



*"Developing Outstanding Ideas and Individuals... One at a time."*

# ARG Alumni Newsletter Summer '05

## 1. Greetings

Hello again to all ARG Alumni. We hope your summer was a productive one. As you'll see soon, the first part of this year was very "productive" for both current ARG members and alumni alike. We've spent much of this summer doing our research and writing of stuff we've been working on over the fall and spring semesters. If you're interested, you can check out the section on the website that lists papers. Also, for further, and more frequent, updates you can always check out the "What's New" section leading off the ARG website at <http://mr-roboto.me.uiuc.edu>.

## 2. Who's New?

We did have a large group at the end of last year, and not that many people graduated. We're getting to think that the ARG atmosphere may be a bit 'too' comfortable for current lab members. However, there was one new graduate student that joined us over the summer.

**David Hoelzle** comes to the ARG from *the* Ohio State University. David received his degree in Mechanical Engineering this Spring and joined us mid-summer. His research will be multi-disciplinary in collaboration with Prof. Amy Wagoner-



Johnson and her group. He will study the development and fabrication of bone-substitute scaffolds. The fabrication technology builds on the previous micro-robotic deposition work that is currently being done by Doug Bristow. This will be a combination of Mechanical Engineering and Biomedical engineering. So far Dave's research has been progressing nicely and we hope to report in the future on some of his results.

## 3. Transitions

Since last we wrote, several of our ARG members became ARG alumni. Both Pinaki Gupta and Brad Edler graduated with an M.S. degree and joined Caterpillar Inc. in Peoria, IL. Marina Tharayil defended her thesis and accepted a position with Xerox at their Research Center in upstate New York. We wish all of these alumni the best of luck in their new positions.

## 4. Accomplishments

There have been some notable accomplishments that have come out of the ARG since last I wrote. Some of you may have caught up with these if you have been monitoring the "What's New" section. Prior to detailing individual accomplishments, it should be noted that the ARG has seen a very productive period over the past 6-8 months with many of the students who started last year really starting to develop and take

ownership of their own research projects. As for specific accomplishments

- Bryan Rasmussen won a Teaching Award (List of Teachers ranked Excellent by their students) for his classroom performance in ME 360.
- Not finished, Bryan also landed a job in Mechanical Engineering at Texas A&M University. This makes 2 ARGers in academia.
- Paul Kawka was awarded a Vodafone fellowshp for the completion of his dissertation on wireless communication and control. This is one of the most prestigious fellowships offered across the College of Engineering at UIUC.
- Paul Kawka also successfully passed his Preliminary Exam.
- Both Paul and Doug Bristow received “Best Presentation” awards for their papers at the American Controls Conference (ACC) in Portland OR this year.
- Both Kira Barton and Alex Montgomery received honorable mentions in the NSF Fellowship competition last year.

If you know any of the awardees mentioned above, feel free to drop them an e-mail in the lab and say congrats. Also, you can check our ARG homepage regularly to find out whether any new news has come through.

## 5. Alumni Focus.

We got some very good feedback from last year’s newsletter featuring one of our alumni several years after graduation. This year we’re featuring Dr. Danian Zheng. Danian received his BS degree in Mechanical Engineering and Manufacturing from Tsinghua University in 1994 and his Masters in Manufacturing in 1997. Then he moved to US and joined the ARG. His PhD work was focused on manufacturing control and he did some of the initial work on the Adaptive Iterative Learning Control Algorithm that others in the ARG have continued. His PhD application was on an Injection Molding Machine. He finished his Ph.D. in 2002 and

went to work for GE Global Research Center (GRC) at Schenectady, NY.

Here he started out in the area of manufacturing control and optimization. The project goal was to develop a method to monitor and readjust the parameters of a DVD injection molding line on-line. After completion of this project, Danian hopped on the new bandwagon of wind energy when GE acquired Enron Wind Energy. He has been “blowing in the wind” with a large variety of topics ranging from Hurricane risk analysis and offshore hydro-dynamics to structural dynamics/control since then. The nature of the business requests coordinating engineering resources between GRC, GE Wind Germany and GE wind Greenville, NC. This has provided him opportunities to travel often to NC and EU countries to work with other people in the global team and push projects forward. The main project he is leading has been inventing a structure-damping device that will improve the structure’s life and protect the wind turbine during extreme storms. Recently his first production prototype was tested in the field at Germany. From later this year on, he will be working with a major “ecomagination” joint-project with DOE to develop the foundation technologies for a next-gen offshore wind turbine that could have a blade span diameter of 160meters.

Looking back, Danian feels that the key take-away from his ARG days is the capability of being sensitive, open-minded and persistent in finding promising problems in daily engineering work and develop them into programs that provide invention and solution for the industry. Being a research engineer in industry requires a wide variety of knowledge and abilities. They include solid engineering knowledge, unyielding research integrity, the capability to learn what you don’t know quickly and soundly, and the leadership to put

everyone in the team and everything you need together and keep the program rolling.



Danian lives in Clifton Park, NY with his wife of 5 years, Ping and their 5 month old daughter, Maya. The new life with kid is both a brand new joyful ride for the new parents to enjoy and a challenge for two full-time researchers to fumble through... But they believe that being equipped with what UI has taught them they will survive and thrive.



## 6. Announcements-Catching up.

Well, Danian has led off with the baby news so we'll keep that ball rolling. Turns out there were many, many new additions to the extended ARG family this year. Surprisingly, none of these additions belonged to Bryan Rasmussen...this time ☺

Sean and Rachel Brennan welcomed their second child into their family. Ethan Brennan joined big sister Coral to enrich Mom and Dad's lives. Sean and Rachel are both still at Penn State as Assistant Professors.



Xiaojing Yang & Rong Zhang welcomed their first child, a bouncing baby boy named HeYang Zhang. His nickname is TinTin. You can see Rong carrying him around below.



Of course, this is the oh-so-organized Dr. Zhang, so you know he's got a super web log. You can find more about TinTin and his loving parents at the website:

<http://www.umich.edu/~xiaojing/tintin>

Rong is still with GM Research in Warren Michigan.

Heather Wright and her husband Mike had a baby boy named Aidan. They were all out in Southern California at the beginning of the year but were contemplating a return to the heartland



Last but not least in the baby parade are Brian Eldredge and his wife Rachel. They welcomed daughter Annelise Kay earlier this summer.



We give a hearty “congratulations!” to all the new parents out there and wish them the best of luck getting a good night’s sleep!! That’s all the updating we have time for now. We hope to have more for you in the winter, including some upcoming baby news from current ARG members.