

# CALL FOR ABSTRACTS



The 74<sup>th</sup> Annual Meeting of the  
**FLORIDA ACADEMY OF SCIENCES**  
will be held at  
**INDIAN RIVER STATE COLLEGE**  
Ft. Pierce, Florida  
March 19-20, 2010

*All FAS abstracts must be submitted online  
at*

***[www.barry.edu/fas/](http://www.barry.edu/fas/)***

*the website will accept abstracts beginning 26 October 2009*

**Abstract Topics:** Abstracts on any aspect of science are solicited and you are cordially invited to organize additional sessions or symposia in any area of science or science education. For further information and procedures, visit the academy's web page located at [www.floridaacademyofsciences.org](http://www.floridaacademyofsciences.org) or contact the FAS Program Chair, Dr. Jeremy Montague (Barry University) at 305-899-3218, fax 305-899-3225, email [jmontague@mail.barry.edu](mailto:jmontague@mail.barry.edu)

***Abstract Deadline: Friday, 18 December, 2009  
(Early submissions are strongly encouraged.)***

Section Chairs, 2009-2010, Florida Academy of Sciences

- AGR** Agricultural and Natural Resource Sciences: Mr. Gilbert Queeley, Research Associate, Florida A&M University, 202 Perry Paige Building South, FAMU, Tallahassee, FL 32307, Phone: 850-412-5255, fax: 850-561-2151, email: gilbert.queeley@famu.edu
- ANT** Anthropological Sciences: Dr. Gilbert Ellis, College of Arts & Sciences, Barry University, 11300 NE 2<sup>nd</sup> Ave, Miami Shores, FL 33161, 305-899-3217, email gellis@mail.barry.edu
- AOS** Atmospheric and Oceanographic Sciences: Ms. Kelli Zargiel, Marine and Environmental Systems, Florida Institute of Technology, 150 West University Blvd, Melbourne, FL 32901, 321-674-7334, kzargiel@my.fit.edu
- BIO** Biological Sciences: Ms. Kym Rouse Campbell, ENVIRON International Corp., 10150 Highland Manor Drive, Suite 440, Tampa, Florida 33610, 813.628.4325, fax: 813.628.4983, cell: 813-482-4028, kcampbell@environcorp.com
- CMS** Computer/Mathematical Sciences: Dr. Jaci White and Dr. Siamack Bondari, Co-Chairs, Dept. of Mathematics, Saint Leo University, Saint Leo, FL 33574, 352-588-8338, fax 352-588-8440, email jacci.white@saintleo.edu
- ENG** Engineering Sciences: John K. Baker, 2227 Hillsdale Road, Tallahassee, FL 32301, 850-510-7729, email: bdozen@hotmail.com
- ENV** Environmental and Chemical Sciences: Eric Steimle, 727-492-8951, email: esteimle@gmail.com
- RES** Florida Committee on Rare & Endangered Plants & Animals: Dr. I. Jack Stout, Department of Biology, University of Central Florida, Department of Biology, 4000 Central Florida Blvd., Orlando, FL 32816-2368, 407-823-2919, email jstout@pegasus.cc.ucf.edu
- GHS** Geology/Hydrology: TBD...inquiries may be sent to the FAS Program Chair (Jeremy Montague, see contact information below)
- MED** Medical Sciences: Dr. Sanjay Sesodia, School of Podiatric Medicine, Barry University, 11300 NE 2<sup>nd</sup> Ave, Miami Shores, FL 33161, 305-899-3684, email ssesodia@mail.barry.edu
- PSS** Physics and Space Sciences: Dr. Niescja Turner (Chair, 321-674-7135), and Dr. Eric Perlman (Chair-Elect, 321-674-8098), Physics & Space Sciences Dept., Florida Institute of Technology, 150 W. University Blvd., Melbourne, FL 32901, emails neturner@fit.edu and eperlman@fit.edu
- SOC** Social Science: Dr. Guillermo Wated, Department of Psychology, College of Arts and Sciences, Barry University, 11300 NE 2<sup>nd</sup> Ave, Miami Shores, FL 33161, 305-899-3274
- TCH** Science Teaching: TBD...inquiries may be sent to the FAS Program Chair (Jeremy Montague, see contact information below)
- URB** Urban & Regional Planning: Dr. Elizabeth Strom Department of Geography, University of South Florida, 4202 Fowler Avenue, NES 107, Tampa, FL 33620, 813-974-4291, email estrom@cas.usf.edu
- Local Arrangements Chair:** Dr. Mark Wade, Evans Properties, Inc., 660 Beachland Blvd, Suite 301, Vero Beach, FL 32963, 772-234-2410, email mwade@evansprop.com
- Program Chair:** Dr. Jeremy Montague, Department of Biology, College of Arts and Sciences, Barry University, 11300 NE 2<sup>nd</sup> Ave, Miami Shores, FL 33161, 305-899-3218, fax 305 899-3225, email jmontague@mail.barry.edu

# FLORIDA ACADEMY OF SCIENCES 74<sup>th</sup> ANNUAL MEETING MARCH 19-20, 2010 MEETING INFORMATION

## OVERVIEW

The 74<sup>th</sup> Annual Meeting of the Florida Academy of Sciences will be held at the Indian River State College, Ft. Pierce, Florida from March 19-20, 2010. Abstracts on all aspects of science are solicited for general sessions in all sections of the Academy (list of sections on previous page). Any person or section interested in organizing a special session should contact the appropriate Section Chair or the Program Chair for further information.

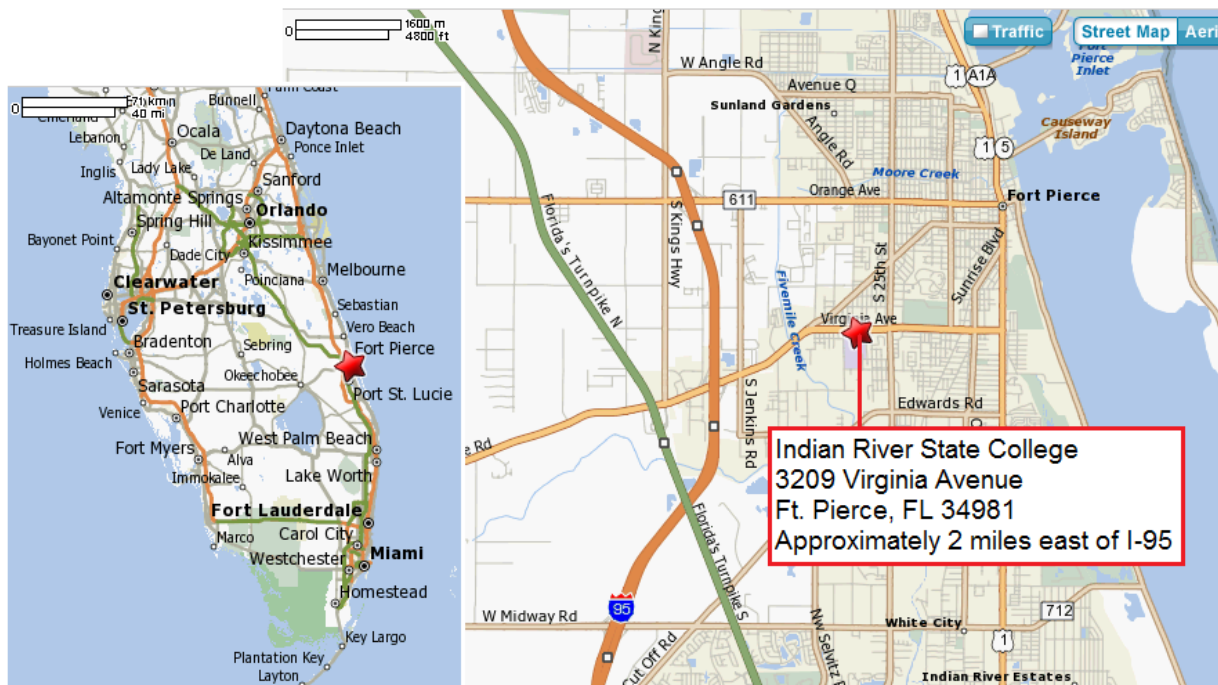
## INDIAN RIVER STATE COLLEGE <http://www.irsc.edu/pdf/maincampusmap.pdf>

Linking Indian River, Martin, Okeechobee, and St. Lucie Counties with eight campuses, Indian River State College positively impacts lives by making possibilities a reality, offering Associate and Bachelor degrees in many programs. Its 252 acres comprise IRSC's beautifully landscaped Main Campus in the coastal city of Fort Pierce. IRSC responds to our community by creating a superior learning environment, cultivating student success, embracing diversity, stimulating economic growth, promoting cultural enrichment, and providing lifelong learning.

## LOCATION

3209 Virginia Avenue, Ft. Pierce, FL 34981

- **From the Florida Turnpike**...take the SR-70 exit, EXIT 152, toward FT PIERCE
- **From I-95**...take the SR-70 exit, EXIT 129, toward US-1/FORT PIERCE/HOSPITAL/INDIAN RIVER STATE COLLEGE



## **DAYS, TIMES AND SESSION SCHEDULES**

The tentative scheduling is:

- Friday sessions: AGR, ANT, AOS, BIO, CMS, ENG, ENV, GHS, PSS, RES, SOC, TCH, and URB
- Saturday sessions: MED

The scheduling details will be finalized in January 2010.

## **PARKING [Link to Campus Map = <http://www.irsc.edu/pdf/maincampusmap.pdf>]**

Parking information will be made available in February 2010.

## **REGISTRATION**

ALL PARTICIPANTS MUST REGISTER but you need not be a member in order to present a paper or poster. Academy members and non-members registering before 1 February 2010 will receive a Program Preview by email. The Program Issue of the *Florida Scientist* (Supplement 1 to Volume 73) will be available at the Registration Desk on Friday, March 19, 7:30 AM-4:00 PM, and Saturday March 20, beginning at 7:30 AM.

## **LOCAL ARRANGEMENTS**

The Local Arrangement Chair for the Annual Meeting is Dr. Mark Wade (Evans Properties, Inc., Vero Beach, see contacts, p. 2); he should be consulted for any special meeting needs.

## **LODGING**

No reservations can be made through the Academy. The following hotels in Ft. Pierce are within two miles of the Indian River State College:

- Marriott Fairfield Inn & Suites, 6502 Metal Drive (772-462-2900); the Local Arrangements Chair has secured a favorable rate for FAS attendees with this Marriott...please make early reservations
- Comfort Suite, 6505 Metal Drive (772-409-1420)
- Days Inn, 6651 Darter Court (772-466-4066)
- Motel 6, 2500 Peters Road (772-461-9937)
- Sleep Inn, 2715 Crossroads Parkway (772-595-6080)
- LaQuinta Inn, 2655 Crossroads Parkway (772-828-4199)
- Quality Inn, 2831 Reynolds Drive (772-460-9855)
- Holiday Inn Express, 7151 Okeechobee Road (772-464-5000)

## **MEALS**

Information on dining and meals will be made available in February 2010.

## **BANQUET**

The Academy banquet is scheduled for Friday evening (March 19) promptly at 7 pm. Additional banquet information will be made available in February 2010. The Banquet Address ("*Got Crabs?? Climate Change and Biological Invasion in Antarctica*") will be given by Richard B. Aronson, Ph.D. (Head, Biological Sciences, FIT).

## **PLENARY SESSION SPEAKER**

The Meg Gale Plenary Address will be given on Friday, March 19, 2010, at 1:00 PM immediately following the business meeting. The speaker and topic will be made available in February 2010.

## **FIELD TRIPS**

Special field trips being run in conjunction with the Annual Meeting will be announced in the Program Preview to be mailed in February 2010. For information concerning local attractions, please check the Registration Desk.

## **FLORIDA JUNIOR ACADEMY OF SCIENCE ANNUAL MEETING**

The Junior Academy will meet with Florida Academy of Sciences this year. As the student division of FAS, the Florida Junior Academy of Science provides opportunities that encourage middle and high school students in science by allowing them to compete, share, and network with other students and adults having common interests. The focus of this "common bond" among participants is their research activities. The Florida Junior Academy of Science is seeking volunteers to assist in judging and to act as section moderators at its meeting, to be held on Saturday, March 20, 2010. The Junior Academy is also seeking individuals in early February of 2010 to evaluate research papers submitted for this meeting. Persons interested in participating in this rewarding experience should contact the FJAS Coordinator: Ms. Patricia Zalo, 2812 26th Avenue Drive W., Bradenton, FL 34205-3707, telephone 941-756-4156, email: pzalo@yahoo.com

## **NOMINATIONS FOR THE FAS MEDALIST**

The Florida Academy of Sciences encourages its members to submit formal nominations for candidates to be considered as the 2010 Medalist.

**Nomination Procedure:** the Medalist nomination form is now available on the Academy's main website ([www.floridaacademyofsciences.org](http://www.floridaacademyofsciences.org)). All nomination(s) will go to the Honors Committee Chair, Dr. Dan Odell (Biological Consulting, PO Box 692042, Orlando, FL, 407-761-7601, email: [dodell@cfl.rr.com](mailto:dodell@cfl.rr.com)).

**Criteria:** The Florida Academy of Sciences Medal is presented each year at the Annual Meeting to a resident of the State of Florida, who has contributed in an outstanding manner to the promotion of scientific research, to the stimulation of interest in the sciences, or to the diffusion of scientific knowledge. The candidate need not be a Ph.D. He or she may be a research scientist, philanthropist, educator, journalist, science-fair coordinator, member of industry, government, or other organization, etc., and who has met the above criteria.

## **COMMERCIAL AND INSTITUTIONAL EXHIBITS**

Space is available on a first come-first served basis. Exhibits by research institutions or organizations offering programs of an informational nature may be given free space. Parties interested in fee or free spaces should contact the FAS for details (407-514-2079). The Academy reserves the right to deny exhibits by individuals or organizations with a focus that is not pertinent or is contrary to its goals.

## **STUDENT AWARDS**

Students presenting papers at the Annual Meeting of the Academy, and who are registered for the Meeting, may be considered for a number of awards. Details are presented below. Students wishing to be considered for one or more of these awards should indicate their interest on the

FAS abstract submission website. Mr. Barry Wharton is the FAS Awards Chair, and he can be reached at HDR, *Inc.*, 5426 Bay Center Drive, Suite 400, Tampa, FL 33609, 813-282-2360, email: bwharton@hdrinc.com

1. Outstanding Student Paper Award - This award is presented by any of the Academy Sections to graduate and undergraduate students for oral and poster presentations.
2. American Association for the Advancement of Science Award - This award is presented to one male and one female undergraduate student annually and is a one-year membership in AAAS including the journal *Science*.
3. Sigma Xi Awards – Three awards, one presented by the University of Central Florida chapter of Sigma Xi, is for \$50 and a certificate for UCF graduate students, and one for undergraduate students; the third presented by Barry University chapter of *Sigma Xi*, is for \$100 and a certificate for the outstanding presentation by a Barry University undergraduate student.
4. Al Hall Student Award in Engineering – The award shall be given for a paper or poster by an undergraduate or graduate student that judges at the Annual Meeting of the Academy deem outstanding in nature. The winner of the Al Hall Engineering Student Award will be presented with a monetary gift, plaque, and certificate for the outstanding paper and/or poster presentation at the FAS Annual Meeting. Additional details will be available in January 2010.
5. Life Star Foundation Award: The Life Star Foundation works in conjunction with FAS to recognize, encourage and reward research that has potential to contribute to the field of regenerative medicine. The award winner(s) may be high school, undergraduate or graduate students, and will be presented a monetary gift of \$500 and certificate for the paper and/or poster presentation at the FAS annual meeting or at another appropriate occasion. Additional details will be available in January 2010.

FLORIDA ACADEMY OF SCIENCES 74<sup>th</sup> ANNUAL MEETING  
MARCH 19-20, 2010

INSTRUCTIONS FOR ABSTRACT SUBMISSION

**ONLINE SUBMISSION**

The abstract online submittal form is available at:

***<http://www.barry.edu/fas/>***  
***the website will accept abstracts beginning 26 October 2009***

FAS requests complete names, addresses (including street addresses and ZIP codes), organizational departments, phone numbers, *etc.*

**PUBLICATION OF FAS ABSTRACTS**

All accepted FAS abstracts will be published in the Program Issue of the *Florida Scientist* (Volume 73, Supplement 1). Meeting attendees must stop at the Registration Desk to receive their copies.

**DIRECTIONS FOR ABSTRACT PREPARATION**

Abstracts must be typed (or text may be cut-and-pasted) into the appropriate submission window on the website (see URL above). **WE ASK ALL AUTHORS TO ADHERE STRICTLY TO THE INSTRUCTIONS SHOWN BELOW IN ORDER TO ACHIEVE UNIFORM PUBLICATION; PLEASE FOLLOW THE DIRECTIONS CAREFULLY.** Sample abstracts follow at the end of this document, and are also posted on the online submission URL shown above.

**Abstract Size:** No more than 350 words (*including* title, authors, affiliations, *etc.*). ***It is crucial for publication in the Program Book that abstracts are kept within this limit...the submission software is designed to truncate abstracts at 350 words.***

**Order of parts:** Title, author(s), affiliation(s), text (including acknowledgment of financial and technical assistance).

**Title:** Upper case 1<sup>st</sup> letter for the 1<sup>st</sup> word of the title, and for 1<sup>st</sup> letter of proper nouns, followed by a period.

**Author(s):** Immediately following title. All upper case letters, not including the word “and”, if multi-authored, and followed by a period.

**Affiliation(s):** Immediately following author(s). Upper and lower case letters. Full address with zip code, and state abbreviation (FL or others). Use standard abbreviations (*e.g.*, Dept., Inst., Univ., Geol.) only if necessary to save space for text, and followed with a period.

**Text:** Immediately following affiliations. According to standard typing of scientific text in respective discipline.

## **POSTERS**

Poster exhibits of scientific studies on any topic are *strongly encouraged*, and will be displayed during the annual meeting. *Poster presentations must include an abstract to be submitted online.* All poster abstracts will appear in the Program Issue.

## **POSTER FORMAT**

Maximum size is approximately 3'×5' (a size used commonly at many conferences and meetings). We request posters to be printed/displayed in landscape view.

## **AUDIO VISUAL EQUIPMENT**

The standard presentation format will be PowerPoint slides submitted to the session chair prior to the session meeting. We expect presenters will have their PowerPoint presentations available on their personal thumb-drive/memory-stick devices 15 minutes before the beginning of a session.

Overhead projectors will be available in all meeting rooms. 2x2 slide projectors will not be generally available; presenters should *specialy request* on the abstract online submittal form if they will require any special AV equipment.

## **WHEN TO SUBMIT**

The deadline for abstract submittal is *Friday, 18 December 2009.*, but FAS *strongly* encourages early submissions.

## **PLANNING YOUR PRESENTATION**

Each speaker will have 15 minutes for his or her presentation. There will be no exceptions to this rule. It is recommended that your presentation last approximately 12 minutes, so that there will be ample time for questions afterward. Your Section Chair or moderator will give you a signal as the end of your 12 minutes approaches. Please plan on being present when the session in which you are going to speak begins. Your Section Chair may have instructions that speakers need to hear. In addition, if you are going to be using special equipment, such as slide projectors, you should be at the meeting room 15 minutes before the start of your session to see that this equipment is working properly.

## **QUESTIONS?**

Contact your Section Chair (page 2), or the Program Chair at: [jmontague@mail.barry.edu](mailto:jmontague@mail.barry.edu)

**Please check the FAS website for further updates:**

***<http://www.floridaacademyofsciences.org>***

**(See next page for sample abstracts.)**

**Abstract sample, single author:**

Population distribution of bottlenose dolphins (*Tursiops truncatus*) in Florida's Charlotte Harbor before and after hurricane Charley in August 2004. M. THOMPSON. SNHS-Biology, Barry University 11300 NE 2nd Avenue, Miami Shores, FL 33161. The population distribution of bottlenose dolphins (*Tursiops truncatus*) in Florida's Charlotte Harbor has been well documented by frequent boat based surveys. However, their distribution after a destructive hurricane, such as Charley in August 2004, remains unknown. After a hurricane, dolphins may leave the area temporarily, permanently, or not leave at all. To assess post hurricane impact on dolphin distribution we chose 34 dolphins from the Charlotte Harbor population. Dolphins chosen for this study had to have at least ten total sighting records, either before or after the storm. Sighting records dating back to 1990 and photo-identification data were used to determine the number of sightings a dolphin had before the storm. Boat-based surveys were carried out on the 23rd and 27th of May 2005. During both days dolphins were sighted. Using Geographic Informational Systems (GIS), all data sets were compiled and analyzed. Results show there was no change in Charlotte Harbor dolphin distribution after hurricane Charley. The immediate reaction by bottlenose dolphins to natural disasters has yet to be discovered. This study provides further insight into dolphin behavior and reaction to habitat threat by natural events. (Project supported in part by NOAA-EPP/MSI NA03OAR4810129 awarded to Barry University).

**Abstract sample, more than one author from same institution:**

Behavioral responses of stone crab larvae to changes in hydrostatic pressure and gravity. P.M. GRAVINESE and R.A. TANKERSLEY. Department of Biology, Florida Institute of Technology, 150 W. Univ. Blvd, Melbourne, FL 32901. Behavioral responses of many crustacean larvae to changes in hydrostatic pressure have been hypothesized to form the basis of a negative feedback system for depth regulation. We compared the responses of zoeae (I, III, V) of the Florida stone crab, *Menippe mercenaria*, to gravity and hydrostatic pressure. All three larval stages were negatively buoyant with mean passive sinking rates ranging from 0.32 cm sec<sup>-1</sup> for Stage I zoeae to 1.50 cm sec<sup>-1</sup> for Stage V. Responses to gravity varied throughout development, with early stage larvae (I, III) exhibiting a negative geotaxis and late stage zoeae (V) exhibiting a positive geotaxis. Increases in pressure evoked an ascent response in all larval stages. Similarly, larvae descended in response to decreases in pressure. Rates of change in pressure necessary to evoke a corrective response (*i.e.*, threshold) differed among larval stages.

**Abstract sample, more than one author from two or more institutions:**

An ichthyoplankton survey of the northern Indian River Lagoon system, Florida, with emphasis as to the function of an estuarine fisheries reserve. E.A. REYIER (1) and J.M. SHENKER (2). (1) Dynamac Corporation, Room 3103, O & C Building, Kennedy Space Center, FL 32899, (2) Department of Biology, Florida Institute of Technology, Melbourne, FL 32901. One anticipated benefit of marine reserves is that the protection they afford adult fishes will result in increased ichthyoplankton production, a mechanism difficult to demonstrate in most coastal settings. The estuarine reserve at Kennedy Space Center (KSC), Florida, is hydrologically isolated from public areas, largely preserving initial differences in ichthyoplankton production across its boundary. We examined the density of larval sciaenid sportfishes across the KSC Reserve boundary on 48 surveys from August 2002 to July 2004. Of the 16,000 sportfish larvae collected, 99% were estuarine-spawned *Cynoscion nebulosus*, *Menticirrhus americanus*, and *Sciaenops ocellatus*. Significantly higher densities of these taxa, as well as sciaenid eggs and total larvae, were found outside the reserve, and predicted densities remained so even after habitat conditions known to influence adult spawning behavior or larval survival were accounted for. Results suggest that habitat conditions (some unaccounted for in the sampling protocol), not current adult sportfish harvest rates, largely dictate local ichthyoplankton abundance. Potential explanations for this observed distribution include enhanced larval survival in public areas due to elevated primary production, or decreased survival within protected areas due to bottom-water hypoxia near known spawning sites.