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Horizons

The Newsletter of the
Office of Research Administration

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SPRING 2008

Recent Awards



José Argüello

In the Department of Chemistry, Professor **José Argüello** was recently awarded \$180,000 for Year 1 of a five year project from the National Science Foundation entitled "Structure and Function of Copper Transport ATPases". The total budget for this five year award is \$900,000. The goal of the project is to understand the fundamental biochemistry involved in transmembrane heavy metal transport by PIB-type ATPases. These are essential transporters required to maintain metal micronutrient homeostasis.

Professor **Pamela Weathers**, Biology and Biotechnology was recently awarded \$60,000 from Freeman Energy Corporation for a project entitled, "Proposal to Develop an Algal Bioreactor Using the Freeman Reactor System". Professor Weathers will be demonstrating the efficacy of the Howard Freeman Reactor (HFR) by testing the HFR2 to determine how *Chlorella* survives the conditions inherent in this system.



Pamela Weathers



Cosme Furlong

In the Department of Mechanical Engineering, Professor **Cosme Furlong** was recently awarded \$70,000 from Insight Technology Incorporated for a project entitled, "Characterization of a MEMS Micromirror Device with Digital Holography". In this work, the PI and his research collaborators will apply their experience in high-performance optical metrology systems to characterize a specific MEMS micromirror device of interest to Insight Technologies.

SPOTLIGHT ON AWARDS

In the Department of Electrical and Computer Engineering, Professor **Wenjing Lou** was recently awarded a prestigious CAREER award from the National Science Foundation, for a five-year research project, entitled



Wenjing Lou

"Opportunistic Routing in Multihop and Multirate Wireless Networks." The total project proposal is for \$450,000 and the first year of funding was awarded for \$89,999. The work of this project will advance the theoretical frontier in characterizing fundamental limits of Opportunistic Routing technique in multihop wireless networks.

In the Bioengineering Institute, Professors **Grant McGimpsey**, Chemistry and Biochemistry, **Peder Pedersen**, Electrical and Computer Engineering, **Yitzhak Mendelson**, Biomedical Engineering, and **R. James Duckworth**, Electrical and Computer Engineering, received continuation funding of \$848,000 from the U.S. Army for their collaborative project entitled, "Real-Time Troop Physiological Status Monitoring Systems Using A Common Wireless Network". This research continues the effort begun in 2002 at developing new physiological sensor and medical imaging technologies to facilitate remote triage and improved casualty status assessment.



Grant McGimpsey



Kaveh Pahlavan

Professor **Kaveh Pahlavan**, Electrical and Computer Engineering, received a recent award of \$42,936 from Skyhook Wireless Inc. for a project entitled, "Performance Evaluation of Cellular Localization Techniques." Phase 1 of this project is to design a comprehensive testbed for comparative performance evaluation of RSS based cellular and WiFi localization techniques.

RESEARCH UPDATE

Allowable Costs on Federal Awards

Not so long ago, at another University, I was in the process of reviewing a travel reimbursement request on a federal grant from a prominent PI.

Since this PI traveled to far away places to do his research, many of the receipts were in another language—Spanish, in this case. It was at this moment that my 3 years of Spanish instruction in high school paid off. I recognized the word “cerveza,” which means “beer,” in Spanish. Aha! I called the PI, and explained that federal regulations prohibit us from charging alcohol on a federally sponsored project. He grumbled, but understood. (End of anecdote.)

Some additional “offbeat” examples of research costs that others in the Research Administration community have passed on:

- * A coffee pot as a “constant temperature water bath.”
- * Footballs and basketballs for a pig research project.
- * Fake mustaches for bird research. (The PI needed to use clever disguises to “trap” birds under investigation.)

Fortunately, for Research Administrators and Principal Investigators everywhere, most costs fall well within the realm of what’s “allowable” by the federal government. Whether preparing a proposal budget, or spending on federally funded



grants, Universities are guided by the government’s Office of Management and Budget (OMB) Circular A-21, entitled “Cost-Principles for Institutions of Higher Education.” This document spells out specifically what costs are, and are not allowed to be charged to a federal grant. Each federal agency, in turn, has its own particular set of guidelines which implement the rules and regulations that are set forth in A-21.

Question: How does one determine if a particular

cost is allowable on a federal award or proposal? Answer: By applying the following standards, and looking to OMB A-21 and agency guidelines for further assistance.

1. Allowable: Is the cost *allowable* under A-21, agency guidelines, and any resulting agreement?
2. Reasonable: The “Prudent Person Standard,” is applied, which asks if a particular cost is that which a “prudent person” would allow under similar circumstances.
3. Allocable: Is the cost appropriately allocated to one or more sponsored activity with a reasonable degree of accuracy.
4. Consistent: Costs must be treated the same in like circumstances, as either direct, or indirect costs.

Some examples of allowable costs: Personnel, Fringe Benefits, Project Related Travel, Necessary Equipment, Materials and Supplies, Publication Costs, Tuition.

Some examples of unallowable costs: Alcohol, Entertainment, General Administrative Costs/ Expenses, Proposal Preparation Costs, Patent Costs, Lobbying.

It should be noted that there are limited exceptions to the above. It’s also very important to note that the above “rules of allowability” apply even when costs are clearly listed in a proposal budget and budget justification, and not questioned during the review and award process.

Who knows? Maybe the PI using “footballs and basketballs” for a pig research project had a perfectly reasonable explanation? Rumor has it, that they were necessary for the pig’s “environmental happiness.” The point of all this, is that when questions of “allowability” arise, the federal government applies certain standards that we in the research community, are called upon to interpret and apply to the best of our ability. As always, our office will be happy to discuss these issues, and others, with you at any time.

To read all about it in OMB A-21 please click here: http://www.whitehouse.gov/omb/circulars/a021/a21_2004.html

(Submitted by Ted Russo, ORA Associate Director of Pre-Award) Services

Some examples of allowable costs: Personnel, Fringe Benefits, Project Related Travel, Necessary Equipment, Materials and Supplies, Publication Costs, Tuition.

Identifying Funding Opportunities

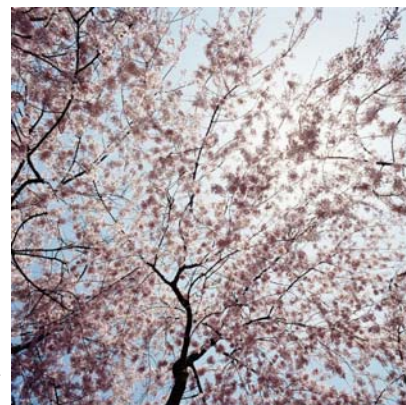
The Office of Research Administration offers several tools to assist you in identifying funding opportunities. Many are linked from the ORA web site, which can be found at <http://www.wpi.edu/Admin/Research/Funding>, including:

- Spin Access (Sponsored Programs Information Network) – An online database of funding information that is updated regularly with new sponsor announcements.
- FedBizOpps (Federal Business Opportunities) – The single government point-of-entry (GPE) for Federal government procurement opportunities over \$25,000.
- The Grant Advisor Plus – Offers on-line access for the entire institution and features many extras, including the newsletter in Acrobat PDF format, database searches, deadline listings with extensive hyperlinks, and much more, all in an easy-to-use web interface.
- GrantsNet – A one-stop resource to find funds for training in the sciences and undergraduate science education.
- Grants.Gov – A single portal to find and apply for Federal grant funding.

FUNDING OPPORTUNITIES

Additionally, the ORA web site provides links to a wide variety of Federal, private, Commonwealth of Massachusetts, and other web sites.

Many of these sites, such as the National Science Foundation (<http://www.nsf.gov>) and Grants.gov (<http://www.grants.gov>), also offer free email subscription services that allow you to receive email updates as new funding opportunities are announced.



If you have questions or would like assistance utilizing these services, please feel free to contact ORA at x5359.

(Submitted by Tammy Houle, ORA Proposal Services Administrator)

Funding Announcements - May 2008 through October 2008

Sponsor	Program	Title	Program No.	Deadline	URL
NSF	CCLI	Course, Curriculum, and Laboratory Improvement (CCLI)	08-546	May 20, 2008	http://www.nsf.gov/pubs/2008/nsf08546/nsf08546.pdf
NIH	R15	Academic Research Enhancement Award (AREA)		June 25, 2008	http://grants.nih.gov/grants/funding/area.htm
NSF	CAREER	Faculty Early Career Development (CAREER) Program Includes the description of the NSF component of the Presidential Early Career Awards for Scientists and Engineers (PECASE)	08-557	July 22-24, 2008	http://www.nsf.gov/pubs/2008/nsf08557/nsf08557.pdf
AFOSR	YIP	Young Investigator Program		July 22, 2008	http://www.wpaafb.af.mil/shared/media/document/AFD-080403-036.pdf
NSF	CDI	Cyber-Enabled Discovery and Innovation (CDI)	07-603	September 30, 2008 - Letter of Intent, November 4, 2008 - Preliminary Proposal, February 27, 2009 - Full Proposal	http://www.nsf.gov/pubs/2007/nsf07603/nsf07603.pdf
NIH	R01	Research Grants		October 5, 2008 - New November 5, 2008 - Renewal, Resubmis-	http://grants.nih.gov/grants/guide/pa-files/PA-07-070.html

The IRB and Student Projects

Human subjects questions arise in all kinds of research settings and WPI's Institutional Review Board (IRB) is ready to assist you in finding answers.

You might wonder, "Does an assessment activity in my classroom require human subjects review?" "If an MQP involves observing students as they navigate a new game environment, does that need human subjects review?" "If my IQP group wants to interview other students about music downloading and file sharing, does that need human subjects review?" "If I'm using data from educational records, but no student names are attached, do I need human subjects review?"

Anytime you wonder about the use of human subjects or data collected from human subjects, please share your concerns with a member of the WPI IRB! Our job is not just about approving research, it's largely about educating faculty, staff and students about the proper conduct of research involving human subjects.

The difficult part about human subjects research is knowing how to apply the general principles and legalistic rules of IRB review to the work that you and your students wish to do.

The first rule is: *If you have any questions at all, it's best to ask the IRB.* Relying on your own judgment, could lead to problems later on, even when you think the risks are minimal.

NSF Broader Impacts Review Criterion

Again, the National Science Foundation (NSF) indicates that not enough grant applicants and peer reviewers are taking seriously (or even know about) a longstanding requirement requiring evaluation of the "broader impacts" of proposed programs. So in a recent "Dear Colleague" letter, the agency has reminded applicants and reviewers of the rule. The broader impacts criterion is intended to encourage principal investigators to pursue socially useful results, which could include recruiting members of minority groups as scientists or improving the public's understanding of science.

In 1997, as a means to demonstrate to Congress and the White House that it was utilizing federal tax dollars wisely and for more than just "ivory tower, fundamental research," the NSF simplified the agency's principal criteria for the merit-based review of grant applications to two areas: intellectual merit and broader impacts. Since then, many academic researchers have been perplexed and annoyed by the broader-impacts requirement, which is often referred to as "Criterion 2." Although the NSF has stressed that it gives equal weight to both criteria, some research have argued that intellectual merit should count for more. They have pointed out as well that socially useful applications of fundamental research can be difficult to predict and may take years to appear.

COMPLIANCE REPORT

Secondly, one must know the general principles of the ethical conduct of human subjects research. In this context, the IRB is concerned with any human subjects research to be conducted *on or off campus by a WPI employee or student*, and we're concerned with any research that *uses our students or employees as research subjects*, no matter where the PI is located.

Some researchers might think that IRB review only applies to federally sponsored research, but that view is mistaken. WPI is responsible to ensure that all human subjects research adheres to the principles of ethical research conduct, regardless of the source of funding.

Some might also think that IRB review does not apply to student work, but that view is also mistaken! Students in projects or classes can also find themselves doing research that requires IRB review. *When the work involves a "systematic investigation," designed to collect or utilize information gathered from a person or involving private information about persons, IRB review is required.*

Let us help! For more information, check our website: <http://www.wpi.edu/Admin/Research/IRB> or email Kent Rissmiller (IRB Chair kjr@wpi.edu) or Tina DeVries in Research Administration (cdevries@wpi.edu).

(Submitted by Kent Rissmiller, WPI IRB Chair)



For the benefit of investigators, the NSF has provided previously published examples of how, apart from future technological applications, the broader impacts of the work to be performed can be described in an effective way. The "Dear Colleague" includes a link to these examples and is available at: <http://www.nsf.gov/pubs/2007/nsf07046/nsf07046.jsp>. More information from the NSF on this review criterion is expected soon and we will try to keep the community apprised of any further developments.

(Submitted by Franc Lemire, ORA Director)

New NIH Public Access Policy Update

In January, the National Institutes of Health (NIH) announced plans to implement a new policy that will be in effect as of the publication date of this newsletter. The NIH Public Access Policy, in the simplest terms, requires authors of journal articles based on NIH funding to deposit copies of their manuscripts in the PubMed Central (PMC) depository so that they can be made publicly available within 12 months of the publication date of the articles. As you may be aware, the process was voluntary until the advent of the new NIH policy.

Unfortunately, simplicity is not the end word with this new policy and it has caught many institutions off guard due to the magnitude of the requirements. The first issue that NIH-funded investigators and institutions are facing is ensuring that authors retain the right to make or allow a deposit into PMC when publication copyrights with publishers are negotiated. Second, there is the process of making the deposit itself. Finally, beginning on May 25, 2008, anyone submitting an application, proposal, or progress report (or similar documents) to the NIH must in-

PROPOSALS AND AWARDS

clude the PMC reference number when citing articles arising from their NIH-funded research. This requirement includes applications submitted for the May 25 and subsequent due dates.

We hope to make an announcement to faculty members in the near future about the new NIH policy. In the meantime, the policy is available on the NIH web site at <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html>. Additional resources are available as well. For example, the Association of Research Libraries has collected a variety of resources from other institutions in an attempt to provide information to NIH recipients. This web site is <http://www.arl.org/sc/Implement/nih/guide/nih-resources.shtml>.

Please stay tuned as we try to provide additional guidance in the very near future.

(Submitted by Tammy Houle, ORA Proposal Services Administrator and Franc Lemire, ORA Director)

**Worcester Polytechnic Institute
Comparative Summary of Proposal and Award Activity
for the First Three Quarters of FY2008 and FY2007**

	FY2008		FY2007		Difference	
	No.	\$ Amount	No.	\$ Amount	No.	\$ Amount
Gross Proposal Submissions	202	\$70,902,988	181	\$49,219,831	21	\$21,683,157
Less: Earmark Program Proposals	(2)	(1,708,000)	0	0	(2)	(1,708,000)
Net Dollar Volume of Proposals ¹	<u>200</u>	<u>\$69,194,988</u>	<u>181</u>	<u>\$49,219,831</u>	<u>19</u>	<u>\$19,975,157</u>
Gross Awards Receipts	87	\$9,841,286	85	\$8,099,682	2	\$1,741,604
Less: Earmark Program Awards	(1)	(839,000)	0	0	1	(839,000)
Net Dollar Volume of Awards ¹	<u>86</u>	<u>\$9,002,286</u>	<u>85</u>	<u>\$8,099,682</u>	<u>1</u>	<u>\$902,604</u>

¹Earmark programs are excluded to enable reporting of net results achieved via competitive programs.

INSIDE ORA

Congratulations John Orr

All of us in the Office of Research Administration would like to congratulate Dr. John Orr on his appointment as Provost and Senior Vice President for WPI. We wish him the best!

IPAS Form

Did you know that the Office of Research Administration (ORA) web site contains the "Institute Prior Approval System (IPAS)" form for use by WPI investigators? The form, which is a revision of the former "Request for Pre-Award Costs and/or Advance Account" form, facilitates the review and approval by ORA of both pre-award costs (up to 90 days prior to issuance of an award) as well as requests for no-cost extensions (grants only), when such expanded authorities are extended to WPI by our federal sponsors. Built into the form is a list of which agencies have authorized this authority.

A link to the new IPAS form is available at <http://www.wpi.edu/Admin/Research/Handbook/ipas.html> on the ORA web site. As always, please let us know if you have any questions regarding the use of this form.

The ORA Web Site

* Did you know that the ORA web site contains a lot of *
* information and provides tools to assist you through the *
* proposal and award process? Many of the resources and *
* forms you need are just a click away. Please visit our *
* web site at: *
* <http://www.wpi.edu/Admin/Research/index.html>. *
* *
* Now that our office has the capabilities to edit our site *
* directly through the use of CMS Red Dot, information is *
* being updated much more rapidly. As we continue to *
* improve our site, please do not hesitate to provide us *
* your feedback. *
* *

*Deep beneath, the cavernous maze...a beast awakens.
Spring has arrived. Summer shant be long.
Oh Joyous Noise!
From the cold silence of winter, it exacts its revenge
On the delicate ears of mere mortals.*

- Anonymous

Happy Spring!



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