

# 2009 1-week CASA K-12 Content Institute Program (KCI09) in Mayaguez, PR

**What:** Weather, Radars, and Energy in a Changing World

**When:** June 29<sup>th</sup> –July 2<sup>nd</sup>, 2009 (plus travel days June 28<sup>th</sup> and July 3<sup>rd</sup>)

**Where:** Mayaguez, PR

**Who:** Grade 5 to 12 science or technology teachers. Multi-media teachers interested in developing (as part of their classroom curriculum) radio, podcast, or other “science spots” to disseminate scientific materials may also be accepted. Teachers should be willing and interested in sharing curriculum ideas with other teachers at their school.

**No Cost:** The Workshop is Free of Cost. **Participants will receive a \$500 stipend** in addition to reimbursement for travel costs, meals, and hotel.

**Agenda:** Please see the attached tentative schedule.

**Availability:** 2 spaces available for teachers from Massachusetts or neighboring states; priority given to teachers in high needs school districts.

## PROGRAM HISTORY & OVERVIEW:

Since 2004, the NSF Center for Collaborative Adaptive Sensing of the Atmosphere (CASA) has offered a content institute every summer designed to enable science teachers to deepen their knowledge of concepts and develop hands-on classroom activities with respect to the Engineering, Technology and Earth and Space science curriculum frameworks. The institute features lectures by expert faculty, hands-on labs and activities, communications technologies, a field trip, and development and/or review of classroom resources.

The content institute will have an interdisciplinary focus on socially relevant science and engineering topics that are appealing to young people, such as weather prediction and forecasting using new technologies as well as renewable energy and climate change. Teachers will have the chance to collaborate with faculty and other teachers from Oklahoma, Massachusetts, Puerto Rico, and Colorado. A one-day callback in November will allow teachers to present projects that they develop and implement in their classrooms.

## APPLICATION:

Complete the attached application and email or fax by Friday, May 22nd. Later applications may be accepted, but spots will be filled on a first come first serve basis with preference given to first time participants and teachers from high needs school districts.

**E-mail:** [lrobidou@ecs.umass.edu](mailto:lrobidou@ecs.umass.edu) (please note “KCI09 application” in the subject line)

**Fax:** 413.545.1103, attn: Lorraine Robidou

## COURSE FACULTY:

The summer institute features lectures by experts in Hydrology, Meteorology, Electrical Engineering, Civil Engineering and End User Partnerships from three universities, tentatively including:

- **Dr. Sandra Cruz-Pol**, Professor, Electrical Engineering, University of Puerto Rico at Mayaguez
- **Dr. Anura Jayasumana**, Professor, Electrical & Computer Engineering, Colorado State University
- **Dr. Kevin Kloesel**, Assistant Dean, College of Geosciences, Oklahoma University
- **Dr. Paula Rees**, Research Professor, Director of Massachusetts Water Resources Research Center, UMass Amherst

**TENTATIVE AGENDA: to be updated following discussion**

Starting time	Monday June 29	Tuesday June 30	Wednesday July 1	Thursday July 2
7:30am	Breakfast on your own	Breakfast on your own	Breakfast on your own	DAY TRIP (BUS DRIVER)  Arecibo Observatory Radar, Radiometer & Museum
8:30	Welcome	Hydrology  (Paula)	Renewable Energy (Sandra)  X-Pol's Solar Thingies	
8:45	Introductions			
9:00	CASA Overview (Jose			
9:15	Colom-Ustariz)			
9:30	Pretest and Syllabus			
9:45	Overviews (Paula?)			
10:00	Break			
10:15	Frameworks	Using Radar Data In the Classroom I (Kevin or Anura?)	Using Radar Data In the Classroom II (Kevin or Anura)	
10:30	(Paula?)			
10:45	Diversity Case Studies (TBD)			
11:00				
11:15				
11:30	Lunch	Lunch	Lunch	
11:45				
12:00PM				
12:15				
12:30	Radar (Anura)  Technology	Grant Writing (Paula)	End Users (Walter)	
12:45				
1:00				
1:15				
1:30				
1:45				
2:00			Research Opportunities (Kevin)	
2:15	Break	Break	Break	
2:30				
2:45	Dr. Kevin K. Handheld Radar	Climate Change Station (Dr. Sandra X-Pol)	Curriculum Brainstorm	
3:00				
3:15				
3:30	Radar demo at CLiMMate Lab Stefani Bldg		Evaluation  Post- Test (Paula?)	
3:45				
4:00				
4:15	Social party & Dinner	Social party & Dinner	Social party & Dinner	
4:30				
6:30-8:00				



**CASA K-12 Content Institute (KCI) PROGRAM**

**APPLICATION - Summer 2009 @ University of Puerto Rico Mayaguez, June 29<sup>th</sup> – July 2<sup>nd</sup>, 2009**

*NSF Collaborative Adaptive Sensing of the Atmosphere [CASA] Center* (<http://www.casa.umass.edu>)

**Eligibility:** Positions are offered on a competitive basis to United States citizens or U. S. Legal Permanent Residents who are teaching science or technology full time. **Instructions:** Complete this application and submit on or before **May 22<sup>nd</sup>, 2009**.

**Section I.**

1. Full Name (first, last) \_\_\_\_\_
2. I am a  US Citizen  US Legal Permanent Resident  Other (may be ineligible)
3. Email Address \_\_\_\_\_ Alternate Email Address \_\_\_\_\_
4. Home Mailing Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone Number \_\_\_\_\_

Questions 6-8 *Optional* (The following information is used by the NSF for statistical purposes only)

6. I am  Male  Female
7. Ethnicity \_\_\_\_\_
8. Physical Challenges or Special Needs, etc. \_\_\_\_\_

**Section II.**

9. School Name \_\_\_\_\_
  10. School Mailing Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone Number \_\_\_\_\_
  12. Total number of years teaching science at the K-12 level \_\_\_\_\_
  13. Number of years teaching at current school \_\_\_\_\_
  14. List courses and grade levels you are currently teaching (indicate if labs are included)
- | Course name | Grade level | # of classes | Lab included? |
|-------------|-------------|--------------|---------------|
|-------------|-------------|--------------|---------------|

15. What approaches have you used to stimulate your students' interest in science?  
\_\_\_\_\_

**Section III. The following information will assist in development of course content at an appropriate level.**

16. Undergraduate Institution You Attended \_\_\_\_\_
17. Major(s) \_\_\_\_\_
18. Degree earned and date of graduation (month and year) \_\_\_\_\_
19. List undergraduate and graduate (college level) science and math courses completed. (if more than 10, list 10 most relevant)

Course name	Date completed	Where taken	Lab included?
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**Section V.**

20. I hereby certify that all information provided on this application is true and complete to the best of my knowledge. If accepted, I understand that providing false information is grounds for dismissal from the CASA RET program. (The following is your electronic "signature" and is considered binding.)

Initials \_\_\_\_\_ Full Name \_\_\_\_\_ Date \_\_\_\_\_

21. CASA has my permission to copy all parts of my application for internal distribution to members affiliated with CASA during the RET selection process.

I agree  I do not agree

Please send this form by **email** to [lrobidou@ecs.umass.edu](mailto:lrobidou@ecs.umass.edu), **subject:** "KCI09 Application" or **FAX:** 413.545.1103 (attn: Lorraine Robidou). Additional information: 413.545.6390.