

BESS News

Student Opportunities

BESS Research

Employment Opportunities

From the Department Head

Students and faculty in the department continued their success this year in the annual EURēCA: Exhibition of Undergraduate Research and Creative Achievement competition. BESS had five entries in the recent competition, with submissions in both the College of Agricultural Sciences and Natural Resources (CASNR) and the College of Engineering (COE) categories. In the CASNR competition Tyler Pannell received an award for his research titled “A Chemical and Material Evaluation of Biodegradable Agricultural Mulch Materials” where he was one of 19 CASNR entries, and one of 3 receiving awards. There were 13 entries from the College of Engineering, of which five were selected for awards. The team of James Bevington, Joseph Freeman, Benjamin Hoptroff, Clayton Parsons was identified as an award winner for their project “Blue Crab Nursery for Stock Enhancement”.

The 5 entries from BESS and their faculty mentors are as follows:

College of Agricultural Sciences and Natural Resources

Chanci King “Snorkel Camera Underwater Video Mapping System (SCUVMS) for Georeferenced Fish Population Analysis” Faculty mentor, Dr. Paul Ayers

Charles “Tyler” Pannell “A Chemical and Material Evaluation of Biodegradable Agricultural Mulch Materials” Faculty mentor. Dr. Douglas G. Hayes

College of Engineering

James Bevington, Joseph Freeman, Benjamin Hoptroff, Clayton Parsons “Blue Crab Nursery for Stock Enhancement” Faculty mentor, Dr. Paul Ayers

Haden Campbell, Joe Selby “Storm Water Management Roof” Faculty mentor Dr. John Tyner

Katie Peay, Brett Denton, Colby Summers, Blake Vaughn “Continuous Treatment and Recovery of Blood Contaminated Slaughterhouse Wastewater by Heat Addition” faculty mentor, Dr. John Buchanan

Congratulations to all these researchers for their fine work!

Eric

In a Research Lab, the Future of Blue Crab's Population Probed

The blue crab is disappearing from our oceans along America's coasts, down in sharp numbers especially on our Atlantic and Gulf shores. But you'll find a few growing in a surprising place —the land-locked "crab lab" in UT's Ag Engineering building.

Concerned about the species' decline, Senior Jay Bevington and classmates designed a system in the lab to raise crabs and perhaps one day replenish the population. In captivity, a female can lay her eggs in peace without the threat of predators disturbing them. "In the wild, typically one in a million eggs makes it from the egg stage to the adult stage. So what we're doing is trying to increase their odds," Bevington says.

The students built what's called a refugium tank that houses microbes and grows sea lettuce, which removes compounds from the water that can be harmful to crabs. They also designed a filtration system that allows for the optimal blend of salt and fresh water.

"They basically started from scratch, designing the tank system, the pump system, and then learned a lot about the biology of the crab and water quality issues and feeding. So it was a project that started small and then grew," says Dr. Paul Ayers of UT AgResearch, who served as the students' advisor on the project.



The idea is that someday crabs can be grown in artificial surroundings, raised to a certain size and then set free in the ocean. It could even happen in some Tennessee aquaculture operations.

"These crabs have been able to produce in low salinity areas, and so there's some opportunity, I think, in some of the local farm ponds," says Ayers.

"Potentially this could be an aquaculture system where all of a sudden we're not fishing out in the Chesapeake Bay at all anymore. We're fishing in farm ponds, and we have another source of blue crab," says Bevington.

Bevington and fellow Biosystems Engineering students Joseph Freeman, Benjamin Hoptruff and Clayton Parsons received a research award for their design project from UT's campus-wide Exhibition of Undergraduate Research and Creative Achievement (EURĒKA).

This is why college students choose a major and future vocation: to do something important. As for the crabs in the lab, this new kind of home could mean a better future for the entire species. Professor Ayers and his students plan to continue, and build upon, the crab lab research project. — *Chuck Denney*

CONGRATULATIONS TO THE FOLLOWING

Grant Awards for March 2011

Dr. Neal Eash and Dr. Forbes Walker

Funding agency - Virginia Tech

Amount - \$235,847.00

Dr. Alvin Womac

Funding Agency - Genera Energy LLC

Amount - \$685,104.00

Dr. Federico Harte and Dr. John Wilkerson

Funding Agency - Bush Brothers and Company

Amount - \$105,743.00

Dr. Forbes Walker and Dr. Shawn Hawkins

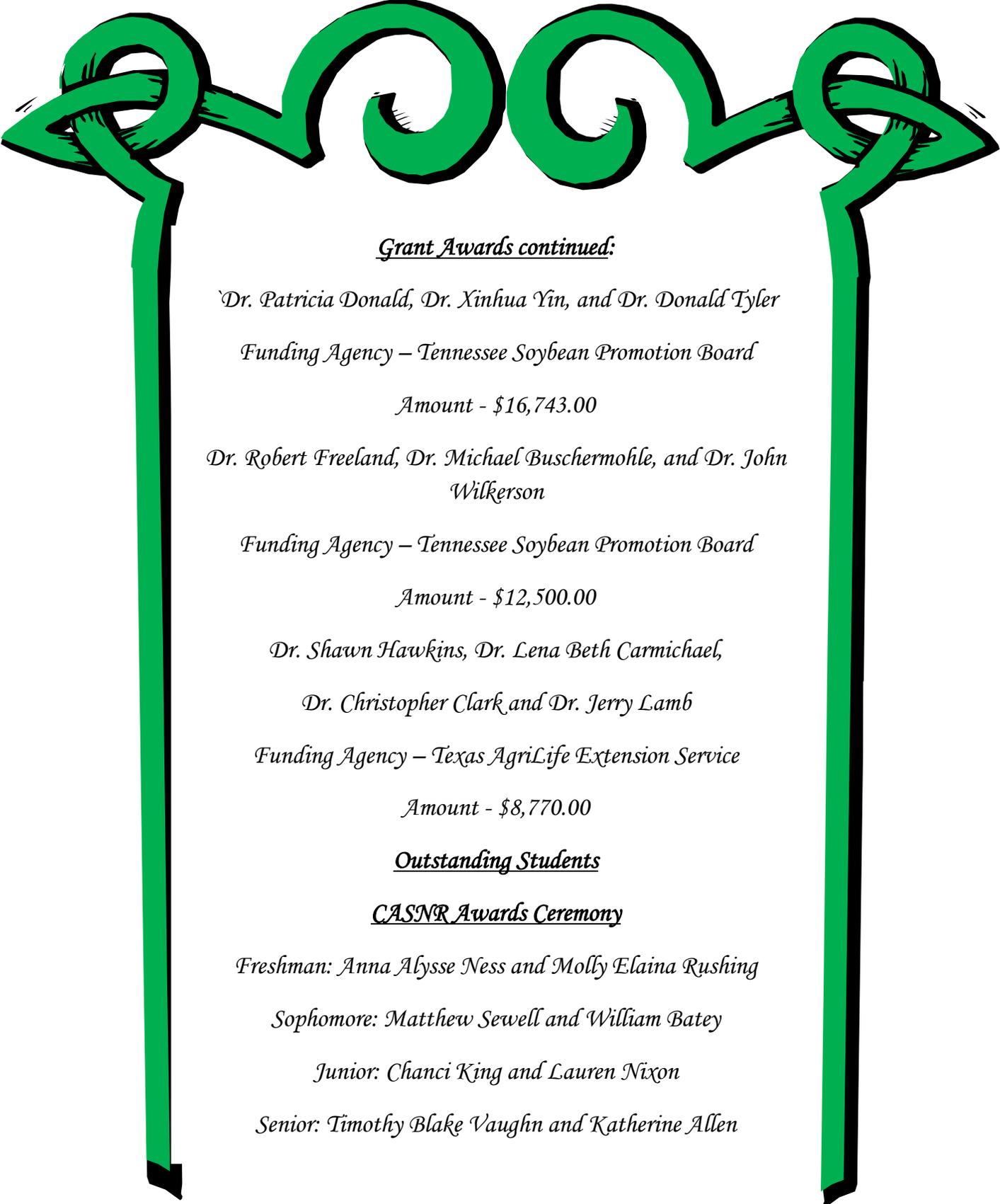
Funding Agency - Mannco Fertilizer, Inc.

Amount - \$84,048.00

Dr. Shawn Hawkins

Funding Agency - Texas AgriLife Extension Service

Amount - \$20,000.00



Grant Awards continued:

Dr. Patricia Donald, Dr. Xinhua Yin, and Dr. Donald Tyler

Funding Agency – Tennessee Soybean Promotion Board

Amount - \$16,743.00

Dr. Robert Freeland, Dr. Michael Buschermohle, and Dr. John Wilkerson

Funding Agency – Tennessee Soybean Promotion Board

Amount - \$12,500.00

Dr. Shawn Hawkins, Dr. Lena Beth Carmichael,

Dr. Christopher Clark and Dr. Jerry Lamb

Funding Agency – Texas AgriLife Extension Service

Amount - \$8,770.00

Outstanding Students

CASNR Awards Ceremony

Freshman: Anna Alysse Ness and Molly Elaina Rushing

Sophomore: Matthew Sewell and William Batey

Junior: Chanci King and Lauren Nixon

Senior: Timothy Blake Vaughn and Katherine Allen

Employment

**DEPARTMENT OF BIOLOGICAL AND AGRICULTURAL ENGINEERING
KANSAS STATE UNIVERSITY, MANHATTAN, KANSAS
ASSISTANT PROFESSOR – BIOPROCESS ENGINEERING**

Title: Assistant Professor: Biological and Agricultural Engineering
Full-time, nine-month, 50% research / 50% teaching tenure track position

Position Responsibilities: Develop and conduct a nationally recognized academic and research program in one or more of the following core areas:

- catalytic conversion of biomass to fuels and products,
- value-added utilization of by-products from biofuel production processes
- production and/or separation of high value chemicals and products from renewable resources

Acceptable candidate is expected to develop an academic program of excellence in core area of responsibility that is nationally and internationally recognized. Development of the program includes the discovery and dissemination of knowledge through the peer reviewed process as well as the ability to develop and provide educational opportunities to undergraduate and graduate students. The expectation includes the individual serving as principal investigator of funded projects as well as interdisciplinary collaboration with on campus and off campus federally funded initiatives including NIH, USDA/NIFA, EPA or others as appropriate. Responsibilities will include developing a successful research program including guiding and training graduate students and developing collaborative partnerships with private industry. Provide leadership to the profession through national and international professional society participation, and to collaborate with faculty in the BAE department and other related units in the university.

Qualifications: Earned doctorate in Biological Engineering, Agricultural Engineering, Biosystems Engineering, Chemical Engineering or a closely related engineering discipline is required. Eligibility to be licensed as a professional engineer is desired. The successful candidate should have expertise in the bio-based product engineering area, a demonstrated record of scholarship, evidence of potential to secure extramural funding, and be able to develop a high quality education and outreach program. Excellent speaking and writing skills, an ability to communicate effectively, and an ability and desire to work collaboratively in an interdisciplinary environment are expected.

Salary: Salary commensurate with qualifications and experiences.

Starting date: September 1, 2011

Application: Screening of applications will begin May 15, 2011 and continue until a suitable candidate is found. Submit a letter of application including a statement of research and teaching philosophy, resume, transcripts, and complete contact information for at least three professional references to:

Dr. Joseph P. Harner, Professor and Head
Department of Biological and Agricultural Engineering
Kansas State University
129 Seaton Hall
Manhattan, KS 66506-2906
Phone: 785-532-5580
Fax: 785-532-5825
Email: jharner@k-state.edu

Graduate Scholarships: Water Engineering Research (WATER) Scholars Program – TEXAS A & M UNIVERSITY; Departments of Civil and Biological & Agricultural Engineering

r-autenrieth@tamu.edu

The WATER Scholars program at Texas A&M University provides scholarships to *engineering graduate students* pursuing a *master's degree* and who have an interest in water-related research. Scholarships are awarded in Civil Engineering (emphases in environmental engineering, water resources engineering, coastal engineering) and Biological and Agricultural Engineering (emphases in engineering hydrology, water quality, water management, water cycle) disciplines. The participating departments in this project are the Zachry Department of Civil Engineering (CVEN) and the Biological and Agricultural Engineering Department (BAEN). Funding is provided by the National Science Foundation. The first cohort of WATER Scholars will begin in Fall 2010.

Student Eligibility

- Meet departmental requirements for admission into graduate program
- U.S. citizens and permanent residents
- Demonstrate financial need by completing the FAFSA available at <http://www.fafsa.ed.gov>
- Submit WATER Scholar application packet (includes past academic performance, GRE scores, personal statement, any research experiences, two references). Application form provided on WATER Scholars website (<http://waterscholars.tamu.edu>)
- Underrepresented students are encouraged to apply

WATER Scholarships

- Award \$10,000 scholarships to at least five new students each year
- Each WATER Scholar is allowed a maximum of two annual WATER scholarships. (Scholars may apply for funding opportunities at TAMU in addition to the WATER Scholars program; BAEN students who participate in the Hispanic Leaders in Agriculture and the Environment program will be eligible to receive \$2,500 per year for research.)
- WATER Scholars will join a cohort, but be mentored individually by a CVEN or BAEN faculty member
- WATER Scholars are expected to participate in some mandatory courses and events.

Select Activities

- WATER Scholar service project(s)
- Industrial field trips
- Social events
- Industry internship opportunities
- WATER seminars
- Professional development workshops
- Conference participation

Project Team: Robin Autenrieth (PI, r-autenrieth@tamu.edu),
B. Mohanty (co-PI), C. Munster (co-PI), R. Wurbs (co-PI), J. Pettibon (co-PI)

<http://waterscholars.tamu.edu>

Student Opportunity

Scholarships: The NPFDA (National Poultry & Food Distributors Association) Scholarship Foundation due May 31, 2011

Each student selected will receive a \$1,500.00 - \$2000.00 scholarship from NPFDA.

To qualify, each applicant must:

- Be a college junior or senior the upcoming (award) year at a U.S. institution
- Be enrolled as a full time student
- Be pursuing a Poultry or related Agricultural, Ag Business degree – Agricultural Business, Poultry Science, Food science, Animal Science, Pre Vet, Food Marketing, Ag. Econ., etc. (Unrelated degrees such as English or Nursing will not be considered).
- Provide his or her current official transcript - sealed
- Provide a letter of recommendation from his or her Dean, Department Head and/or advisor
- Complete the enclosed application
- Provide a one-page letter describing his or her goals and aspirations

All applications and documents must be received by the NPFDA office no later than May 31, 2011.

Please send to:

NPFDA SCHOLARSHIP FOUNDATION, INC.

2014 Osborne Rd

St. Marys, GA 31558

Phone 770-535-9901, Fax 770-535-7385

Selection criteria for the scholarship will include, but not be limited to the following:

1. Students must be in their **Junior** or **Senior** (college) year when they *receive* the scholarship – therefore may be a sophomore when applying.
2. Consideration of academic excellence.
3. Applicants must be enrolled as a *full time* student in a U.S. University/College.
4. Past and current involvement in poultry, ag and food related activities.
5. Professional objectives of the student.

Scholarship checks will be forwarded to the Dean/Department Head during the summer and are to be disbursed to the student in *equal installments each term* after verification of the student's enrollment. Any unused funds are to be returned to The NPFDA Scholarship Foundation, Inc.

Student News

The Academic Job Talk

Sources:

The Academic Job Search, Rice University Career Services Center.

Jonathan A. Dantzig (2001). Landing an Academic Job: The Process and the Pitfalls. Department of Mechanical and Industrial Engineering, University of Illinois at Urbana-Champaign, February 22, 2001.

Perfecting The Job Talk by Professor John Eadie, Department of Wildlife, Fish & Conservation Biology, University of California, Davis, <http://iccweb.ucdavis.edu/graduates/PerfectJobTalk.htm>.

THE “**JOB TALK**” is perhaps the single most important thing you’ll do during an academic interview. On the basis of your presentation, you’ll be evaluated as a scholar, teacher and potential colleague. A dynamic talk is likely to result in a job offer, while a poorly organized, flat or uninspired presentation will almost certainly eliminate you from consideration.

Here are some key points to consider as you prepare for an academic job talk.

Before the Talk

Different institutions and disciplines have different expectations about the length and format of the job talk. Make sure you know what is expected of you. Attend job talks in your department. Listen to how faculty members evaluate the talk, and then figure out what works and what doesn’t. Use this information to guide your preparation.

Find out who will be attending the job talk.

Knowing your audience will help you decide how specific or technical you should make the presentation. For example, if the audience is primarily undergraduates, you’ll want to spend more time explaining the significance of your work. Also, ask about the format of the talk so you’ll know how much time you’ll have.

Your research talk will probably be related to your dissertation, but remember, this isn’t a dissertation defense. Dr. Jonathan A. Dantzig (2001), professor of mechanical and industrial engineering at the University of Illinois at Urbana-Champaign, advises: “make sure that everyone who attends your seminar learns something.” He notes that a good job talk should answer the following questions:

- What problem have I worked on?
- Why would anyone work on this problem?
- What is significant about what I have done?
- How has my work made progress on the problem?

He offers this sample structure for a 45-minute research job talk:

 (See table next page) 

Content	Time	Target Audience	Detail Level / Purpose
Background	15	Everyone Present	Your parents would understand it
Your Approach	10	People in related fields	Show you know the field
Your results	10	People who work in your field	Show that you are the world expert on something
Summary	10	Everyone in the room	Relate your results to the big picture

Prepare an organized presentation. Good presentations have a beginning, middle and an end, often referred to as the “3 Ts”:

**Tell ‘em what you’re going to tell ‘em;
Tell ‘em; and
Tell ‘em what you told ‘em.**

If you choose to use a Power Point presentation, don’t use complete sentences on your slides, because you’ll invariably end up turning your back to the audience and reading the slides verbatim. Instead, follow these general rules:

- Two- or three-word phrases for each point; avoid long sentences
- Generally one topic per slide
- Title for each slide
- Generally no more than 6 words a line
- Generally no more than 6 lines a slide
- Larger font to indicate more important information
- Font size generally ranging from 18 to 48 point
- Bullets to highlight your text items
- Don’t overwhelm your audience with fancy fonts, shaded backgrounds or custom effects (for example, words or phrases that fade or dissolve or graphics that fly in or out). These “enhancements” are sure to distract the listener from your presentation.

If your material is too detailed to put on a slide, consider using handouts instead. But be sure the information is not too complex and that any tables, charts or graphs are clearly labeled. Finally, make sure you bring with you enough copies of the handouts with the pages stapled together.

Now that you’ve prepared your presentation, practice it.

Practice in front of your adviser, some fellow graduate students, and at least one person who knows nothing about your subject matter. Perhaps invite some undergraduates to the mock talk. Get their comments, and then practice it again. Make sure your seminar is at an appropriate level for the various audience members (e.g., faculty, postdoc fellows, graduate students, undergraduate students). Get as much feedback as you can.

Practice it again. Time yourself. If you’re using slides, figure out which slide corresponds to the halfway point of your presentation. That way, you can tell whether you’re going too slowly or too fast – while you still have time to do something about it. If you’re running short of time during the talk, it’s better to cut a pre-planned optional

section in the middle than to be prevented from giving the conclusion. And don't try to include every minor detail. Keep the big picture in mind.

During the Talk

Remember that an "extemporaneous" presentation – planned thoroughly in advance yet delivered in a spontaneous manner – will be far more convincing than a scripted one. In other words, don't read your presentation. Keep in mind the purpose of your talk. You are not delivering a research paper.

Ask the audience to hold questions until the end except for brief questions of clarification. Otherwise you're likely to get interrupted and run out of time.

Start by providing an overview of the topics you'll be covering.

Be sure to explain near the beginning why a non-specialist might be interested in your work. Near the end, be sure to explain why your substantive conclusions are of importance beyond the immediate topic of the work.

Maintain eye contact with the audience.

Choose people at various locations in the room and systematically sweep your eyes around to be sure you engage the entire audience. Avoid standing right in front of the projector. You'll end up obstructing the view of people near the front, and you'll also be partially blinded by staring into the projector's light. If you use a laser pointer, slowly circle around the item you want the audience to attend to, instead of trying to point at it directly. If you point and you're nervous, your shaky hand will be greatly exaggerated by the laser beam.

Don't stand in one spot during the entire presentation. Make use of both horizontal and vertical space when speaking. When asking or answering questions or emphasizing a point, move toward the audience. Create presence. Be unpredictable in your physical movement, but don't pace back and forth.

After the Talk

The question-and-answer session following your talk can be as important as the talk itself. The best way to prepare for this portion of the job talk is to anticipate the kinds of questions that might be asked, then practice responding to them. Often the biggest challenge is to understand what the questioner is asking.

Pause before you reply. If you're not sure what the question is, ask for clarification by restating the question in your own words and asking if that is what the questioner meant. It's okay to take notes on the remarks from the audience, especially on an interesting point that you hadn't considered. And it's not a crime to say, "I don't know. That's a great question and it would make a great follow-up research project." (Just don't answer every question like that.) Finally, never, ever argue or become defensive with the questioner.

In the end, remember that the job talk is not another defense of your work. You don't have to prove your competence. Instead, consider it a demonstration of your ability to contribute and collaborate as a potential colleague and as a clear communicator. That's what your audience is most interested in knowing.

* * * * *

NOTE: Anyone can SUBSCRIBE to the Tomorrows-Professor Mailing List by going to:
<https://mailman.stanford.edu/mailman/listinfo/tomorrows-professor>

Student Opportunity

**NORTH CAROLINA A & T STATE UNIVERSITY
POSTDOCTORAL SCHOLAR
ADVANCED BIOMASS GASIFIER DESIGN AND OPERATION**

The Postdoctoral Scholar position is being established in the Department of Natural Resources & Environmental Design (School of Agriculture & Environmental Sciences) and the Department of Chemical and Bioengineering (College of Engineering). This is an EPA Non-faculty Research position. The Postdoctoral Scholar will work under the direct supervision of a Faculty Mentor, Dr. Lijun Wang.

The Postdoctoral Scholar will work independently to conduct research on:

- analysis of biomass gasification chemistry,
- syngas cleaning technology,
- computational fluid dynamics (CFD) modeling of fluidized bed gasification,
- design and operation of fluidized bed gasifier, and
- life cycle assessment of biomass gasification.

The selected candidate will be appointed to a one-year appointment with the possibility of renewal for up to two additional one-year terms. Responsibilities of the position include but are not limited to:

- writing research proposals to attract extramural funding,
- supervising undergraduate and graduate students to conduct research in support of the Biological Engineering Program, and
- demonstrate research productivity through publication in relevant refereed journals and through dissemination of results at professional meetings.

Qualifications:

The selected Postdoctoral Scholar must have been awarded a Ph.D. or equivalent doctorate within the last eight years in Agricultural Engineering, Biological Engineering, Chemical Engineering, Mechanical Engineering or related field. Prior experience with FUEENT software and biomass gasification is desired.

For information on application requirements please refer to the followings:

<http://careerengineer.aidche.org/c/job.cfm?t735=153&vnet=0&t730=&max=10&site%5Fid=1932&t737=684&jb=7579286>

**Abolghasem Shahbazi, Ph. D. and Director
Biological Engineering Program
Room 107 Sockwell Hall
NC A&T State University
Greensboro, NC 27411
Phone: 336-334-7787; Fax: 336-334-7270;
ash@ncat.edu**

Employment

Postdoctoral Research Associate (Geospatial Hydrology) position Vernon, TX

The **Texas Agrilife Research** (Texas A & M University System) is seeking applications for a Postdoctoral Research Associate (Geospatial Hydrology) position at the Texas Agrilife Research and Extension Center at Vernon, TX. The candidate will assist the project leader (Assistant Professor/Geospatial Hydrologist) with the development and implementation of research projects related to sustainable water resources management and water quality on crop, range and grazing lands and pasture production systems under semi-arid environment. Research is expected to address geospatial hydrologic processes, groundwater-surface water interactions, water resources and water quality management, hydrologic impacts of land use and climate change, rangeland restoration, hydrologic/groundwater/water quality modeling and watershed assessments at temporal and spatial scales in dryland/limited-irrigation cropping systems and extensive/intensive livestock production systems.

The individual is expected to have strong computer modeling skills, proficiency in the use of GIS and Remote sensing software, and the ability to train and supervise graduate students and technicians in the planning and conduct of research and data analysis. The selected candidate is expected to have a Ph.D. in Agricultural/Civil/ Environmental Engineering, Agronomy, Soil Science, Ecosystem Science & Management or closely related field at the time of appointment. This is a one-year, full-time, benefits-eligible position with a possibility for another year extension contingent upon performance and funding. Interested applicants should electronically submit a letter of research interests, CV, transcripts and the contact information of at least three references at <https://greatjobs.tamu.edu> (NOV number 05313). **Texas Agrilife Research** is an equal opportunity employer. Review of applications will begin soon and will continue until appropriate candidate is found.cd

Student Opportunity

Entry-level opportunity for an Assistant Food Technologist – OPUS International

Our client is the world's leading producer of cereal and a leading producer of convenience foods. They have an opening for an Assistant Food Technologist in the Midwest and are willing to consider a May graduate who has had an internship.

The Assistant Food Technologist manages small to medium size food process technology projects and programs to improve productivity, product quality and capacity in Operations. The individual supports medium to large size projects and has a major impact on the Corporation through knowledge and application of a technical discipline.

Principal Responsibilities:

Develops, organizes and supports breakfast cereal and cereal related projects while increasing the incumbent's level of understanding of project executions, processes, and methods, as well as giving general direction to assigned cross-functional teams in accomplishing projects on scientific and technical developments.

Keeps current with the latest developments and technology through investigation, training, and communication within that discipline.

Writes and issues plant test/startup reports.

Confirms production formulas and issues SAP production formulas to the plant.

Supports a variety of scientific tests on new product ideas, ingredients, formulas, and processing using the SAP Recipe Management System for ingredient specification and product formulation development.

Supports the testing of ingredients and processes using Design of Experiments.

Position Requirements Minimum:

Bachelor's Degree in Engineering (e.g., Biosystems, Chemical, Mechanical), Food Science, or science-related field.

No supervisory / managerial experience is required. Company will consider May graduates who have had an internship.

Requires verbal and written communication skills to convey information that may be somewhat complex to others who may have limited knowledge of the subject in question. Role may require basic negotiation and influence, cooperation, tact and diplomacy, etc.

Travel Required: 50-75%.

Company is an Equal Opportunity Employer who strives to provide an inclusive work environment that involves everyone and embraces the diverse talent of its people.

All applicants must be authorized to work in the United States now and in the future without requiring sponsorship.

For additional information, please contact Moira McGrath, (954)428-3888
or moira@foodscience.com; www.foodscience.com

Student Opportunity

OPUS International has another entry-level job opportunity for an Assistant Product Development Scientist.

Job #538-MH811

Job Title: Assistant Product Development Scientist

Location: Midwest

[Click here to apply](#) (mobile compatible)

Our client is the world's leading producer of cereal and a leading producer of convenience foods. They have an exciting opportunity for an Assistant Product Development Scientist supporting their Research, Quality, and Technology department in the Midwest.

The Assistant Product Development Scientist will manage and lead projects to develop and introduce new ready-to-eat cereal products and improve existing product quality, productivity, and capacity. The Assistant Scientist will be involved in a broad spectrum of activities between idea creation and commercialization, including bench-top product formulation, process development, and plant start-ups.

Responsibilities include:

- Develops, organizes, manages, and coordinates product development projects.
- Develops prototypes for consumer testing that meet the product design and financial objectives.
- Supports the technical team and manufacturing personnel in executing the process scale-up and production start-up activities.
- Works with the technical team to refine/optimize the process, reduce COGS, and resolve quality issues.
- Provides innovative, timely, and cost-effective improvements, concepts, developments, or scientific insight and understanding with respect to new or existing products or processes.
- Applies understanding of research, technology trends, and consumer needs to advance projects.
- Reviews and interprets market research testing proposals and data and provides recommendations for food product design.

Position Requirements:

B.S. degree in Food Science or Engineering with a minimum of 1 year of experience or an M.S. degree in Food Science or related discipline. Company will consider May graduates who have had an internship.

Experience in ready-to-eat cereal highly desirable but not mandatory.

Travel to, and work in, manufacturing or test facilities is typically required 40 percent of the time. Projects frequently require working beyond the normal workday hours, shift work, and on weekends.

For additional information, please contact Moira McGrath, (954)438-3888
or moira@foodscience.com www.foodscience.com

Research/Grant Opportunities

[Apply for Research & Education Grants](#)

The Southern region of the Sustainable Agriculture Research and Education (SARE) program has released its Calls for Proposals for the 2012 Research & Education Grants program.

We are accepting pre-proposals for projects that focus on sustainable agriculture based on a systems approach to research that aims to understand how complex systems function as a whole, often beginning with a conceptual model.

Read more about [Calls for Proposals](#) guidelines. The deadline for submitting pre-proposals is June 1. If selected, applicants will be invited to submit a full proposal in August. Grant winners are announced in February.

The objective of the SARE program is to enable farmers and ranchers to move profitably toward production systems compatible with the goal of sustainable agriculture, including promoting good land stewardship, protecting the health and safety of people and animals, enhancing quality of life, and strengthening rural communities.

Learn more about [Southern SARE](#) and our sustainable ag efforts.



NASA Applied Sciences Program

Earth Science Applications: Water Resources - NNH11ZDA001N-WATER

The Applied Sciences Program supports efforts to discover and demonstrate innovative and practical uses of NASA Earth science data, knowledge, and technology. The Program funds applied science research and applications projects to enable near-term uses of Earth science, transition applied knowledge to public and private organizations, and integrate Earth science and satellite observations in organizations' decision making and services. The projects are carried out in partnership with end user organizations. The Program thus serves as a bridge between the data and knowledge generated by NASA Earth science and the information needs and decision making of government agencies, companies, regional associations, international organizations, not-for-profit organizations, and others.

The NASA Applied Sciences' Water Resources program promotes the routine integration of NASA Earth science into water resource management for sustainable use of water. The Water Resources Applications area primarily focuses on drought, stream flow and flood forecasting, water supply and irrigation, water quality, and climate impacts on water resources.

The objective of this solicitation is to select applied research and applications projects in the area of water resources. Successful projects will advance organizations' use and application of Earth science observations and models in decision making associated with water resources, especially drought-related topics and management. The projects can include all relevant NASA satellite mission observations and can include data products from non-NASA satellites, including foreign satellites and commercial products, if used in conjunction with some NASA capabilities. Projects are encouraged to include modeling capabilities and predictions, data fusion and interoperability techniques, visualizations, or other Earth science products and capabilities to complement use of an array of Earth observations.

In this solicitation, the program will request applications of Earth science research results to improve decision-making activities on topics related to drought, drought policy and management decision making. The program will initially support one-year feasibility studies of possible applications. The program will then down-select and continue support for a subset of innovative, impactful applications for a three-year effort to develop and transition the application. The amendment to this program element will describe this feasibility-to-decision support project arrangement more fully.

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={B4C8C57F-B470-86A8-D366-3D1553300D2B}&path=open>

TENN TLC Creative Teaching Grants Program Call for Proposals – 2011

PURPOSE: The Tennessee Teaching and Learning Center is pleased to announce a Call for Proposals for the TENN TLC Creative Teaching Grants Program. The purpose of this program is to provide seed funding for teachers who want to creatively redesign their courses. Faculty can propose curricular and pedagogy changes for one or more courses. Criteria for successful proposals include attention to one or more of the following:

- Creative methods of engaging students in their learning process
- Creative design and implementation of new strategies for learning
- Creative use of mixed modes of learning within one class
- Creative use of labor in the learning process (e.g., team teaching, use of GAs, GTAs, honors undergraduates)
- Creative strategies for initiating change of thinking in undergraduates
- Creative strategies for critical and creative thinking applications
- Creative strategies for designing and implementing cross-disciplinary courses
- Creative course design including creative use of formative assessment of learning

DISTRIBUTION OF FUNDS: The funds provide support for the faculty member(s) and for the respective department(s). \$5000 per award will be provided. \$3500 will be awarded to the faculty member and may be used for costs related to the project, summer salary stipends, a GA, or some combination. \$1500 will be provided to the sponsoring department. If

salary stipend is selected, 50% of the stipend and funds to the department will be paid upon completion of planning sessions, and the final 50% will be released upon submission of a final report to the TENN TLC once the project is completed.

PROPOSAL REQUIREMENTS: Please provide the following:

- A 2-3 page summary describing purpose, rationale, creative objectives, work plan, anticipated labor plan, and budget.
- A letter of support from the department head
- An updated CV

PROGRAM TIMELINE: Faculty accepted into the grant program will work on course project planning with the TENN TLC staff at select times during the summer and attend periodic team meetings with faculty during the year. Preparation time will most likely take summer and fall with implementation of the proposed changes in the spring or the following fall. Faculty will report on the results of the grant at the completion of their course, providing evidence of successful conclusion of the grant (evidence should include pertinent materials from the course, such as a redesigned syllabus, lesson plans, background research, etc.) During course delivery, faculty should collect student feedback and sample work.