

Hello S&T instructors! It's definitely Spring outside and that means another semester is winding to a close. In this issue, we're sharing about the new [eStudio](#) and what it can do, how to apply for [mini-grant funding](#) for educational research, and a [tool](#) for helping students read for understanding. Additionally, enjoy an article about [Reza Zoughi](#) sharing what he likes to do best.



**CERTI
NEWSLETTER**
Center for Educational
Research and Teaching
Innovation at Missouri S&T

Getting to do

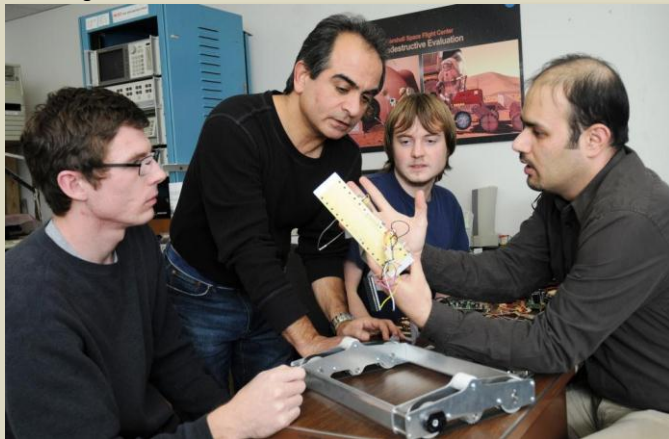
His Favorite Things

It is 4 a.m. on a typical weekday, and [Reza Zoughi](#) is up and preparing for his commute from his suburban St. Louis home to Missouri S&T.

Anticipating a long day with a hectic schedule might be discouraging to some, but the electrical engineering professor looks forward to another chance to do his favorite things.

Zoughi is the Schlumberger Distinguished Professor of Electrical Engineering, and his research on millimeter and microwave Nondestructive Testing (NDT) has put him in the [news](#) on a number of occasions. Yet, the favorite part of his day is spent in the classroom.

Reza Zoughi, second from left, with his students and research



“The best part of my job, the most gratifying part, is the hours I spend in the classroom,” he says. “I can’t describe the feeling I get when students understand what I attempt to teach. I have seen the light come on, and I say

to the student, ‘You just got it!’ Those are the best hours of my day.”

His passion to see others learn and understand resonates with his students. While teaching courses on the subjects of electromagnetic fields and waves, antennas and propagation, and microwave component design, Zoughi’s students consistently give him high course evaluations each semester. He has garnered 12 teaching awards and commendations since coming to Missouri S&T in 2001. At his

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**Presentation
Featuring Award-
Winning Faculty**

Go [here](#) to view the 66 instructors who were honored with campus awards in 2011, presented at this year’s Teaching and Learning Technology Conference.

previous institution, Colorado State University, he received nine teaching awards including seven Outstanding Electrical Engineering Teacher awards in eight years. The latter awards were voted on by the Colorado State junior and senior electrical engineering students.

“It’s humbling to receive teaching awards,” Zoughi says. “because, A – you think you could have always done better, and B – your name is mentioned with many other great teachers that you respect. I never have taken receiving teaching awards for granted.”

“It is important that students see that you are excited about what you teach ... I don’t do anything without a good deal of enthusiasm and passion.”

-- Reza Zoughi

Zoughi knew he wanted to teach from a young age and recognized a knack for explaining things as far back as high school, prior to attending the University of Kansas in 1977. He admits his teaching is still a work in progress.

“Effective teaching is very difficult. I have immense respect for good teachers, tremendous respect.”

He learned from both “magnificent” instructors as well as from ineffective ones. “You can learn a lot from the negative,” he notes.

Powerful motivators

From the magnificent teachers, he learned the power of passion and enthusiasm, both integral motivators in learning. “While in college, I knew professors who, no matter what subject they taught, I would take their classes because I knew I would learn something,” he says. “It is important that students see that you are excited about what you teach. You can’t just send an email to students and say, ‘Be excited!’ I don’t do anything without a good deal of enthusiasm and passion.”

Enthusiasm transmitted to students gives them confidence to attempt new things and helps them understand that they are much more capable than they think they are, he says.

Transparency with his students is also a non-negotiable for Zoughi. Although he has taught some of his classes many times and it would be easy to fall into the trap of thinking that he knows all of the answers, his students still surprise him. When they have a question that stumps him, his response is to admit that he doesn’t know the answer and promise to find out rather than appear to be an infallible expert. He has learned a great deal through this process of interacting with his students.

It’s this give-and-take relationship, as well as an ability to see the interconnection among all aspects of his work, that has given Zoughi a rather seamless perspective on his academic responsibilities.

“We need to change the way we label things,” he says. “Teaching, research, advising and service are all interrelated. I’d like to call it scholarship.”

Proposals for Educational Mini- Grants Being Accepted Through April

The Vice Provost for Academic Affairs, in conjunction with the Center for Educational Research and Teaching Innovation (CERTI), is sponsoring a second cycle of educational mini-grants to support classroom research that promotes teaching scholarship.

All full-time faculty and department chairs are eligible to submit proposals for 2012-2013. **The deadline is April 30, 2012.**

The VPAA is providing up to \$21,000 in funding for this year’s initiative.

Last year, five campus projects were funded. Topics ranged from introducing student-produced videos in a thermodynamics course to developing metrics that helped students judge how innovative their engineering projects were.

More information can be found on the [CERTI website](#).



Blurring the dividing lines

For example, it is difficult for him to sharply divide between research and teaching. In his undergraduate classes, he finds it much more effective to relate the subject matters he teaches to everyday life examples. Visualization of abstract ideas and unseen phenomena, such as those in electromagnetics, coupled with hands-on examples brought into the classroom are far more effective than a dry explanation on the board.

Likewise, when he works with his graduate students in the research laboratory, much of what he does can be described as teaching, exploring, mentoring and engaging his students.

When it comes to the service component of his job, he has had informal mentoring relationships with younger colleagues and has tried to answer questions or provide advice for instructors when asked. Service might also include giving a technical presentation that informs and inspires innovation.

Zoughi says he is “incredibly blessed” to be in a profession where he enjoys all of these interrelated activities, yet, he admits there is little time left for other things. That’s when his wife, Mary, reminds him, “Your work is your hobby!”

“I made a conscious decision to do this a long time ago,” he says, regarding striving for excellence in all areas of his job. “I’m not sure whether I am always successful, but that is how I want it. It’s difficult, especially if you perpetually do it.”

“Perpetually” may be the operative word here. Zoughi can’t imagine a future without teaching and learning, and even in retirement, he is certain his passion to help people understand new and old ideas will never wane. He will find *somewhere* to share his love of teaching and learning with others. Fortunately for Missouri S&T, he is still making the early morning treks to Rolla to share it here.



Academic Integrity Resources Now Available Online

As the semester winds down and final exams and projects are looming, the Office of Undergraduate Studies offers [three new pages](#) on its website dedicated to the topic of academic integrity.

The faculty resources page also includes a link to an [electronic reporting form](#), a password protected document that allows instructors to file an online report to the vice provost for undergraduate studies about alleged academic dishonesty.

Topics covered on the webpages include:

- Top things to do to reduce academic dishonesty
- Including academic integrity in your class syllabus
- What to do if you suspect a student is cheating
- Talking to a student suspected of cheating
- What happens after dishonesty is reported?
- Plagiarism 2.0 – information ethics in the digital age
- Data for incidences of alleged dishonesty
- Other resources

Go to ugs.mst.edu and click on the Academic Integrity Resources tab.

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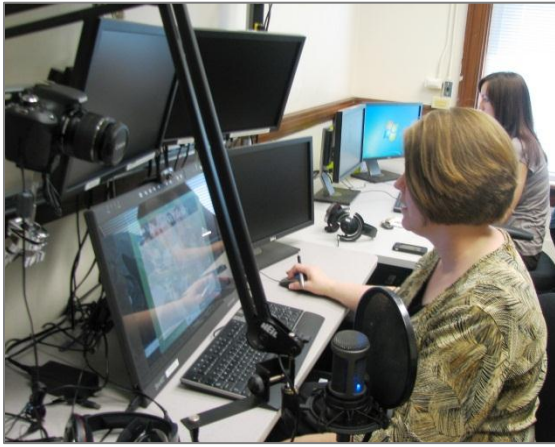
The Ideal vs. the Typical Professor

The ideal vs. the typical professor are not that far apart in their characteristics, at least according to one research team’s findings (Epting, et al 2004). A cohort of junior and senior students was asked to compare their “ideal” professors with their “typical” ones.

The researchers’ summary: “Overall, our research suggest that ideal professors are highly accessible to students, allow student input into the course policies and procedures, provide for significant variety in the course, and provide a comfortable learning environment for students” (p. 182).

These characteristics were not absent from the typical professors, but were more pronounced in the ideal professors. Go [here](#) for a criteria of teaching characteristics used in the research surveys and a summary of findings.

Reference: Epting, L.K., Zinn, T.E., Buskist, C. and Buskist, W. (2004). Students’ perspectives on the distinction between ideal and typical teachers. *Teaching of Psychology*, 31 (3), 181-183.



Julie Phelps, foreground, and Amy Skyles

eStudio provides free help: No experience necessary

Assistant Mining Professor Kwame Awuah-Offei didn't want to spend valuable class time repeatedly explaining to his students how to use the specialized software required for his course or answer the same questions about it over and over again. So, he turned to the the Educational Technology Office for help.

A new eStudio housed in IDE 203 with equipment for recording tutorials provided the answer.

It was simple to install the mine planning and design software on the eStudio computer and then record the professor's voice explaining how to use it. These tutorials are now part of his courses

on Blackboard, and students can review them whenever they need to. An added benefit was that EdTech staff provided closed captioning of the voice content. That way, students can "see" the words and vocabulary used as well as hear them.

"The video tutorials have been helpful for my class," says Awuah-Offei. "The students like it and have requested more videos. I have seen a reduction in the number of times I'm repeating instruction on the same basic skills. It's been a win-win for both the students and me."

The eStudio opened in fall 2011 and houses a SMART podium, five computer monitors, two cameras, a webcam, a headset and microphone, Camtasia software and Adobe Suite software.

One popular use of the software is for faculty to to annotate or narrate their Powerpoint slides easily. "No prior experience is needed to do this," says Julie Phelps, instructional designer with EdTech. "We can help faculty at whatever level they are at."

The studio can be used by faculty for a variety of other projects. Short videos that introduce the instructor to the class can be posted on Blackboard and used multiple times. One faculty member created brief introductory videos to describe upcoming online modules for her distance classes.

The actual recording takes very little time, Phelps said, and EdTech is available to provide editing and captioning to finish the project. For more information, contact edtech@mst.edu.

"If the faculty can run their Powerpoint, we can help them record it."
--Amy Skyles, Instructional Technologist

Let's Be Brief

CLICKER SIGN-UP FOR FALL 2012

It's time for faculty to indicate their intent to use clickers for fall 2012 classes. Please go to this [link](#), choose your name from the dropdown box, and submit your information. (Make sure the term selected is *FS 2012*).

There is also an option for you to indicate whether you will allow your students to use other electronic devices in the place of clickers (e.g., iPad, laptop, cell phone, etc.) For more information, contact [Diane Hagni](#).

SURPRISING USES OF POWERPOINT

Some surprising uses of PowerPoint can be used to increase student engagement with the content of your courses.

Klaus Woelk, interim chemistry department chair and winner of the UM System Innovative Teaching Award, gave a presentation to the campus on the topic recently. Go [here](#) to watch the video.

A Tool to Help Students Read for Understanding

If you are dissatisfied with the level of depth with which your students read course material, here is a rubric you can use to help them engage more meaningfully with the content.

The acronym for the reading rubric is **SPUNKI** and it asks students to answer the following six questions while they are reading:

“What part or parts of the reading did you find **Surprising?** **Puzzling?** **Useful?** **New?** **Knew it already?** **Interesting?** (See a copy of the [rubric](#) below.)



In a pilot study, instructors asked students to evaluate their experiences using SPUNKI. Some of their responses:

- ✓ “It allows me to think about what I am reading.”
 - ✓ “It made reading more interesting.”
 - ✓ “Recording your thoughts was better than just highlighting...”
 - ✓ “Once I got used to SPUNKI ... I discovered I could be successful in the course.”
 - ✓ “SPUNKI forced me to think and comprehend.”
- ✓ “I actually paid attention to the reading.”
 - ✓ “It’s a nice jumping off point to begin a discussion.”

Some tips for using SPUNKI:

- ✓ Use the rubric yourself on something in your current reading list before trying it with your classes to get a feel for how it might affect students.
- ✓ Give the actual rubric to students to write down their responses.
- ✓ Don’t overuse the tool, as students may tire of it. You may want to use it for challenging course material or at the beginning of a new unit.
- ✓ Collect but don’t grade SPUNKI responses.
- ✓ Encourage students to use it on their own, even if it is not a requirement of the assignment.
- ✓ Post the rubric on Blackboard for students to use for multiple classes or whenever needed.

Above information from [“On Course: SPUNKI: A Reading Rubric That Engages Students with Course Content,”](#) by Sharon W. Smith and Louise E. Loomis. Go to link for more information.

Online Tools Can Make Organizing, Teaching Easier

Looking for an easy way to make concept maps, flow charts or mind maps? Try [Bubbl.us](#), which allows you to easily create colorful mind maps to print or share with others. It’s an effective way for you or your students to organize ideas.

If you’re tired of searching for a website or bookmark while away from your personal computer, check out [Symbaloo](#) and access your bookmarks anywhere you are.

Try [Films on Demand](#) for a large repository of documentaries to use in teaching. It is licensed for both classroom and online course use.

Do you use group projects in your classes? [Google Docs](#) allows students to edit a document together in real-time and at a distance, without attachments. Intuitive commenting aids discussion. [Google Sites](#) gives your groups secure and simple web page creation.

Your Missouri S&T login can be synchronized with [Google Apps](#) so you won’t need a different name and password. For more help, talk to the [EdTech](#) team.

SPUNKI

Instructions: Using this form as a guide, answer the following: “What part or parts of the reading did you find Surprising? Puzzling? Useful? New? Knew it already? Interesting?” Explain your responses on the form below. Be prepared to discuss and/or hand in your responses.

Surprising

Puzzling

Useful

New

Knew it already

Interesting