



Consortium for Integrating Energy Systems in Engineering & Science Education

DE-NA0003330

Consortium for Integrating Energy Systems in Engineering and Science Education (CIESESE)

By

Dr. Eduardo I. Ortiz-Rivera (UPRM)

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CONSORTIUM PARTNERS

Universidad del Turabo/Puerto Rico Energy Center (PREC), Gurabo, PR (Lead)

University of Puerto Rico – Mayaguez, PR , University of Texas – El Paso, TX

Miami Dade College – Miami, FL., University of New Mexico – Albuquerque, NM

National Energy Technology Laboratory – Morgantown, WV , Sandia National Laboratory –
Albuquerque, NM

Current US Energy Objectives (December 2016)

Secure and Resilient

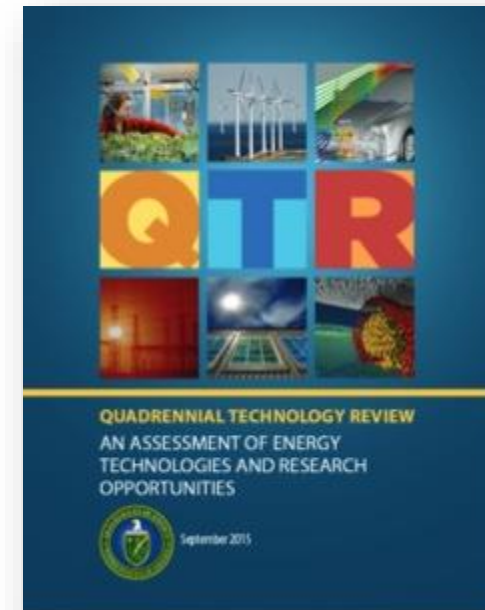
- Energy systems should be secure from and resilient to natural disruptions as well as man-made attacks. Security must be addressed along the entire energy service value chain from supply (energy resources, materials, and technologies) to operations (distribution, storage, and end-use of fuels/electricity).

Economically Competitive

- Energy systems should provide energy services that are abundant, sustainable, and affordable—taking into account the full market impacts and life-cycle costs of the energy-service value chain.

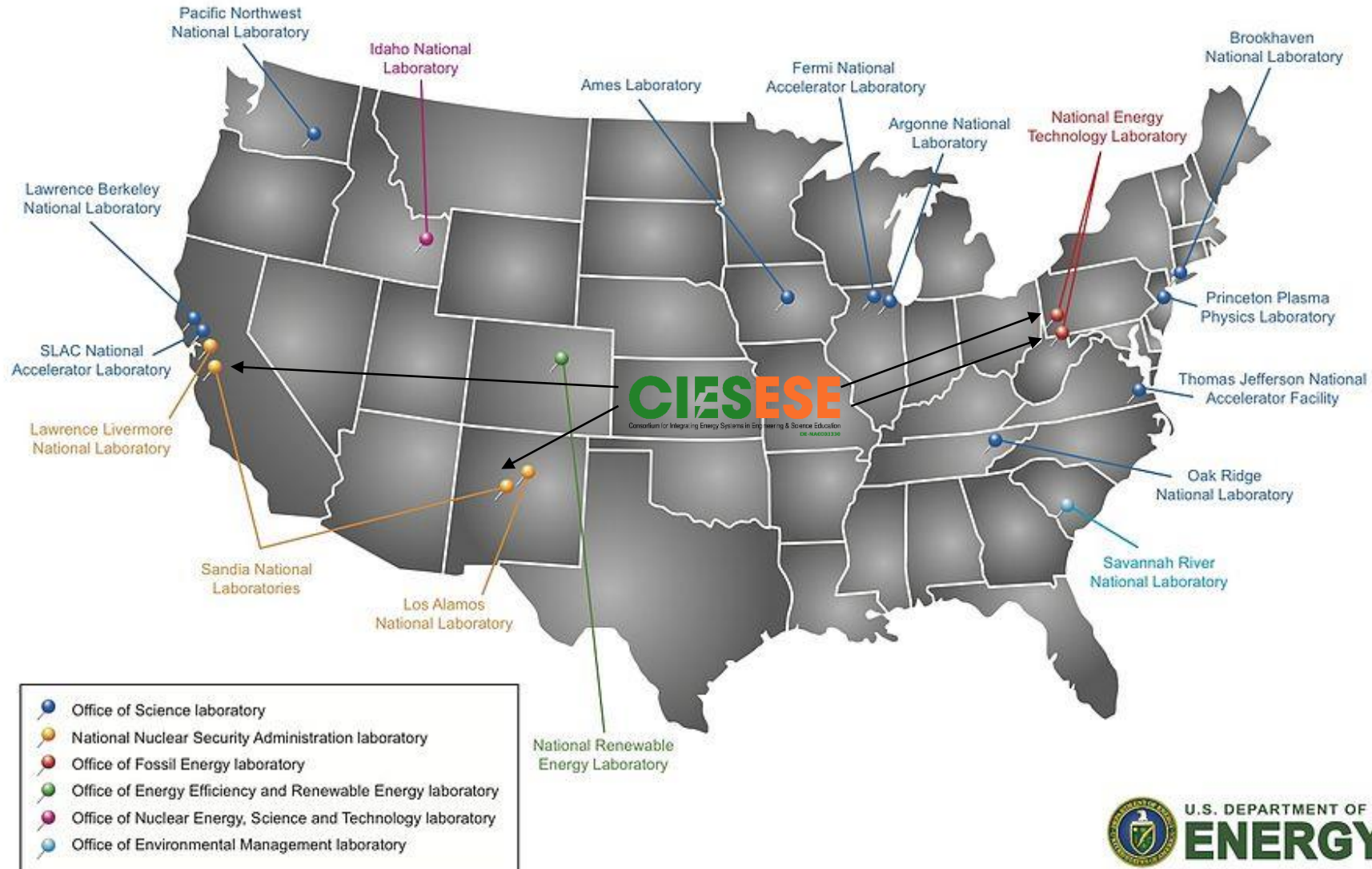
Environmentally Responsible

- Clean energy systems should minimize air, water, and land pollutant emissions; GHG emissions; bio fuels impacts; and disruption of water and land resources.



Source: US DoE QTR, pp 19

Department of Energy National Laboratories



- The **Consortium for Integrating Energy Systems in Engineering and Science Education (CIESESE)** is a DoE sponsored project with the goal of increasing the pipe line of graduates ready to pursue a career in energy relevant fields (source: www.prec.pr).
- Among the activities of the consortium is the participation of faculty and students, from Engineering and Physical Sciences, in Energy Systems Research in collaboration with National Laboratories.
- The primary goals of the CIESESE Sponsored Research Program are the following:
 - 1.Enable year-long research experiences in energy systems.
 - 2.Enable summer research opportunities for undergraduate and graduate students.
 - 3.Increase number of students performing research on energy systems related topics

CIEESE Members

Consortium for Integrating Energy Systems in Engineering & Science Education
DE-NA0003330

TURABO

UNIVERSIDAD
DEL TURABO
SISTEMA UNIVERSITARIO
ANA G. MÉNDEZ

CIEESE Lead Institution



CIEESE Sponsor Agency



The University of New Mexico



Sandia
National
Laboratories



Miami Dade
College



NATIONAL
ENERGY
TECHNOLOGY
LABORATORY

CIEESE Meeting December 11-14, 2016 at SNL

Consortium for Integrating Energy Systems in Engineering & Science Education
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Pictures at the SNL PV Laboratory, and the SNL Solar Platform Laboratory



CIEESE Sponsorship at UPRM

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Outreach Activities on Energy Systems
minds2create.ece.uprm.edu



Lead by Dr. Eduardo I. Ortiz-Rivera, INEL

Journal of Undergraduate Research
<http://joustcontact.wixsite.com/joust-uprm>



Lead by Dr. Mauricio Cabrera, ININ

<http://engineering.uprm.edu/academic-affairs/pre-ingenieria/>

University of Puerto Rico
Mayagüez



Fecha Límite de Solicitud

=====

13 de marzo de 2017

Requisitos

- =====
- Ser estudiante de grado 11
 - Tener GPA de 3.50 o más

Fechas del 2017

=====

1ra sesión: junio 4 al 10

2da sesión: junio 18 al 24

Lead by Dr. Manuel Jimenez, ICOM



TURABO

UNIVERSIDAD DEL TURABO
SISTEMA UNIVERSITARIO
JANA G. VÉNEZ



10-week Summer Research Internship @ Sandia National Laboratories

a U.S. Department of Energy Laboratory

Apply by **February 15, 2017**: <http://www.sandia.gov/careers/ps-forward.html>

Search Job ID: 655770

Who:	Undergraduate Students enrolled in Science, Math or Engineering	
From these Universities:	Universidad del Turabo	Miami Dade College
	University of New Mexico	UPR - Mayaguez
	The University of Texas at El Paso	
Where:	Albuquerque, NM	
Research Area:	Energy Systems – See http://energy.sandia.gov/energy/	

Benefits	Requirements
<ul style="list-style-type: none"> ○ Generous Stipend, airfare, lodging allowance ○ Participate in state-of-the-art research projects ○ Mentoring ○ Professional development seminars 	<ul style="list-style-type: none"> ○ GPA: 3.2/4.0 ○ U.S. Citizen – Ability to obtain a DOE security clearance. ○ Good oral and written communication skills ○ Ability to contribute in a team environment ○ General knowledge of Project Management ○ General knowledge and good understanding of a suite software, including MS Office



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SISTEMA UNIVERSITARIO
ANA G. MENDOZA



10-week Summer Research Internship @ Sandia National Laboratories

a U.S. Department of Energy Laboratory

Apply by **February 15, 2017**: <http://www.sandia.gov/careers/ps-forward.html>

Search Job ID: 655772

Who: Graduate Students enrolled in Science, Math or Engineering

Universidad del Turabo

Miami Dade College

**From these
Universities:**

University of New Mexico

UPR - Mayaguez

The University of Texas at El Paso

Where: Albuquerque, NM

Research Area: Energy Systems – See <http://energy.sandia.gov/energy/>

Benefits	Requirements
<ul style="list-style-type: none"> ○ Generous Stipend, airfare, lodging allowance ○ Participate in state-of-the-art research projects ○ Mentoring ○ Professional development seminars 	<ul style="list-style-type: none"> ○ GPA: 3.5/4.0 ○ U.S. Citizen – Ability to obtain a DOE security clearance. ○ Good oral and written communication skills ○ Ability to contribute in a team environment ○ General knowledge of Project Management ○ General knowledge and good understanding of a suite software, including MS Office



TURABO

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SISTEMA UNIVERSITARIO
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10-week Summer Research Internship @ National Energy Technology Laboratory

a U.S. Department of Energy Laboratory

Apply by **March 1st, 2017**: <http://www.ornl.gov/netl/applicants/how-to-apply.html>

Who: Undergraduate Students enrolled in Science, Math or Engineering

Universidad del Turabo

Miami Dade College

**From these
Universities:**

University of New Mexico

UPR - Mayaguez

The University of Texas at El Paso

Where: Morgantown, West Virginia

Research Area: Energy Systems – See <https://www.netl.doe.gov/research>

Benefits	Requirements
<ul style="list-style-type: none"> ○ Generous Stipend, airfare, lodging allowance ○ Participate in state-of-the-art research projects ○ Mentoring ○ Professional development seminars 	<ul style="list-style-type: none"> ○ GPA: 3.2/4.0 ○ U.S. Citizen – Ability to obtain a DOE security clearance. ○ Good oral and written communication skills ○ Ability to contribute in a team environment ○ Completed 1st year of College, and taken chemistry. ○ Depending on project, academic knowledge of upper division courses may be required. ○ General knowledge and good understanding of a suite software, including MS Office

After applying, send an email to Ms. Suheilie Rodriguez (srodriguez@suagm.edu) informing her that you have applied to NETL for summer 2017.



10-week Summer Research Internship @ National Energy Technology Laboratory

a U.S. Department of Energy Laboratory

Apply by **March 1st, 2017**: <http://www.ornl.gov/netl/applicants/how-to-apply.html>

Who:	Graduate Students enrolled in Science, Math or Engineering	
From these Universities:	Universidad del Turabo	Miami Dade College
	University of New Mexico	UPR - Mayaguez
	The University of Texas at El Paso	
Where:	Morgantown, West Virginia	
Research Area:	Energy Systems – See https://www.netl.doe.gov/research	

Benefits	Requirements
<ul style="list-style-type: none"> ○ Generous Stipend, airfare, lodging allowance ○ Participate in state-of-the-art research projects ○ Mentoring ○ Professional development seminars 	<ul style="list-style-type: none"> ○ GPA: 3.2/4.0 ○ U.S. Citizen – Ability to obtain a DOE security clearance. ○ Good oral and written communication skills ○ Ability to contribute in a team environment ○ Completed 1st year of College, and taken chemistry. ○ Depending on project, academic knowledge of upper division courses may be required. ○ General knowledge and good understanding of a suite software, including MS Office

After applying, send an email to Ms. Suheilie Rodriguez (srodriguez@suagm.edu) informing her that you have applied to NETL for summer 2017.



TURABO

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ANA G. MENDOZA



10-week Summer Research Internship @ UNM, UPR, UT, or UTEP

Apply by **March 1, 2017**: <http://ciesese.prec.pr>

Who: Undergraduate Students enrolled in Science or Engineering

Partnering Universities: Universidad del Turabo
University of New Mexico
The University of Texas at El Paso

Miami Dade College
UPR – Mayaguez

Where: UT (Gurabo, Puerto Rico), UNM (Albuquerque, NM) UPR-M (Mayaguez, Puerto Rico), or UTEP (El Paso, Texas)
Except the student's own institution.

Research Area: Energy Systems – Generation, Storage, Infrastructure, Distribution, Security, Resilience, etc.

Benefits	Requirements
<ul style="list-style-type: none"> ○ \$8,000 Stipend, airfare, lodging allowance ○ Participate in state-of-the-art research projects ○ Mentoring ○ Professional development seminars 	<ul style="list-style-type: none"> ○ GPA: 3.0/4.0 ○ Science/Engineering majors completed at least sophomore year. Completed 1-year of STEM courses with lab: Chem, Biol, Phys) ○ Programming skills ○ Depending on project, academic knowledge of upper division courses may be required. ○ Good oral and written communication skills ○ Ability to contribute in a team environment ○ Knowledge of MS Office ○ Research statement and letter of recommendation from a faculty



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10-week Summer Research Internship @ UNM, UPR, UT, or UTEP

Apply by **March 1, 2017**: <http://ciesese.prec.pr>

Who: Graduate Students enrolled in Science or Engineering

Partnering Universities: Universidad del Turabo
University of New Mexico
The University of Texas at El Paso

Miami Dade College
UPR – Mayaguez

Where: UT (Gurabo, Puerto Rico), UNM (Albuquerque, NM) UPR-M (Mayaguez, Puerto Rico), or UTEP (El Paso, Texas)
Except the student's own institution.

Research Area: Energy Systems – Generation, Storage, Infrastructure, Distribution, Security, Resilience, etc.

Benefits	Requirements
<ul style="list-style-type: none"> ○ \$8,000 Stipend, airfare, lodging allowance ○ Participate in state-of-the-art research projects ○ Mentoring ○ Professional development seminars 	<ul style="list-style-type: none"> ○ GPA: 3.2/4.0 ○ Completed at least 1 semester of graduate school by summer 2017 ○ Highly interested in Energy Systems research ○ Programming skills ○ Literature research skills ○ Good oral and written communication skills ○ Ability to contribute in a team environment ○ Knowledge of MS Office ○ Research statement and letter of recommendation from a faculty

Visiting Faculty - Energy System (Engineering or Physical Sciences) Universidad del Turabo

**Date Posted**

Oct. 7, 2016

Job Title

Visiting Faculty - Energy System (Engineering or Physical Sciences)

Department

Engineering Department

Department Website<http://ut.suagm.edu/es/engineering>**Institution**

Universidad del Turabo
Gurabo
Puerto Rico

Application Deadline

Open until filled

Position Start Date

Available immediately

Apply Online Here<https://jobs.suagm.edu/>**Job Categories**

Visiting Professor

Academic Fields

Engineering - Other
Energy Technology

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The selected candidate will coordinate CIESESE's related to STEM activities at UT and its partners, and conduct research in the area of energy systems; of particular interest are the areas of wind, bio fuels, solar, and fuel cells; and will work on research related activities, including writing proposals seeking external funds, write articles for conferences and journals, and serve as a liaison between engineering and natural sciences faculty in energy related research activities. The position will reports to the PREC Director, and will work closely with CIESESE's Principal and Co-Principal Investigators to plan, coordinate and oversee, the local annual and summer research program, participate in the development of workshops and courses in energy systems, and perform some administrative duties. Universidad del Turabo is seeking candidates with a PhD in Engineering, Physical Sciences, or other areas related to energy systems is desirable. Knowledge of Spanish is desirable. The salary is commensurable with qualifications and experience. Applicants should send a letter of interest, résumé and professional references to: camperez@suagm.edu and complete our Electronic Employment Application by accessing our webpage <https://jobs.suagm.edu/> Review of applications will begin immediately and will continue until the position is filled.

PREC was initiated in 2005 as a priority effort of the Central-Eastern Technological Initiative (known as INTECO from its Spanish acronym) with the collaboration of the U.S. Department of Energy, as a contribution to create a stable energy future for the region and Puerto Rico. The Center is operated by Universidad del Turabo, with active participation of faculty members and researchers from different disciplines and universities.

Universidad del Turabo (UT), is a Hispanic-Serving Institution (HIS), with more than 15,000 students. It was founded in 1972, and it is part of the Ana G. Mendez University System. UT offers degree at the undergraduate and graduate levels, including doctoral degrees. UT is accredited by the Middle States Commission on Higher Education and licensed by the Puerto Rico Education Council (CEPR).

EEO/AA Policy

Equal Opportunity, Affirmative Action Employer and Educator

The Puerto Rico Energy Center (PREC) at Universidad del Turabo invites applications for a Visiting Faculty to serve as Academic Coordinator and Researcher for the new Consortium for Integrating Energy Systems in Engineering and Science Education (CIESESE), funded by the U.S. Department of Energy. CIESESE has the goal of increasing the pipeline of graduates ready to pursue a career in energy systems. Energy systems refers to the infrastructure, technologies, and procedures to generate, store, and distribute energy for use by individual consumers and by the public and private/industrial sectors.

Please reference **AcademicKeys.com** in your cover letter when applying for or inquiring about this job announcement.

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Benefits

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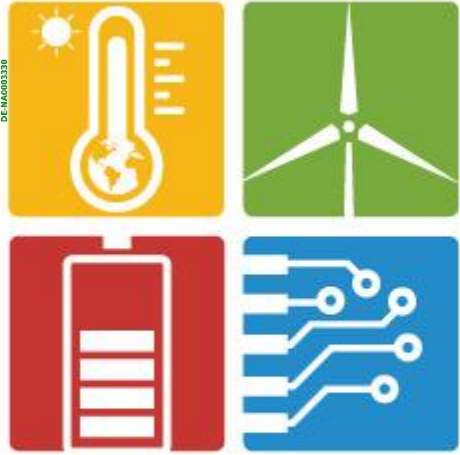
- Selected faculty and participating students spend 10 weeks (Summer Term) at a DOE national laboratory engaged in a research project under the guidance of a laboratory scientist.
- Faculty members build collaborative relationships with DOE research scientists, become familiar with DOE sponsored research programs, scientific user facilities, and potential funding opportunities.
- Students participate in enrichment activities, including career professional development workshops (e.g. technical and scientific writing skills development, poster, or oral presentation activities, etc.), laboratory tours, scientific lectures and seminars.
- Host laboratories may provide laboratory tours, scientific lectures and seminars, workshops on accessing DOE scientific user facilities.
- Host laboratories provide all required site specific training.

Financial Support:

- Participating **faculty** receive a 10-week stipend of \$13,000 during the internship period. Participating faculty are reimbursed for one round trip domestic travel to the host laboratory (if permanent address is more than 50 miles from the host laboratory). Transportation expenses will be reimbursed on the basis of the most direct route. Travel by a private automobile will be reimbursed at the current government rate up to a maximum of \$500.00 or the cost of the lowest commercial airfare, whichever is lower. Travel by air will be reimbursed at the cost of the lowest commercial airfare. Housing information will be provided to visiting faculty prior to arrival at the host laboratory. In general, housing opportunities will vary from laboratory to laboratory. An allowance is available for visiting faculty placed at host laboratories that are unable to offer direct housing arrangements.
- Participating **undergraduate** students receive a stipend of \$500 per week during the internship period. Participating undergraduate students are reimbursed for one round trip domestic travel to the host laboratory (if permanent address is more than 50 miles from the host laboratory). Transportation expenses will be reimbursed on the basis of the most direct route. Travel by a private automobile will be reimbursed at the current government rate up to a maximum of \$500.00 or the cost of the lowest commercial airfare, whichever is lower. Travel by air will be reimbursed at the cost of the lowest commercial airfare. Housing information will be provided to interns prior to arrival at the host laboratory. In general, housing opportunities will vary from laboratory to laboratory. An allowance is available for interns placed at host laboratories that are unable to offer direct housing arrangements.
- Participating **graduate students** are expected to be supported by their home academic institutions consistent with their



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CI-MAN0001119



IX SYMPOSIUM

Puerto Rico Energy Center

ENERGY & ENVIRONMENT

October 20, 2017 · Universidad del Turabo · Gurabo, Puerto Rico

The Puerto Rico Energy Center (PREC), the Ing. José Domingo Pérez School of Engineering, and the School of Natural Sciences and Technology at Universidad del Turabo, are pleased to invite you to the **IX Puerto Rico Energy Center (PREC) Symposium** to be held on October 20, 2017 in the Argentina Hills Amphitheater, located at the Universidad del Turabo main campus in Gurabo, Puerto Rico. This year the main topic of the symposium is Energy and Environment.

Prospective participants are invited to submit their work through the [electronic form](#) located at the symposium web site on or before August 25, 2017. Authors whose works are accepted will be notified on September 22, 2017. Abstracts should be written in English in accordance with PREC required format and accepted subject to a peer review. Accepted abstracts will be published in the Symposium Proceedings. For more information please contact:

symposium@prec.pr or visit www.prec.pr

Thanks!!



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Main researcher and team leader of

M_{inds}²CREATE Research Team