

# Ephemeral Flow

A NEWSLETTER ABOUT SAHRA

SUMMER 2005

Welcome to the Summer issue of Ephemeral Flow, a newsletter for sharing information within the SAHRA community. Ephemeral Flow is sent to SAHRA researchers, staff, and students at all participating institutions approximately every two months. Your contributions and suggestions are always welcome. Please send items to Mary Black at [mblack@sahra.arizona.edu](mailto:mblack@sahra.arizona.edu).

## UPCOMING EVENTS

Meetings, Workshops, Seminars, Short Courses

**Oct. 26-28:** SAHRA's Annual Meeting and NSF Site Visit, Radisson Hotel, Tucson

## FEATURE

### Good as Gold

Coached by Betina Hofacre and SAHRA graduate student Tasha Lewis (and as reported in this newsletter in April), the varsity team from Tucson's Our Mother of Sorrows School took first place state honors in the category of water quality, thereby qualifying for the National Science Olympiad competition. The two-person team of Stacy Garland and Sergio Matias went to nationals in May at the University of Illinois at Urbana-Champaign. Stacy and Sergio aced the competition, placing first in a field of 60 for the Water Quality event. Along with our hearty congratulations, the two students will receive \$2,000 per year scholarships from the University of Illinois-Urbana if they choose to enroll there as undergraduates.



Garland and Matias prove Water Quality is golden

## CONTACT US!

Please let us know when you have news to share or a reason to brag. Students, let us know for example when you have completed your oral exam, defended your thesis/dissertation, or accepted a position in the real world (or even academia). Faculty members, are you offering a new course, hosting a workshop, leading a panel, editing a new journal? Too bashful to talk about your own accomplishments? Anonymous or second-party tips on newsworthy announcements are also gratefully accepted.

## PUBLICITY/HONORS

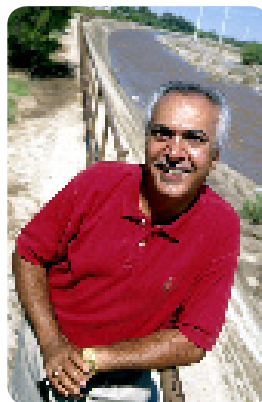
### Distinguished Service to NASA

SAHRA Founder and Executive Committee member **Soroosh Sorooshian** is the 2005 recipient of the NASA Distinguished Public Service award (for non-governmental employees). He received the award April 27, 2005 during the annual award luncheon at NASA HQ in Washington, DC.

According to the NASA website, this is "the highest honor NASA awards to anyone who was not a Government employee when the service was performed. The award is granted only to individuals whose distinguished accomplishments contributed

substantially to the NASA mission. The contribution must be so extraordinary that other forms of recognition would be inadequate."

Our heartfelt congratulations go to Soroosh for this outstanding honor.



### No Spineless Journalism Here

Southwest Hydrology snagged a Cactus Quill Award from the International Association of Business Communicators, Tucson chapter, on June 2.

Southwest Hydrology received one of only four Awards of Excellence – the highest category – from 27 entries, which were judged by the Sacramento region of IABC.



## PEOPLE

### *New SAHRA REUs for 2004/05*

SAHRA continues its partnership this summer with other NSF Science and Technology Centers, using a national solicitation to recruit students to collaborate on SAHRA research for eight weeks under NSF's Research Experiences for Undergraduates (REU) program. At UA, four students are participating:

- **Martin Alcalá**, a Ph.D. student from Texas A&M, Kingsville, who is working with Juan Valdes and Julio Cañon Barriga on precipitation climatologies for the Lower Colorado;
- **Lauren Ingegneri**, a junior majoring in engineering at Smith College in Northampton, MA, working with Tom Meixner and Laura Klasner doing chemical analyses of San Pedro samples;



*John Petti bullies REU Ingegneri into reaching the top of the Mt. Bigelow tower, demonstrating there are scarier things than acrophobia.*



*REUs Teague, Ingegneri, and Krall reach new research heights this summer while escaping the Tucson heat.*

- **Jacob Krall**, a senior at Cornell University, Ithaca, NY, working under the direction of Tom Meixner to study diurnal flow fluctuations in the San Pedro and their correlations with ET and temperature; and
- **Aarin Teague**, a 2005 graduate in biological systems engineering from Texas A&M University, College Station, TX, working with Travis Huxman on soil moisture data from the Santa Rita range in southern Arizona.

Toiling in the Valles Caldera with Eric Small on ponderosa pine ET and how it varies with soil moisture and other soil factors are:

- **Natalie Burris**, an undergraduate geology major from the University of Kansas; and
- **Ronn Friedlander**, majoring in biomedical engineering and ecology and natural resources at Rutgers University.

### *Student and Faculty News/Milestones*

#### **Students who finished degrees recently**

Advised by Chris Duffy, **Yizhong Qu** received his Ph.D. in May from Penn State University, and has moved to the Boston area and accepted a position with a firm that does hydrologic modeling. Yizhong's dissertation was titled "An integrated hydrologic model for multi-process simulation using semi-discrete finite volume approach."

In June, **Matt Baillie** successfully defended his UA master's thesis in hydrology, "Quantifying base flow inputs into the San Pedro River using geochemical tracers." Matt will continue his studies this fall at the University of Victoria in British Columbia, and should brace himself for numerous

*see People, continued next page*

## GRANTS/LEVERAGING

### *Water Planet*

SAHRA recently learned that an NSF proposal developed by the Science Museum of Minnesota (SMM), with Gary Woodard as a co-PI, was awarded \$2 million of the \$3 million requested to create a traveling science exhibit. SMM is scrambling to find corporate sponsors to cover the \$1 million balance, but is optimistic about the endeavor. **Water Planet** is to be a traveling exhibition debuting in 2007 that will examine the role of water in large-scale planetary processes, in an effort to educate public audiences about the new field of earth-system science. SAHRA will develop portions of the exhibit that look at semi-arid hydrology and groundwater.



### *Watershed Visualizations*

Jim Washburne reports that a proposal to NSF's GeoEd program, authored primarily by **Liz Hancock** and former SAHRA graduate student **Anne Kramer Huth**, has been recommended for funding. The project targets middle and high school teachers and classrooms and focuses on visualizations of watershed data for several Lower Colorado Basin watersheds (the Salt/Verde, Bill Williams, Santa Cruz, and San Pedro). It will complement the WATER kits project funded two years ago with TRIF support from the state of Arizona. The GeoEd proposal requested \$290,000 over two years.

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summer visitors from Arizona and New Mexico beginning in May 2006.

**Kevin Dressler** finished his Ph.D. in hydrology and water resources at the UA this spring. His dissertation topic: "Estimating the spatial distribution of snow water equivalent and simulated runoff modeling in headwater basins of the semi-arid Southwest." Congratulations to Kevin, who is continuing in his current position as a faculty research hydrologist at Penn State University.

Belated felicitaciones to **Aleix Serrat**, who finished his MS in Hydrology and Water Resources at the UA in December

2004, with a thesis entitled "An alternative approach to the operation of multinational reservoir systems: application to the Amistad and Falcon reservoir system (Lower Rio Grande/Rio Bravo)." He is continuing on at UA for his Ph.D. Juan Valdes is Aleix's primary advisor.

**Gustavo Goncalves de Goncalves** received his Ph.D. in hydrology and water resources from the UA in May and will continue his stellar career with a National Research Council Fellowship at NASA's Goddard Space Flight Center. Gustavo's dissertation topic was "Land surface-atmosphere interactions in regional modeling over South America," and his primary advisor was Jim Shuttleworth.

**Aloha, yes; Shalom, yes; but Goodbye, never**

**Elizabeth Hancock**, of Education macrotheme fame, left the employ of SAHRA on May 24 for greener, less arid pastures in Tuscaloosa, Alabama. Liz lent her incredible organizational and educational talents to SAHRA as a postdoc for three years, beginning in June 2002, and will be sorely missed.

She will, however, serve as a consultant on the new GeoEd grant. Best of luck, success, and happiness to her and her family.

## ADMINISTRATIVE NOTES

### *Who Thought the Strategic Plan Could Get Any Better?*

It's hard to describe the staggering beauty of the intricate timelines and flow diagrams that SAHRA Staff Scientist James Hogan took such pains to create to supplement SAHRA's new Strategic Plan. See them and be amazed at [www.sahra.arizona.edu/publications/StrategicPlan/SAHRA\\_SP\\_5-31-2005.pdf](http://www.sahra.arizona.edu/publications/StrategicPlan/SAHRA_SP_5-31-2005.pdf) and discover where your SAHRA project fits into the master plan. The Strategic Plan is actually the result of a massive collaborative effort by SAHRA's administration, macro-theme leaders, PIs, and myriad little people. All NSF STCs have been charged with creating strategic plans for their centers, and SAHRA's plan has quickly become the standard of excellence, thanks largely to the steely determination and keen insights of Jim Shuttleworth and James Hogan.

### *Water News Watch Now Even More Global*

Global Water News Watch has a new map interface that allows you to click on a map of the world and search for articles on the region by country, topic, and/or time frame. Arabic language sources are now being covered by **Aomar Boum**, a Ph.D. student from Morocco in anthropology at the UA. News coverage has expanded to Syria, Kuwait, and Bahrain and improved across North Africa and the Middle East.

## ANNOUNCEMENTS

### *Baby News*

Graduate student Sharon Einloth Desilets and her husband, recent UA hydrology Ph.D. Darin Desilets, are the proud parents of **Laurel Beth Desilets**, born in Tucson June 10th at the inconvenient hour of 2 am. Mom, dad, and baby are doing great.



## R & R

### *Busman's Holiday in The Orient*

**Tasha Lewis**, graduate student in the UA's Master of Engineering program, and lately of Science Olympiad fame (see feature), is spending the summer in a fellowship program at the Nanjing Hydraulic Research Institute in the People's Republic of China. Tasha is currently working on a research project on the Hai River watershed in northeastern China, an area most similar to the arid Southwest, and one of the few places in China where groundwater is utilized. She reports that

she finds both Chinese cuisine and China's water resources very interesting, with the latter mostly focusing on flood prediction, dam operation, and hydropower. The institute's hydrologists frequently utilize U.S. government websites (such as USGS, EPA, and ACE) to guide them in developing China's water resources, she reports. Coincidentally, the president, two deans, and three directors of the institute will be visiting SAHRA in a one-day stop at the UA on August 18.