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## **STUDENT SPOTLIGHT: JILLIAN HARDIN, MELANNIE PINEDA & ARETI VASSILOPOULOS**

**Melannie Pineda** and **Jillian Hardin**, both Ph.D. students in Nancy Jones' WAVES Emotion Lab, never imagined that their research in experimental psychology would include blowing bubbles and making silly faces at babies. But, as researchers in the WAVES Emotion Lab, their job is to understand the factors that contribute to the development of socio-emotional wellness during infancy and childhood. They are helping Dr. Jones investigate the physiological and behavioral underpinnings of affective development.

When babies come to the lab – which looks much like a cozy nursery – they are fitted with a little cap with dozens of tiny holes and wires sticking out the back. The group works as a team – using bubbles, rattles and cooing noises – to distract the babies while the cap is placed on their heads. The cap is connected to a brain monitoring system which essentially maps the babies' brain waves as they interact with the adults in the room.

Jillian, a 5<sup>th</sup> year Ph.D. student, oversees the Kangaroo Care (KC) Project, which examines how touch and breastfeeding facilitate mother-infant bonding and the development of optimal physiological patterns in

infancy. Her research interests include the effects of maternal depression on infants and the role of breastfeeding and skin-to-skin (KC) parent training in buffering impaired mother-infant communication in these dyads.

Melannie Pineda is a 2<sup>nd</sup> year doctoral student in the lab. She graduated from FAU and completed her undergraduate Honor's Thesis project in the WAVES Emotion lab. Melannie's thesis project involved looking at the stability of EEG and jealousy responses in infants between the ages of 9 months and 12 months of age. The study she is currently working on examines differences in mother-infant bonding and the regulation patterns of infants across groups of depressed and non-depressed mothers.

Senior **Areti Vassilopoulos**, an Honors College Psychology major, also helps in the lab. Her interests lie in working on mental health issues with children and she plans to pursue a graduate degree in clinical psychology.

"Current theories and research into brain development note that the frontal lobes continue to develop throughout early childhood. Our goal is to examine the factors that contribute to risk and resilience in the development of emotional response, said Jones. "Individual differences in temperament and social interactive attachments to parents impact the trajectory to emotionally competent functioning during childhood. Our research, funded in part by the National Institutes of Mental Health and FAU seed grants, is designed to explore and understand the contributors to optimal infant and child development."

## **COLLEGE OF SCIENCE ANNOUNCEMENTS**

### **College of Science Faculty Research Seed Grant Program**

**Due by 5 p.m. on March 31, 2014**

The Charles E Schmidt College of Science is pleased to announce a College Faculty Research Seed Grant Program for AY 2013-14. The primary objective of the seed grant program is to foster increased extramural funding by facilitating preliminary research for a grant application. For details see attached Guidelines.

Award Information: A total funding of \$20,000 is available to support this program. The maximum award amount will be \$5,000. A principal investigator can only submit one proposal. The number of awards funded will depend on the quality of proposals submitted.

Eligibility: All faculty members from the Charles E Schmidt College of Science are eligible. Proposals currently funded by university seed fund program will NOT be considered by this program.

Submission Deadline: Proposals should be submitted as one single PDF document by e-Mail to Dr. Zhixiao Xie, Chair of the College's Master Researcher Committee, (xie@fau.edu) by 5p.m. on March 31, 2014.

### **Successful Grantsmanship Professional Development Seminar Series**

**April 9, noon to 1:30 p.m., PS 226 (VC to Davie LA 150, Jupiter SR 200, HBOI LE 103)– Speaker Dale Gawlik**

**April 17, noon to 1:30 p.m., PS 226 (VC to Davie LA 150, Jupiter SR 200, HBOI LE 103) – Speaker Xavier Comas**

The Charles E. Schmidt College of Science's Master Researcher program is pleased to announce the creation of professional development seminars aimed at enhancing the research culture and increasing external funding. These professional development seminars are designed for faculty and graduate students to explore the fine points of obtaining grant funding. Three of the College's top funded researchers - Salvatore Lepore, Dale Gawlik and Xavier Comas – will discuss balancing scholarship, research and obtaining funding as well as experiences with various funding agencies and issues that are highly tailored to the FAU environment. [Register](#) in advance. For more information, contact [Zhixiao Xie](#) or [Paige Garrido](#).

### **Charles E. Schmidt College of Science to Host "Pre-Health Professions Day"**

**March 17, noon to 3:30 p.m., Sanson Life Sciences Building Patio**

FAU's Charles E. Schmidt College of Science will host "Pre-Health Professions Day." The annual event connects students, alumni and the community with detailed information about health-related graduate education

programs. Participants will have an opportunity to speak with admission representatives from various health-related graduate and professional programs, including chiropractic; dental; exercise and health promotion; medicine; nursing; occupational therapy; optometry; pharmacy; physical therapy; physician assistant; podiatry; and veterinary medicine. The admission representatives will share information about specific programs, answer related questions and provide information about unique opportunities within their programs. Organizations scheduled to appear in a school showcase include the University of Central Florida College of Medicine, University of South Florida College of Medicine, Florida State University College of Medicine, Florida Atlantic University College of Medicine, Nova Southeastern University College of Osteopathic Medicine, Palm Beach Atlantic University College of Pharmacy and more. The event is free and open to the public. For more information, call 561-297-3700, email [preprof@fau.edu](mailto:preprof@fau.edu)

### **Owl's Nest Campaign**

Don't forget to make your annual giving contribution. Send a strong message to those outside the university – announcing to alumni, friends, corporations, donors and community partners that together we support FAU from within and feel it is worthy of *their* support.

**Joining the Owl's Nest is easy! Simply choose one of the links below:**

- Make an [online gift](#) by credit card
- Sign up online for [payroll deduction](#) (Go to the *TRUE BLUE* tab)
- Fill out and return this [gift form](#) to Paige Garrido, SE 248

### **At-risk Seniors**

We continue to need assistance in identifying at-risk seniors in classes who have declared an intent to graduate in May. If you received an earlier request from the provost then you have such seniors in your class, if not then please disregard this email. If you have responded to the prior request from the provost, thank you. A number of faculty have responded and as a result many such seniors have been identified and advisors are already at work contacting them to see what can be done to get them back on track for graduation.

To flag the at-risk students, go to <https://gradrates.fau.edu>. After you log in, you will see a list of those seniors enrolled in your classes who have indicated an intention to graduate this semester. Check the "at risk" box if the student is at risk of not passing the course. Feel free to add comments to assist the advisors when they reach out to students. There is no submit button necessary to send the information.

## **OUTREACH AND NEWSMAKERS**

The College of Science would like to thank the following individuals for helping to spread good news about our research and our College throughout our local community and beyond:

**Nicole Hernandez Hammer**, Florida Center for Environmental Studies, was selected as one of only six "Science Moms" from around the country to speak to the Director of the Environmental Protection Agency. Nicole and **Dr. Len Berry** received a significant amount of press following Senator Bill Nelson's comments on the Senate floor about FAU leading the charge in sea level rise research.

**Jeanette Wyneken** published a study in the [Proceedings of the Royal Society B](#) that tracked neonate sea turtles on their trek through Atlantic Ocean waters after hatching. She and her team received a significant amount of media coverage, as this was the first study of its kind to track baby turtles during their "lost years," or years when researchers knew very little about their migratory patterns.

Congratulations to the **Center for Cryptology and Information Security** for being designated as a National Center of Academic Excellence in Information Assurance Research (CAE/R) for the years 2012- 2017.

**Olga Shukina** and **Jesse Adamski**, who completed their Masters degrees in the Mathematics Department in 2013, were asked to present at APL-2000, Inc.'s annual conference. Olga's work deals with performing data transmission across noisy channels and recovering the message first by using the Golay code, and then by using the first-order Reed-Muller code. Jesse's work utilized APL+Win to generate the full automorphism group of finite Desarguesian projective planes.

Physics undergraduate **Han Soul Lee** has been selected to participate in the 2014 Research Experience for Undergraduates (REU) program in Astrophysics, Particle and Nuclear Physics at Wayne State University from June 2nd to August 8th 2014.

## **GRANTS AWARDED\***

**Xavier Comas**, Department of Geosciences, was awarded a continuation for \$50,000 for a grant titled, "Luquillo CZO: The role of hot spots and hot moments in tropical landscape evolution and functioning of the critical zone." This grant makes FAU one of a handful of universities to be directly involved with a Critical Zone Observatory, an NSF-funded national program that supports research at 6 U.S. locations that represent unique environmental observatories.

**Salvatore Lepore**, Department of Chemistry, was awarded two Faculty Research Seed Grants. One in the amount of \$15,500 in support of "New Natural Product Derived HIV Entry Inhibitors" and a second in the amount of \$22,900 in support of "Ultrafast Silicon F18-Fluorination for PET Medical Imaging."

**Gregory Macleod**, Jupiter Life Science Initiative, was awarded a new grant for \$208,905 from the NIH for "Probing the Synapse for pH-Microdomains." Dr. MacLeod has developed a number of optogenetic tools for the study of structure and function of synapses and their role in aging and disease.

**Dale Gawlik**, Biological Sciences, was awarded a supplement for \$202,857 from the U.S. Army Corps of Engineers for his work on "Dry Season Prey Concentrations." Additionally, he received a \$100,000 award from Everglades National Park to support the FAU Environmental Sciences Everglades Fellowship Program.

**\*Grants listed in this section were announced by the Office of Sponsored Programs between February 15, 2014 and March 14, 2014.**

## **UNIVERSITY-WIDE ANNOUNCEMENTS**

### **Teaching with Technology Showcase**

**April 5, 2014, College of Engineering East building on the Boca Raton campus (Proposal Submission Feb. 28)**

OIT and the Center for E-Learning are co-hosting another Teaching with Technology Showcase. The Teaching with Technology Showcase is designed to open dialogue among FAU faculty members about the effective use of technology to support pedagogical practices in the classroom and online learning environments. By submitting a proposal, you will have the opportunity to showcase how you are incorporating technology to enhance pedagogy in the classroom and discuss advantages and disadvantages. All proposals will be peer reviewed.

Graduate students are welcome to attend and encouraged to submit electronic poster sessions which will be displayed. For more information, visit: [www.fau.edu/teach-with-technology](http://www.fau.edu/teach-with-technology).

### **Teaching about Risk and Resilience: Sea Level Rise, Flooding, and Earthquakes**

**May 14-16, FAU**

Presented by InTeGrate, this workshop will focus the pedagogy of risk and resilience and will include a local emphasis on sea level rise and flooding, contrasting these risks with California earthquakes and is open to 30 faculty (by application). No registration fee to attend. Participation for non-academics is by invitation. Workshop stipends are available to help defray travel expenses in cases of financial need. Accepted participants are expected to contribute teaching materials to a new web-based collection devoted to teaching about risk and resilience across the disciplines. For more information, visit:

[http://serc.carleton.edu/integrate/workshops/risk\\_resilience/overview.html](http://serc.carleton.edu/integrate/workshops/risk_resilience/overview.html).

## **COLLEGE OF SCIENCE UPCOMING EVENTS (MARCH 15 – APRIL 15)**

To see a complete list of semester events, visit: <http://www.science.fau.edu/events.html>. To include a department or club event on this list, please send the information to Paige Garrido at [pgarrido@fau.edu](mailto:pgarrido@fau.edu).

**March 15**

### **Middle School Math Circle**

**2:30 p.m. to 4:00 p.m., PS 109 on the Boca campus.**

The Mathematics department hosts a Math Circle for middle school students who like mathematics and who wish to learn a bit more than is usually covered in the school curriculum. Students can hone their problem solving skills in a fun environment. The Math Circle at FAU, one of the only two registered Math Circles in Florida, is supported in part by a grant from MSRI/NSA. For more information, visit our website at [www.math.fau.edu/MathCircle\\_at\\_Fau](http://www.math.fau.edu/MathCircle_at_Fau) or call or email Dr. Tomas Schonbek at (561) 297-3355 or [schonbek@fau.edu](mailto:schonbek@fau.edu).

**March 17, 2014**

### **Pre-Health Professions Day**

**12:00 – 3:30pm, FAU Boca Raton Campus (SC East Patio)**

Students will have the opportunity to network with admission representatives from medical schools, dental schools, pharmacy schools, veterinary schools, PA programs and more... Free food and prizes for students! For more information, contact Shari Goldstein at [sgoldste@fau.edu](mailto:sgoldste@fau.edu) or visit: [www.science.fau.edu/student\\_services](http://www.science.fau.edu/student_services).

**March 18**

### **FAU Neuroscience Seminar**

**4:00 p.m. to 5:00 p.m., Engineering East Bldg., Room EE106**

**Videoconference to Jupiter Campus Room MC-19, Room #201 and Davie Campus, Room LA-148**

Dr. Charles Gray, Montana State University, "Dynamics of Cortico-cortical Interactions Underlying Visual Working Memory." For more information, contact Rhona Frankel at [franke@ccs.fau.edu](mailto:franke@ccs.fau.edu).

**March 18**

### **Third Tuesdays Open Dome Event (Held the third Tuesday of every month)**

**7:00 p.m. to 11:30 p.m., FAU Observatory, Building SE-43, 4<sup>th</sup> Floor**

For more information, contact Eric Vandernoot at [vandernoot@mail.sci.fau.edu](mailto:vandernoot@mail.sci.fau.edu) or visit: <http://www.physics.fau.edu/observatory/observatory.html>.

**March 19**

### **Center for Molecular Biology and Biotechnology Seminar Series**

**4:00 p.m., Engineering East Building EE-106, videoconference to Jupiter- SR 268**

Guest speaker: Richard Jove, VGTI. For more information, contact: Marjorie Cazeau at [mcazeau@fau.edu](mailto:mcazeau@fau.edu).

**March 21**

**College of Science Research Day**

**10:00 a.m. to noon, Live Oak Pavilion**

The College of Science students who have completed their own poster registration will be presented at this event. Recognition will be given for the top three undergraduate students, top three graduate posters and one first year graduate student. Hosted by the College of Science Graduate Association. For more information, email: [csga@fau.edu](mailto:csga@fau.edu).

**March 21**

**Geosciences Colloquium Series**

**12:00 p.m. to 1:20 p.m., SE 417**

Dr. Tiffany Roberts, Department of Geology & Geophysics  
Louisiana State University, "Coastal Morphodynamics in Response to System Disturbances."

**March 21**

**Chemistry and Biochemistry Department Seminar**

**3:00 p.m., PS, Room 226**

Guest Speaker Dmitiriy Minond, Torrey Pines, "Discovery and Characterization of Novel Pyrrolidine Diketopiperazines that Selectively Inhibit Melanoma

**March 25**

**FAU Neuroscience Seminar**

**4:00 p.m. to 5:00 p.m., Engineering East Bldg., Room EE106**

**Videoconference to Jupiter Campus Room MC-19, Room #201 and Davie Campus, Room LA-148**

Dr. Peter Erdi, Kalamazoo College, MI, "The Quantitative Systems Pharmacological Approach: Altered Hippocampal Theta Rhythms, Anxiety, and Alzheimers Disease." For more information, contact Rhona Frankel at [franke@ccs.fau.edu](mailto:franke@ccs.fau.edu).

**March 26**

**Center for Molecular Biology and Biotechnology Seminar Series**

**4:00 p.m., Engineering East Building EE-106, videoconference to Jupiter- SR 268**

Guest speaker: Keith Knutson, VGTI. For more information, contact: Marjorie Cazeau at [mcazeau@fau.edu](mailto:mcazeau@fau.edu).

**March 28**

**Geosciences Colloquium Series**

**12:00 p.m. to 1:20 p.m., SE 417**

Dean Monette, Department of Geosciences, Florida Atlantic University, "Competition, Grazing, and Invasion Trajectory of *Pomacea maculata*"

**March 28**

**Frontiers in Science Public Lecture Series: "Message without a Bottle: Coding to Send and Receive Information Safely"**

**3:30 p.m., College of Medicine Building, Room 126 (Building BC71) on the Boca Raton Campus**

Speaker Ivelisse Rubio, Ph.D., Professor, Department of Computer Science, University of Puerto Rico, Rio Piedras. For more information, visit: [http://www.science.fau.edu/frontiers/poster\\_spring\\_2014.pdf](http://www.science.fau.edu/frontiers/poster_spring_2014.pdf).

**March 28**

### **Chemistry and Biochemistry Department Seminar**

**3:00 p.m., PS, Room 226**

Guest Speaker John Berry, Ph.D., FIU, "Fishing for Toxins: The Zebrafish Embryo as a Model for Identifying, Isolating and Characterizing Toxins from Cyanobacteria." For more information, contact Helena Szczesny at [hszczens@fau.edu](mailto:hszczens@fau.edu).

**March 29**

### **Middle School Math Circle**

**2:30 p.m. to 4:00 p.m., PS 109 on the Boca campus.**

The Mathematics department hosts a Math Circle for middle school students who like mathematics and who wish to learn a bit more than is usually covered in the school curriculum. Students can hone their problem solving skills in a fun environment. The Math Circle at FAU, one of the only two registered Math Circles in Florida, is supported in part by a grant from MSRI/NSA. For more information, visit our website at [www.math.fau.edu/MathCircle](http://www.math.fau.edu/MathCircle) at [Fau](http://Fau) or call or email Dr. Tomas Schonbek at (561) 297-3355 or [schonbek@fau.edu](mailto:schonbek@fau.edu).

**March 29**

### **Making Waves Gala**

**Martin F. and Jane Greenberg Foundation Tower, FAU Stadium**

For more information, visit: <http://faugala.info/>.

**April 1**

### **FAU Neuroscience Seminar**

**4:00 p.m. to 5:00 p.m., Engineering East Bldg., Room EE106**

**Videoconference to Jupiter Campus Room MC-19, Room #201 and Davie Campus, Room LA-148**

Dr. J. A. Scott Kelso, FAU Center for Complex Systems and Brain Sciences, "Crick's Conjecture and the Coordinative Structures of the Brain: Why Neuroscience needs a Complex Systems Perspective". For more information, contact Rhona Frankel at [franke@ccs.fau.edu](mailto:franke@ccs.fau.edu).

**April 2**

### **Center for Molecular Biology and Biotechnology Seminar Series**

**4:00 p.m., Engineering East Building EE-106, videoconference to Jupiter- SR 268**

Guest speaker: Gregory Macleod, FAU. For more information, contact: Marjorie Cazeau at [mcazeau@fau.edu](mailto:mcazeau@fau.edu).

**April 4**

### **Geosciences Colloquium Series**

**12:00 p.m. to 1:20 p.m., SE 417**

Dr. Virginia Walsh, Senior Professional Geologist,  
Chief Hydrogeology Section, Miami Dade Water and Sewer Department, TBA

**April 4**

### **Chemistry and Biochemistry Department Seminar**

**3:00 p.m., PS, Room 226**

Guest Speaker Bilal Ahmad Bhat, Ph.D., Indian Institute of Integrative Medicine—Jammu, India. For more information, contact Helena Szczesny at [hszczens@fau.edu](mailto:hszczens@fau.edu).

**April 4**

### **First Fridays Open Dome Event (held the first Friday of every month)**

**7:00 p.m. to 11:30 p.m., FAU Observatory, Building SE-43, 4<sup>th</sup> Floor**

For more information, contact Eric Vandernoot at [vandernoot@mail.sci.fau.edu](mailto:vandernoot@mail.sci.fau.edu) or visit: <http://www.physics.fau.edu/observatory/observatory.html>.

**April 5**

**10<sup>th</sup> Annual Math Day**

**General Classroom North 101 and Physical Sciences Building, 109**

The tenth annual FAU Math Day will be held on Saturday, April 5, 2014, on the Boca Raton campus of Florida Atlantic University. Participants can expect exciting competitions and instructive lectures designed to please everybody who loves mathematics, who is contemplating a career in mathematics or science, or who already is pursuing such a career. If you are a high school student who likes and enjoys mathematics come for a day of excitement and fun, with a chance to win prizes and to learn more about mathematics. If you are a teacher, come to see your students compete and to meet your college colleagues. Math Day is an opportunity for high school mathematics faculty and mathematically inclined students of schools in Palm Beach, Broward, Martin and Dade counties, and for math faculty and students at Florida Atlantic University to get together, get to know each other, and share their appreciation of mathematics. For more information, visit: <http://www.math.fau.edu/mathday/>.

**April 8**

**Employee Service Awards Day**

**Live Oak Pavilion**

The University will recognize completed years of service for regular full-time and part-time employees with continuous and completed service of 5, 10, 15, 20, 25, 30, 35 and 45 years at FAU as of Dec. 31, 2013. The University will also acknowledge winners of this year's President's Leadership Awards, Jeffrey Gabor Exemplary Employee Awards, and the VALIC Customer Service Awards. For more information, contact Robin Kabat, Department of Human Resources, at 561-297-3072, or [kabat@fau.edu](mailto:kabat@fau.edu).

**April 8**

**FAU Neuroscience Seminar**

**4:00 p.m. to 5:00 p.m., Engineering East Bldg., Room EE106**

**Videoconference to Jupiter Campus Room MC-19, Room #201 and Davie Campus, Room LA-148**

Dr. Susan Sesack, University of Pittsburgh, "Understanding Dopamine Neuron Connectivity: Passion and Prudence." For more information, contact Rhona Frankel at [franke@ccs.fau.edu](mailto:franke@ccs.fau.edu).

**April 8**

**Mars' Opposition to the Sun Open Dome Event**

**7:00 p.m. to 1:00 a.m., FAU Observatory, Building SE-43, 4<sup>th</sup> Floor**

For more information, contact Eric Vandernoot at [vandernoot@mail.sci.fau.edu](mailto:vandernoot@mail.sci.fau.edu) or visit: <http://www.physics.fau.edu/observatory/observatory.html>.

**April 9**

**Successful Grantsmanship Professional Development Seminar- Speaker Dale Gawlik**

**12:30 p.m. to 2:00 p.m., PS 226**

This professional development seminar is designed for faculty and graduate students to explore the fine points of obtaining grant funding. Presented by the Charles E. Schmidt College of Science's Master Researcher program to nurture and enhance the College research culture and increase external funding. [Register](#) in advance. For more information, email [Paige Garrido](mailto:Paige Garrido).

**April 9**

**Center for Molecular Biology and Biotechnology Seminar Series**

**4:00 p.m., Engineering East Building EE-106, videoconference to Jupiter- SR 268**



Guest speaker: Midhat Abdulreda, University of Miami. For more information, contact: Marjorie Cazeau at [mcazeau@fau.edu](mailto:mcazeau@fau.edu).

**April 11**

**2<sup>nd</sup> Annual Award Banquet – Hosted by the College of Science Graduate Student Association**

**5:00 p.m. to 8:00 p.m., Grand Palm Ballroom**

This event, hosted by the College of Science Graduate Student Association, honors the winners of the College of Science's Research Day and the recipients of 2013-2014 scholarship awards. By invitation only. For more information, contact [Paige Garrido](#).

**April 12**

**Middle School Math Circle**

**2:30 p.m. to 4:00 p.m., PS 109 on the Boca campus.**

The Mathematics department hosts a Math Circle for middle school students who like mathematics and who wish to learn a bit more than is usually covered in the school curriculum. Students can hone their problem solving skills in a fun environment. The Math Circle at FAU, one of the only two registered Math Circles in Florida, is supported in part by a grant from MSRI/NSA. For more information, visit our website at [www.math.fau.edu/MathCircle\\_at\\_Fau](http://www.math.fau.edu/MathCircle_at_Fau) or call or email Dr. Tomas Schonbek at (561) 297-3355 or [schonbek@fau.edu](mailto:schonbek@fau.edu).

**April 15**

**FAU Neuroscience Seminar**

**4:00 p.m. to 5:00 p.m., Engineering East Bldg., Room EE106**

**Videoconference to Jupiter Campus Room MC-19, Room #201 and Davie Campus, Room LA-148**

Student presentations. For more information, contact Rhona Frankel at [franke@ccs.fau.edu](mailto:franke@ccs.fau.edu).

**April 15**

**Total Lunar Eclipse Open Dome Event**

**7:00 p.m. to 11:30 p.m., FAU Observatory, Building SE-43, 4<sup>th</sup> Floor**

For more information, contact Eric Vandernoot at [vandernoot@mail.sci.fau.edu](mailto:vandernoot@mail.sci.fau.edu) or visit: <http://www.physics.fau.edu/observatory/observatory.html>.

If you have any news you would like to include in future editions of *Science Connect*, please email Paige Garrido at [pgarrido@fau.edu](mailto:pgarrido@fau.edu).