

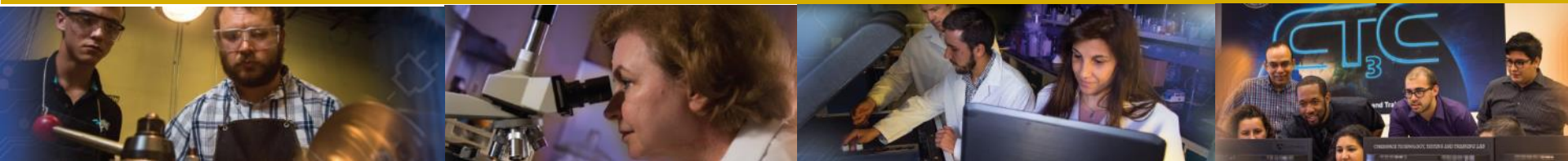


FIU Project 4

DOE-FIU Science and Technology Workforce Development Program

Dr. Leonel Lagos
(Program Director)

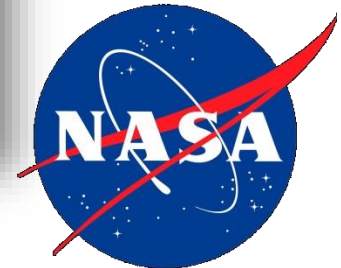
FLORIDA INTERNATIONAL UNIVERSITY



STEM Minority Students Pipeline



Pacific Northwest
NATIONAL LABORATORY



MOTOROLA





DOE Fellow Induction Class of 2017



Joseph Coverston

Ryan Cruz

Katherine Delarosa

Christopher Excellent

Silvia Garcia

Alejandro Koszarycz

Manuel Losada

Ximena Lugo

Anibal Morales-Zambrana

Joshua Núñez

Tristan Simoes-Ponce



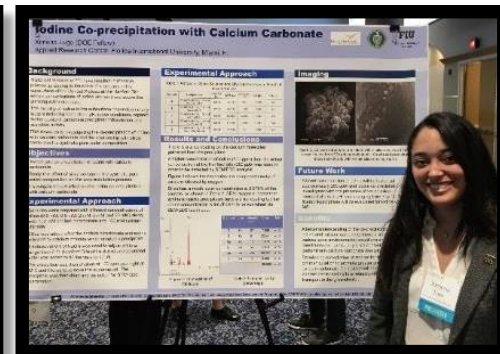
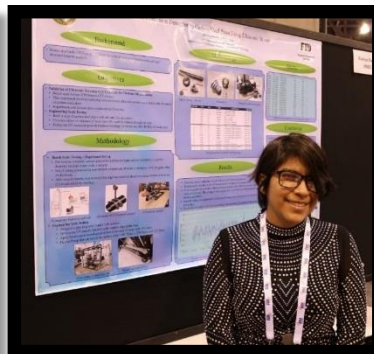
11 New DOE Fellows Inducted, 142 since
program inception



Conference Presentations

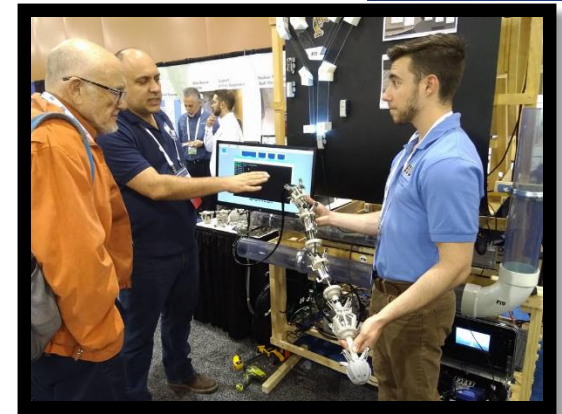


- Waste Management Symposia – 18 student technical posters, 2 professional presentations, and 1 panel member
- DOE Fellows Poster Exhibition and Competition at FIU – 17 Fellows
- Life Sciences South Florida Undergraduate Research Symposium – 7 Fellows
- Third Annual FIU Undergraduate Research Conference – 5 Fellows
- STEM Research & Career Symposium by Emory University in Atlanta – 1 Fellow
- American Geophysical Union fall meeting in New Orleans – 1 Fellow
- FIU McNair Scholars Research Conference – 4 Fellows





WM18 Robotics Pavilion





DOE Fellow Publications

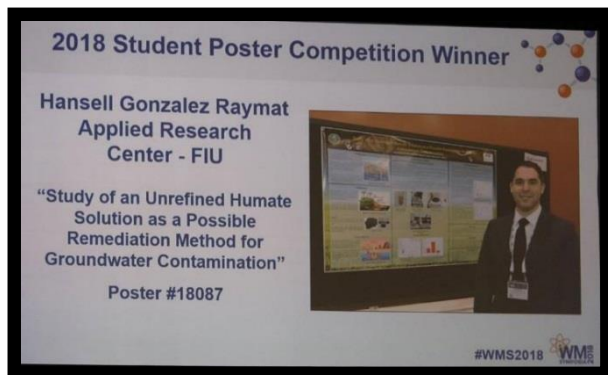
- Emerson, H., **S. Di Pietro**, Y. Katsenovich, J. Szecsody, J. Uranium Immobilization in the Presence of Minerals Following Remediation via Base Treatment with Ammonia Gas. *Journal of Environmental Management* (submitted Feb 2018).
- Emerson, H., **F. Zengotita**, T. Dittrich, M. Richmann, Y. Katsenovich, D. Reed. Retention of neodymium by dolomite at variable ionic strength as probed by batch and column experiments. *Journal of Environmental Radioactivity* (accepted May 2018).
- **Gonzalez-Raymat, H.**, V. Anagnostopoulos, M. Denham, Y. Cai, Y. Katsenovich. 2018. Unrefined Humic Substances as a Potential Low-Cost Amendment for the Management of Acidic Groundwater Contamination. *Journal of Environmental Management*, 15, 212, 210-218.
- **Zengotita, F.**, H. Emerson. T. Dittrich, J. Swanson, D. Reed. The Role of *Chromohalobacter* on Transport of Lanthanides and Cesium in the Dolomite Mineral System. LA-UR-17-30894. Los Alamos National Laboratory, Carlsbad, NM.



DOE Fellow Awards/Recognitions



- Best student poster award at WM18 – Hansell Gonzalez
- 2018 Roy G. Post Foundation Scholarship (Undergraduate Level) – Christine Wipfli
- Young Professional Award at WM18 – Christine Wipfli
- Third place, life sciences track at FIU McNair Scholars Research Conference – Frances Zengotita
- Best posters at DOE Fellows Poster Exhibition and Competition – Jesse Viera (1st), Alejandro Garcia (2nd), Juan Carlos Morales (3rd)
- 2017 DOE Fellow of the Year Award – Ripley Raubenolt
- Cash award for poster at FIU's Undergraduate Research Conference – Ripley Raubenolt
- Monetary awards and sponsored travel from the Innovations in Nuclear R&D Program Workshop (DOE-NE) – Frances Zengotita and Silvina Di Pietro





SRS Field Work

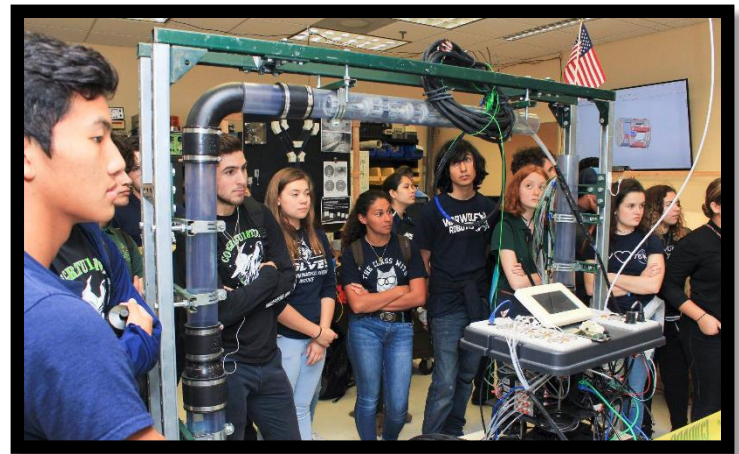
FIU graduate students Ron Hariprashad and Juan Morales deployed two state-of-the-art monitoring stations Tims Branch to automatically record and transmit stream flow data as part of their research to study movement of sediments and contaminants.





Next Generations of Tech Workforce

DOE Fellows demonstrating robotic technologies to middle and high school students during FIU's Engineering Expo





Academic Milestones

- **Mohammed Albassam:**

- Submitted master's thesis proposal: *The Effect of Frequent Atmospheric Events on Flow Characteristics in Tims Branch and its Major Outfalls, Savannah River Site, SC*

- **Silvina Di Pietro**

- Successfully passed Ph.D. candidacy exam based on dissertation: *Uranium Fate and Mineral Transformations upon Treatment with Ammonia Gas*

- **Maximiliano Edrei:**

- Successfully defended master's thesis: *CFD Evaluation of Mixing Processes for High-Level Nuclear Waste Tanks*

- **Sebastian Zanlongo:**

- Successfully passed Ph.D. proposal defense based on dissertation: *Multi-Robot Coordination and Scheduling for Deactivation & Decommissioning*



Graduates – December 2017

Claudia Cardona (Class of 2011) – Ph.D. Civil Eng.
 Max Edrei (Class of 2014) – M.S. Mech. Eng.
 Alexis Smoot (Class of 2015) – B.S. Env. Eng.
 Jesse Viera (Class of 2014) – B.S. Mech. Eng.

Graduates – May 2018

Joshua Nunez (Class of 2017) – B.S. Mech. Eng.
 Tristan Simoes-Ponce (Class of 2017) – B.S. Mech. Eng.
 Christine Wipfli (Class of 2014) – B.S. Env. Eng.



Career Commencements

Alexis Smoot

B.S. Environmental Engineering
Position: Engineer I – Nexant, Chicago, IL



Alexis Smoot
DOE Fellow - Class of 2015



Alexis Smoot at DOE-HQ during her 2016 summer internship with Sarah Bird (left) and at ARC laboratory (right)



Career Commencements

Mohammed Albassam

B.S. Environmental Engineering

M.S. Environmental Engineering (expected graduation Summer 2018)

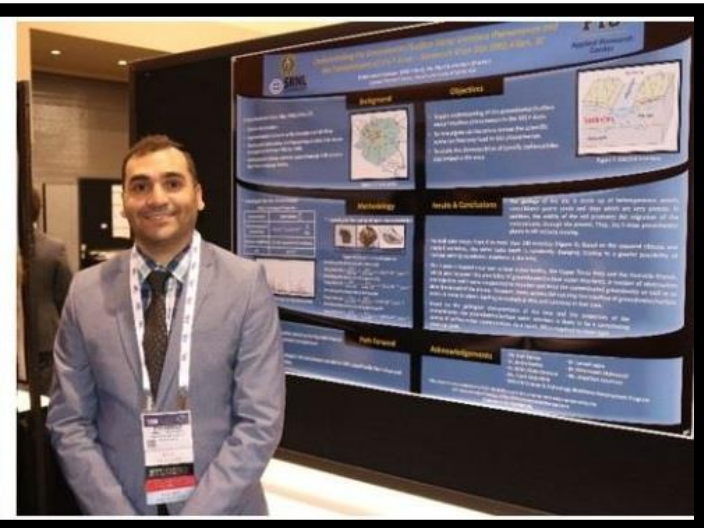
Position: Engineer I – City of Coconut Creek, FL



Mohammed Albassam
DOE Fellow - Class of 2016



Mohammed Albassam at DOE-HQ during his 2017 summer internship at DOE HQ with his mentor Kurt Gerdes and Juan Morales (left) and presenting his poster at WM2018 (right)





Career Commencements

Maximiliano Edrei

M.S. Mechanical Engineering

Position: Engineer II – Huntington Ingalls Newport News Shipbuilding Company,
Newport News, VA



Maximiliano Edrei
DOE Fellow - Class of 2014



Maximiliano Edrei with his summer mentor Chris Guenther during his 2016 summer internship at NETL



Career Commencements

Jesse Viera

B.S. Mechanical Engineering

Position: Second Lieutenant – United States Marine Corps (USMC)
(after successfully completing USMC Officer Candidate School)



Jesse Viera
DOE Fellow - Class of 2014



Official commissioning of Second Lieutenant Jesse Viera into the U.S. Marine Corps (left) and with Dr. Inés Triay (Executive Director, FIU ARC) and Mr. Joseph Sinicrope (right).



Career Commencements

Christine Wipfli

B.S. Environmental Engineering

Position: Entry-level Nuclear Engineer – U.S. Department of Defense,
Pearl Harbor Naval Shipyard, Hawaii



Christine Wipfli
DOE Fellow - Class of 2014

Christine Wipfli during her one-year internship at IAEA (right) and during her poster presentation at WM 2017 (left).



Career Commencements

Kiara Pazan

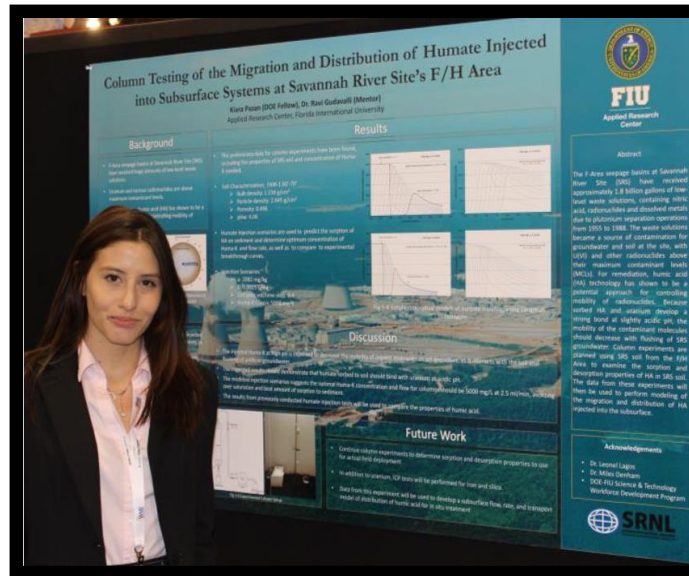
B.S. Environmental Engineering

Positions: Environmental Engineer, AECOM (2015)

Recently accepted position at U.S. Corps of Engineers' Coastal & Hydraulics Lab (2018)



Kiara Pazan
DOE Fellow - Class of 2014



Kiara Pazan with her poster at WM2015 (left) and dressed in PPE with Aref Shehadeh during a summer internship at SRS.





Summer 2018 Internships

DOE Fellow	Internship Location	Internship Mentor
Joshua Nunez	DOE HQ (EM 3.2)	Rod Rimando
Alejandro Koszarycz	DOE HQ (EM 4.11)	Andrew Szilagyi
Silvia Garcia	DOE HQ (EM 4.12)	Skip Chamberlain
Juan Carlos Morales	DOE HQ (EM 4.31)	Robert Seifert
Ximena Lugo	DOE HQ (EM 4.31)	Robert Seifert
Tristan Simoes-Ponce	SRNL	Connor Nicholson
Katherine Delarosa	SRNL	Brian Looney
Ryan Cruz	SRNL	Richard Poland
Silvina Di Pietro	PNNL	Jim Szecsody
Clarice Davila	WRPS	Ruben Mendoza
Joseph Coverston	WRPS	Karthik Subramanian
Anibal Morales-Zambrana	ANL	Young Soo Park
Christopher Excellent	DOE HQ (EM 3.2) / CMU	Rod Rimando / Red Whittaker
Michael DiBono	CMU	Red Whittaker
Sebastian Zanlongo	SRNL/MSIPP	Timothy Aucott, Robin Young
Manuel Losada	SRNL/MSIPP	Jean Plummer
Frances Zengotita	LANL ACRSP	Don Reed, Julie Swanson

**FIU-DOE
Cooperative
Agreement**

**FIU-DOE CA &
CMU**

MSIPP

**LANL, FIU McNair
& FIU-DOE CA**



FIU Performance Year 9

Active hands-on research assisting ARC scientists/engineers during the execution of DOE-EM research in order to integrate education with practical experience in the DOE EM problem areas.

- Recruit qualified talented FIU minority STEM students
- Engage in DOE EM research under the technical projects
- Conduct poster exhibition & competition
- Host DOE Fellows induction ceremony
- Coordinate summer internship program and internship technical reports
- Conference participation & presentations, including WM Symposia
- DOE Fellows lecture series forum
- DOE EM HBCU collaboration/interactions - extend recruitment to include HBCU/MSI students interested in a Ph.D. at FIU
- Work closely with DOE nat. labs to identify opportunities for Ph.D. students including extended work assignments that can lead to post-doctoral positions
- Fostering opportunities for DOE Fellows research assignments at other institutions (i.e. CMU, UT-Austin, others)