with the writings submitted by different groups on the topic of the six selected values. This topic has generated great debate and the experience of working as an interdisciplinary team for analyzing and preparing the list of values was extraordinary. We consider keeping the subject open for debate to be of great importance for the benefit of all, locally and internationally.

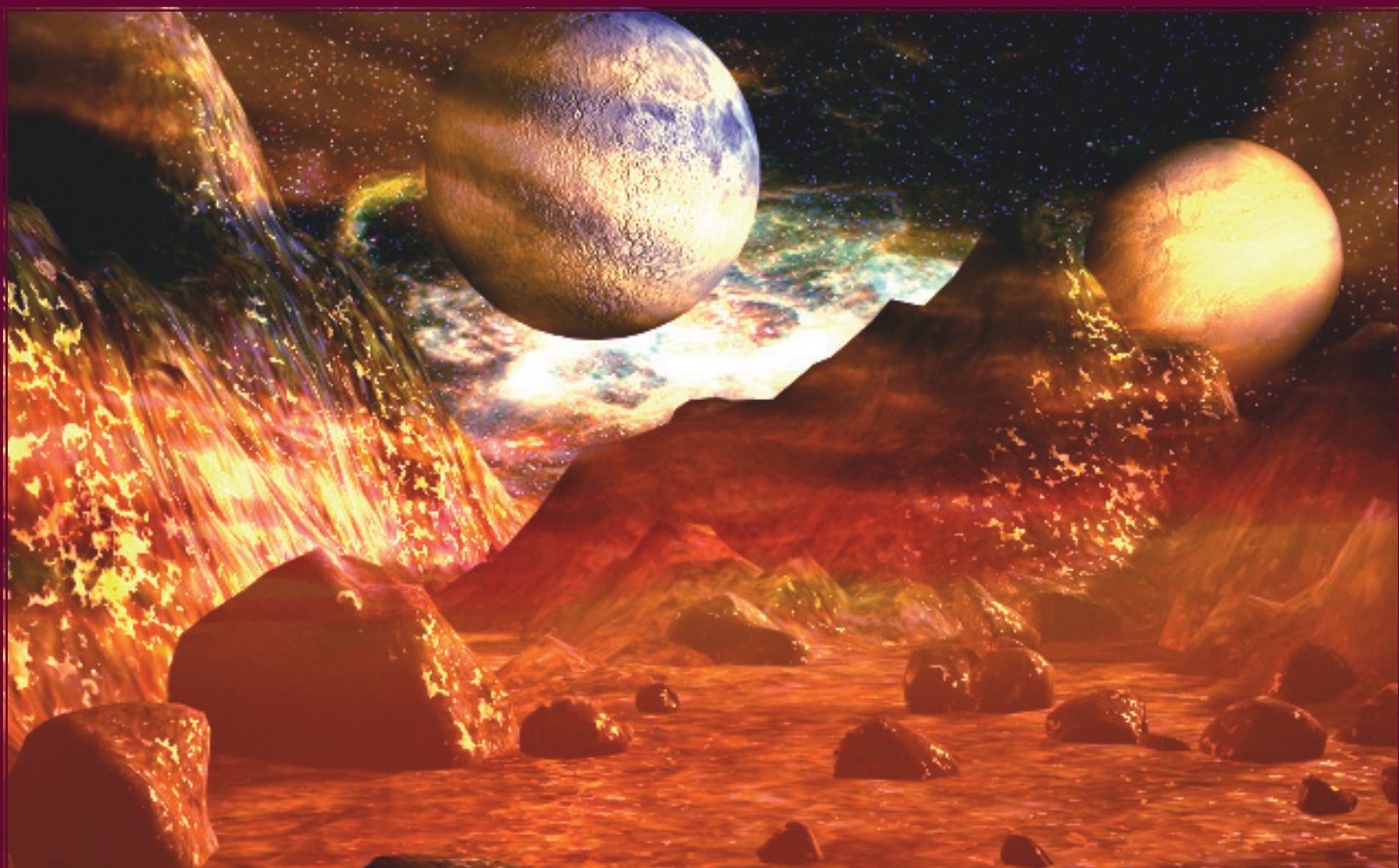
The team of professors in the committee responsible for redacting the declaration included members of the Social Sciences, Chemistry, Biology, Humanities and Hispanic Studies. Here follows the final product of the document, where the proposed values are presented, along with their suggested definitions:

REPECT: It is an attitude of consideration and deference, recognizing the inherent dignity of people, diversity and the universe of values. Respect guides us to treat each person with consideration and courtesy, recognizing and honoring their value as a person and their rights.

HONESTY: Honest is the person who is sincere, genuine, authentic and true. Honesty requires acting with integrity, conforming to the values declared here.

SOCIAL RESPONSIBILITY: Social responsibility requires the making of decisions and the taking of actions for the benefit of the community. It envelops

Continues in page 8



SciTeCC 2008: Searching for Signs of Life

<http://ranier.hq.nasa.gov/astep/title.html>

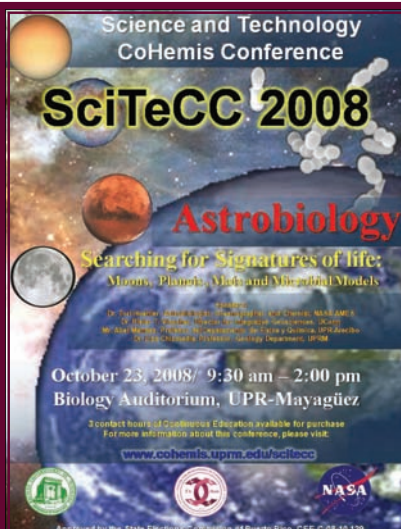
CoHemis held its fourth Science and Technology Congress (SciTeCC) on October 23rd, 2008. The main topics of the congress were: Astrobiology; Searching for Signs of Life: Moons, Planets, Mats and Microbial Models. Among the goals of SciTeCC 2008 were: 1) defining and describing concepts such as astrobiology, comets, asteroids, and other celestial bodies researched for detecting the presence of life, 2) to serve as a platform for

the interaction of disciplines such as Geology, Microbiology, and Physics in Astrobiology for understanding and studying the origins of life, 3) presenting educational initiatives and opportunities for studies and/or research in astrobiology.

SciTeCC 2008 had four local speakers and a number of guests from different United States educational centers and agencies. The first lecture was by Dr. Juan G. González Lagoa, Associate Director of the University of Puerto Rico at Mayagüez Science and Engineering Resource Center. This lecture served as an introduction of the basic principles of Astrobiology. The second lecture was by Dr. Liza Chizmadia, Associate Professor of UPRM's Geology Department, and dealt with the topic of asteroids and comets as seeders of life. Associate Professor Abel Méndez, from UPR Arcibo's Physics Department, was the third speaker, lecturing on measuring planetary habitability. The fourth and last lecture was given by Dr. Tori Hoehler, Astrobiologist, Chemist and Oceanographer for the NASA-AMES Research



Speakers from left to right: Prof. Abel Méndez, Dr. Pieter Visscher, Dr. Liza Chizmadia and Dr. Tori Hoehler



SciTeCC 2008 promotion

Center. Dr. Hoehler has numerous NASA projects regarding planetary habitability and life on other planets.

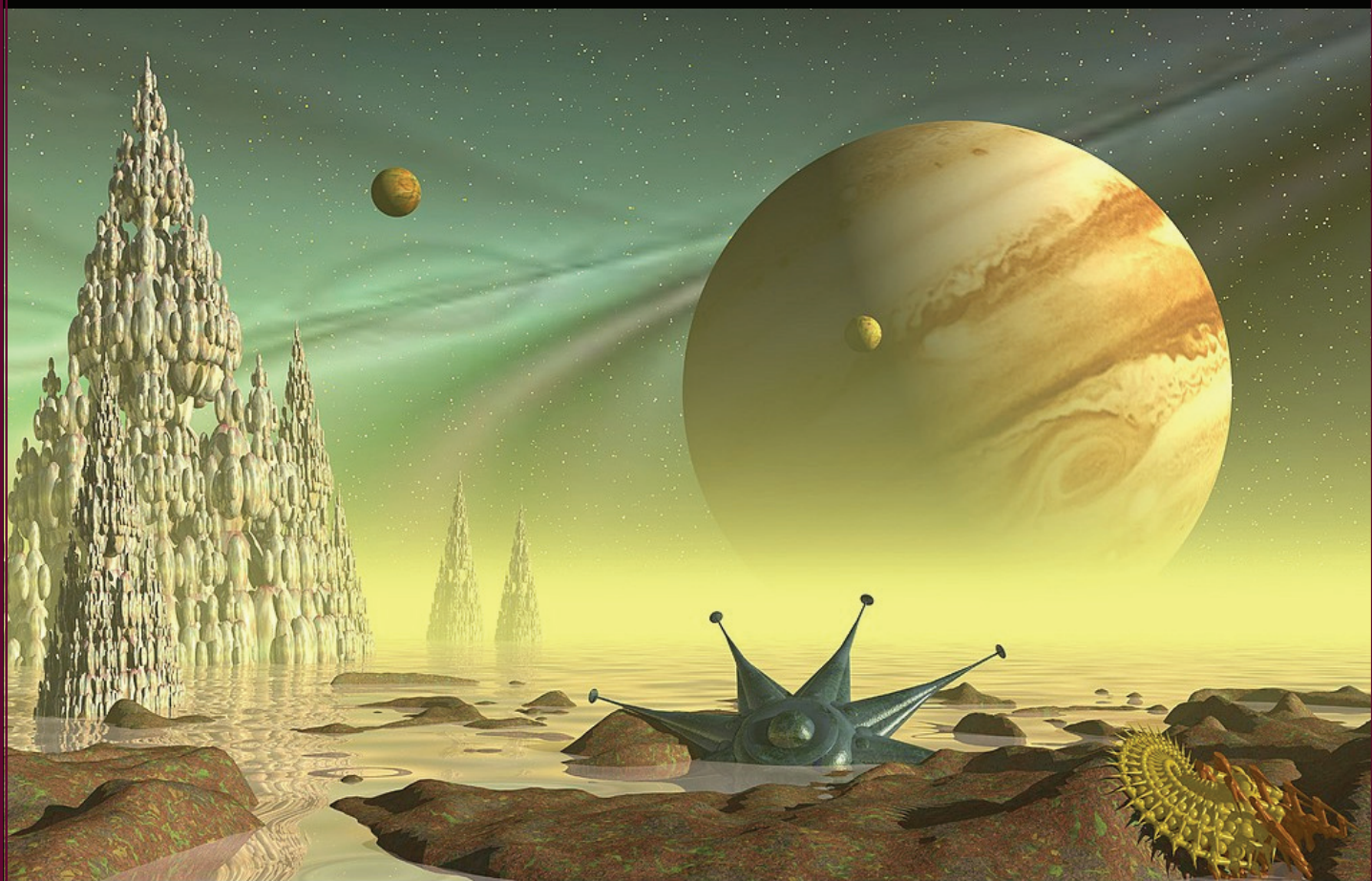
The last speaker was Dr. Peter Visscher, Director of the Integrated Geosciences Center of the Marine Sciences Department at the University of Connecticut (UConn).

Dr. Visscher lectured on Microbial Mats and the microorganisms that form microbial models for understanding the beginnings of life on our planet. After all the lectures were finished a discussion panel was held, in which our guests took questions from the audience. It should be noted that the conference was sponsored by Dr. Carlos Ríos Velázquez's research project *Detection, Isolation, and Characterization of Metal and Radiation Resistant GeoMicrobes from Several Extremophilic Environments (MaRRS-GeM)*, sponsored by the NASA-IDEAS and UPR Río Piedras' Science and Engineering Resource Center. Dr. Ríos Velázquez's students participating in the investigation and members of the UPRM chapter of the Society for Advancement of Chicanos and Native Americans in Science (CoHemis-SACNAS-UPRM) presented each of the guest speakers.

The event was attended by visitors from different educational centers and agencies, the President of the Caribbean Astronomical Society, Mr. Eddie Irizarry, and students from CROEM Specialized School along with their science teacher, Ms. Mary Padilla. The event was one of communication and collaboration. Among the projects on schedule after SciTeCC 2008 is the development of an interdisciplinary course in Astrobiology. The event was broadcasted live for the benefit of CoHemis Consortium and those who could not attend. For more information on SciTeCC 2008 please visit CoHemis' homepage:

www.cohemis.uprm.edu/scitecc.

www.cohemis.uprm.edu/scitecc.



Biotechnology ³

The enthusiasm was evident, young students and science teachers were ready to begin a different summer, a summer of biotechnology. It was the Summer Camp BETTeR-IC 2008, which took place during July of 2008 at our campus. With the motto *Learning Biotechnology as a Team and through Research and Interdisciplinary Centers*, the participants enjoyed one week of educational and recreational activities.

For the third time, 32 high school students from local schools of the west region of the Island, local and international teachers, UPRM students from the Teacher Preparation Program, and UPRM graduate students, participated of the camp. According to Doctor Carlos Ríos Velázquez, CoHemis Co-Director, "one of the aspects that make this a unique camp is the integration between students and teachers, which allows enrichment in both directions. The teacher serves as mentor and at the same time they learn how the student perceives what biotechnology is. At the end, there is a product that the teacher can take to their school".

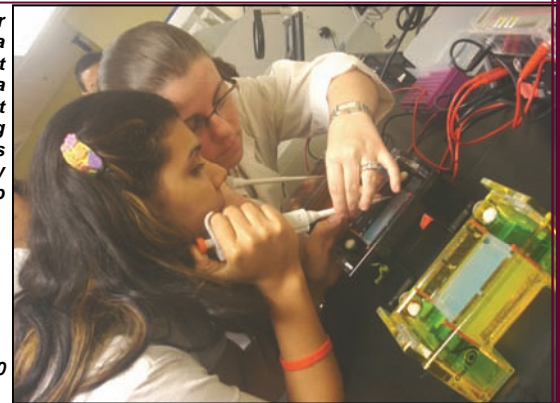
Therefore, the activities were focused in demonstrating the importance of team work as an academic and professional essential tool. "It is active learning because the students learn by doing", continued doctor Ríos-Velázquez. Students

Alumni 2011 ... (from page 5)

as a resource, and will share experiences and tools for our students to make a difference, no matter their study program. As part of the first phase of Alumni UPRM, a directory of interested faculty members was formed. The only commitment asked for was that they would help in the capacity that their responsibilities allowed. The organization focused on whom and in what capacity would help. Among the categories in participation were: mentorship in biology, chemistry and languages, sponsorship of freshmen student groups, the offer of workshops and any other task deemed useful to our initiative by the faculty.

In FIFE-BEAMS/Alumni UPRM we want to help and make a difference, so we can celebrate in each graduation the farewell of our Alumni UPRM, ready to make a difference and become agents of change and people of impact. In CoHemis we believe that this idea can be of great use to our consortium so we can help in each educational center, according to its academic needs.

The lab instructor Vanessa Cardona showing a student how to work with a laboratory tool at the Bioprospecting and Microbes Biotechnology workshop



Continues in page 10

G4 WRITING *Rethinking University Education: Statement of Values* (from page 5)

other values such as service, cooperation, the promotion of peace and responsibility towards the environment. The university works responsibly with institutions, the country, the global community and future generations when it considers the consequences of its decisions.

JUSTICE: Justice is the process of deliberating and acting on what must be equal. One is just when respecting the rights related to the principle of equality among human beings. A just university promotes a culture of inclusiveness, of non-discrimination, and deliberates with objectivity and respect. Justice has been determined culturally and historically, so it must always be the object of critical reflection.

CRITICAL SENSE: To critique is to pass judgment about the qualities of things and its processes. Critical judgment is founded in conscientious and systematic research, as well as reasonable arguments, pondering the consequences and limitations of our decisions and actions.

EXCELLENCE: To excel is to reach the highest level of execution in all aspects of life. It is the mission of the university to inspire and foment the excellence we understand to be a continuous process.

The future challenges involve the reaching of a consensus and the commitment of transmitting the message not just in the classroom, or meeting place or educational center, but in the actions of our daily lives.

Sixth National PRYSIG Meeting Held in Puerto Rico

On November 14th, 2008 and for the sixth consecutive year, CoHemis celebrated Puerto Rico's Remote Sensing and Geographical Information Systems (PRYSIG for Spanish) national meeting. As in the past five previous meetings the main goals were: 1) to promote an actualization and education process on the topic, 2) bring together specialists from academics, the government, and the private sector, 3) bring recent information to everyone interested, and 4) to serve as a forum for the exchange of ideas, the development of joint projects, and a better coordination of the many labors performed in Puerto Rico.

PRYSIG 2008 took place in the UPRM Nursing Department's Amphitheater. According to the event's official registry eighty-four people were in attendance, but that number was closer to one hundred, since not everyone registered. The program was composed of nine lectures and two workshops. The lectures included a number of diverse topics related to coastal environments, soil usage, ecological corridors, light pollution, hydrological studies, and the GRAV-D project. The two workshops were conducted by specialists from Geographic Mapping Technologies Corporation (GMT) and dealt with the extraction of objects using ENVI, and spatial analysis techniques using ArcGIS.

All the research presented showed how Remote Sensing and Geographical Information Systems help us understand the many processes affecting Puerto Rico. An example of this is the work of graduate students Ramón López and Vilmaliz Rodríguez, from the UPRM Marine Sciences and Geology programs respectively, who showed the effect of river discharge in Mayagüez Bay. UPRM Geology undergraduate student Krystina Scott discusses changes in Mona Island's coastline. GMT president Aurelio Castro spoke about the Xplorah project, which has the main goal of modeling changes in soil usage using social economic and environmental variables, with the purpose of establishing integrated planning practices. The evaluation and creation of ecological corridors in Cuba and Puerto Rico was discussed by José Seguinot from Environmental Health Department of the UPR Medical Sciences Campus. Nighttime Puerto Rico and its light pollution were discussed by Olga Ramos of USDA Forest Service. These and other subjects from PRYSIG 2008 gave the audience an environment of learning and professional enrichment, which helped understand the added value of this technology in Puerto Rican environmental studies.

According to event moderator, and CoHemis



Director, Fernando Gilbes-Santaella "the nature of the works presented shows the highly multidisciplinary level of these tools. Once more it has been shown that Puerto Rican society is being benefited by their development and application. CoHemis feels committed to this initiative and hope to continue in the future." Dr. Gilbes-Santaella also announced the formation of an alliance with GMT to organize and international PRYSIG conference. For more information, please visit cohemis.uprm.edu/prysig/.

Technological Seminar Promoting Geographical Information System

The use of Geographical Information Systems (GIS) has been diversely utilized in the University of Puerto Rico and government agencies to facilitate investigative, managerial and administrative tasks. However, there is a lot left to be done in order to reach the full development of its applications. This is why CoHemis joined Geographic Mapping Technologies Corporation (GMT) in putting together the technological seminar "ArcGIS: Uses and Applications at Academic and Government Levels". This event was held on March 19th, 2009 at the Abbott Room of UPR Mayagüez's Chemistry Building. The event consisted of two parts: during the morning, the integration of GIS at UPRM, and in the afternoon GIS applications in government administration.

The morning topics included GIS use in campus administration, GIS as a research and development tool, and new expansion opportunities of GIS technologies through the Campus Pack UPRM. The latter would allow unlimited use of ArcGIS for every member of the school community. CoHemis

continues in page 11

International Students: Lyzett Uribe Mastache's Impressions of her Stay at UPRM



Lyzett Uribe

I was fascinated with UPR Mayagüez since I had never visited a university outside my country. Something that really caught my attention was the Student Center, since I had never seen a university with a space reserved especially for students, where they can spend some time doing different things than those done in a classroom. It is a university that

is focusing and growing to provide better services for its students, not only with the Student Center but with the installations, materials and equipment at the students' disposal.

I spent my stay at the Industrial Engineering Department. I had the chance to sit in a meeting for new graduate students. There I was able to observe the level of capability of the professors, how well organized the department is and their concern in guiding new graduate students career goals. I learned a lot during my stay; it was a wonderful experience in every aspect: personal, professional, etc. The list is too long to mention. Something that I learned, that helped me feel se-

cure and motivated during public presentations was the exposition of our thesis for researchers in Chemistry, Biology, Medicine and Industry, with the purpose of forming a group to participate in the Bioscience and Engineering Initiative (BioSEI). The experience of being in front of all those researchers who develop in so many different fields was really motivating. I was convinced of the importance of interdisciplinary groups in problem solving.

Undoubtedly, the easiest part of the experience was making friends. I had never had such an easy time doing it. If I had the opportunity of doing it all over again, the only thing I would do differently is to relive every scholarly and recreational activity more intensely. The most surprising thing was the will to help of everyone and I mean everyone: classmates, professors, administrative staff, neighbors, campus police, fellow exchange students, and people on the street. Puerto Rico is a great nation with great natural resources, music and the fact that there is always something to do or learn. Above all, I loved the culture; its people. Mayagüez is a city of students who make it live. The saddest thing was the farewells since falling in love with Mayagüez, the "Colegio" and its people is very easy. It was sad to say goodbye.

Biotechnology ³ (from page 8)

and teachers had the opportunity to see the relation between biotechnology and other interdisciplinary fields like engineering, marine sciences and business administration. "One of the most important outcomes is that they recognize that there are no limits. No matter what professional area they are going to select, they can do biotechnology and be able to contribute to that community of knowledge and helping Puerto Rico go forward", expressed Ríos.

The group visited the facilities of UPRM at Isla Magueyes, Lajas, and since it was the first complete residential summer camp, the days ended with group dynamics and recreational activities. In 2009, the main topic of the Summer Camp is: *Science, Technology, Environment and Community Service*. The camp will take place depending on funds raised. For more information about the summer camp or to become a sponsor, go to: cohemis.uprm.edu/

UPRM Press Office Collaboration

By: Rebecca Carrero Figueroa

Most of the participants of the third summer camp, posing for this photo at the square of La Paguera, Lajas.



Above: Students working with fish at the Marine Biotechnology Workshop



Second Meeting on Geomicrobiological and Metagenomic Studies (GeMs) of Puerto Rican Soils

On February 22nd, 2009 UPR Mayagüez held its second meeting for the team of researchers and students of participating on the project USDA-CSREES-GeMs. The title of the project was Geomicrobiological, and Metagenomic Studies (GeMS) of Puerto Rican Soils. This project is sponsored by the US Department of Agriculture's Cooperative State Research, Education, and Extension Service (CSREES). These meetings main topics were related to aspects of diversity analysis, and studies of metagenomic libraries based in functional and sequential aspects.



Mr. Alberto González, Fish & Wild Life Services, presented a conference about resources conservation and he showed a few samples of animal skin made into the production of fashion attire such as shoes, belts and bags of genuine leather.

As part of the activities, students presented and actively participated in the generation of genomic libraries for the study of diversity, were trained in the generation of metagenomic libraries and in the implementing of selection-based functional studies. The event counted with the attendance of researchers such as Dr. Carlos Ríos Velázquez (UPR-Mayagüez) and Dr. Lilliam Casillas (UPR-Humacao), PI and Co-PI of the event respectively. Also in attendance was Dr. Ezio Fasoli, professor and researcher in Organic Chemistry at UPR-Humacao. They offered workshops on designing new activities for the metagenomic libraries generated at the Guánica Dry Forest and at El Yunque.

The event also had guest speaker Mr. Alberto González from the U.S. Fish and Wildlife Service, and a number of graduate students from UPRM Biology Department who presented new techniques and molecular tools for studies at the libraries. One of the main goals of this project is to be able to inform and prepare UPRM and UPRH students, and also students from Puerto Rican high schools, about emerging fields such as metagenomics, its implications and their reconciliation with the conservation of our natural resources using our forests as models.

Technological Seminar Promoting Geographical Information ... (from page 9)

Director and Geology Department Professor, Dr. Fernando Gilbes-Santaella, also spoke about GIS use in his research projects and explained the development of an internet database named GERSVIEW (gersview.uprm.edu). Mr. Roy Ruiz Vélez of UPRM Water and Environment Resource Research Institute spoke about GIS use in his office.

The afternoon's topics included GIS applications in government infrastructure management, territorial and title arrangement, new strategies in government finance management, improvements in revenue collection using GIS technology, and GIS use in National Pollutant Discharge Elimination System (NPDES) program compliance. All morning and afternoon attendees were satisfied with the seminar, giving it an excellent evaluation. Also, they expressed their desire to see similar events in the future. CoHemis has committed to keep promoting these technologies and to organize similar events. Additional information on this seminar can be found at:

<http://cohemis.uprm.edu/prysig/arcgis09/arcgis09.html>



IN THE NEX EDITION:

- ◆ CoHemis Summer Camp BETTeR-IC + 2009: Science, Technology, Environment and Community Service
- ◆ CoHemis-UPRM-SACNAS receives national award for the second time
- ◆ SciTeCC 2010: Bioenergy
- ◆ Learning Factory: Mérida, México

Green Buildings and Energy Conference



The Citizens' Alliance for Renewable Energy held one of its conferences on the topic of Green Buildings. The conference took place at the Municipal Cultural Center in Mayagüez in order to facilitate the attendance from all sectors of the community. UPR-Río Piedras Architecture Professor, Dr. Fernando Abuña, explained what Green Buildings are and how they operate by minimizing energy and water consumption. Puerto Rico Energy Administrator, Mr. José R. Benítez, lectured on new laws, and on consumer benefits in using renewable energy equipment.

The event also had a lecture by US Green Council Caribbean Chapter President and architect Jeannette Rullán from the Architects, P.S.C. firm. She explained the requirements for structures to be

certified as Green by the Leadership in Energy and Environmental Design (LEED). Engineers Alex Casanova, from the Puerto Rico Energy Alliance, and Jorge Hernández from the EESCO Company, lectured on how industries and companies are lowering their costs by using Green measures. Other speakers included Green Campus organizer and Electrical Engineering Department Professor Dr. Sandra Cruz Pol, and Dr. Gerson Beauchamp, also from the Electrical Engineering Department.

The event also had solar and electric car exhibits, and also exhibits of ecological project posters implemented in Puerto Rico and others with designs that are at the forefront of the issue worldwide. More information on this and other events can be found at: aceer.uprm.edu.



About us and CoHemis... Al Día

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