

# THE COMMUNICATION FACTOR

NEWSLETTER OF THE CAIN PROJECT IN ENGINEERING AND PROFESSIONAL COMMUNICATION AT RICE UNIVERSITY - Fall 2004



## North American Pronunciation of Technical Vocabulary Course

Sciences and engineering have become international disciplines; about fifty percent of graduate students in engineering speak English as a second language, and many have third or fourth language knowledge as well. Few had an opportunity to take conversation courses that featured technical vocabulary. As a result, graduate students are often knowledgeable about the meaning of English words for thermodynamics, genetics, or similar terms but have had little instruction in pronouncing terms.

Sometimes the difference in pronunciation cannot be detected from reading. For example, French, Russian, and English all use the word “valence” to describe the combinatory power of an atom but French applies a rule of equal stress on syllables, whereas Russian emphasizes the second syllable and North American pronunciation accents the first syllable. The word is so common that the differences in pronunciation can provide a distracting dissonance when graduate students lead laboratories or talk with colleagues.

This summer two Rice alumni, Woods and Patsy Martin ('49), sponsored a special 8-week course to help graduate students deal with pronunciation differences in their own technical field. Jamie Cluff taught the course on Tuesday and Thursday evenings in two-hour sessions.

As part of the course, native speakers of North American English read aloud passages that participants selected because of the technical vocabulary relevant to their field. Sharon Gibson-Mainka, the Cain Project's instructional designer, videorecorded their readings and will place digital excerpts on the Project's Web site so students can watch and listen to authentic pronunciations and refine their use. Over time, the site will become a unique resource for technical pronunciation.

## Cain Project Celebrates Five Years

In May, Cain Project members celebrated completion of the fifth year of the Project's implementation and the fifth year service anniversaries of Dr. Tracy Volz and Dr. Jan Hewitt with a luncheon and service awards.

Dr. Volz is the assistant director for the Project and has won awards for her teaching and service to graduate students. Dr. Hewitt developed the thesis writing groups for graduate students that have won her accolades from faculty and students alike.

Friends also bid farewell to Dr. John Polking, former Cain Project Faculty Advisory Committee Chair, who is retiring from Rice, and Dr. Julie Zeleznik, who has accepted a tenure-track position in Wisconsin.

The national recognition the Project is receiving demonstrates the importance of all the Cain Project's members and their advisors' contributions. It has been a truly remarkable five years for everyone.



Dr. Tracy Volz



Dr. Jan Hewitt



Dr. Julie Zeleznik



Dr. John Polking

Mr. and Mrs. Martin have provided funds for a second session this fall. Ms. Cluff has decided to expand the session by two meetings to provide additional opportunities. Native speakers who participated in the recording sessions have volunteered to continue their work in developing the on-line resources. Students from this summer's waiting list have priority for the fall session, but interested students can go to the Cain Project Web Site at <http://www.owl.net.rice.edu/~cainproj/> to find out more. Julia Amborski, the Cain Project coordinator, will send information by e-mail to all graduate students.

# Second Annual Mayan Resorts Conference News

## Mayan Resorts Academic Conference Explores What Mexican Businesses Want Interns to Know about International Communication



*Rice's Matherly (center) visits with Tec de Monterrey and Iowa State faculty at Nuevo Vallarta's Mayan Resort.*

photo by William L. Jeffries © 2004

Rice faculty planning to integrate international communication assignments into their regular engineering assignments or to change their internship programs joined Dr. Cheryl Matherly, Director of International Opportunities, and Dr. Linda Driskill as Rice representatives at the Mayan Resorts Academic Conference in Nuevo Vallarta, Mexico on July 8, 9, and 10. Dr. Pedro Alvarez of the Department of Civil and Environmental Engineering and Mr. Gordon Wittenberg of the School of Architecture attended. Dr. Phil Bedient visited with the Mayan Resort managers and engineers in advance of the conference sessions.

This year's conference brought business managers and interns together with university faculty who can prepare students for working abroad. Sessions

explored what businesses need student interns to know international communication to participate successfully in internship opportunities. Managers from Hewlett Packard (HP) Mexico, including Ms. Ana Luz Morales, head of Staffing-Human Resources, and Mr. Luis Miguel Tenorio, the C.P. Program Manager, presented their views on international and intercultural communication and how universities can prepare their students to be intercultural leaders.

Rice student interns Jordana Mosten, Jacob Lopez, Haley Kim Fletcher and Thomas Willis collaborated on a talk that Jordana gave. Other students from Iowa State University, Pennsylvania State University, the University of Alberta in Canada, and the Paul Couse Institute (Culinary Arts) also gave presentations. The Mayan Resorts was the host for the conference, providing transportation, lodging, and meals for the participants.

Fanny Trevino of the Mayan Resorts directs the project, which involves many of the resort's managers. Next year's internships will again be held at Nuevo Vallarta, but in the future additional Mayan Resorts company at several major destinations such as Cancun and Acapulco will be involved. Engineering students interested in 2005 Mayan Resorts internships should study their Spanish and contact Career Services.

## How to Say Drosophila?



**Jamie Cluff** conducted the North American Pronunciation of Technical Vocabulary course this summer. She holds a Master's degree and certifications in teaching pronunciation to non-native speakers. She also serves as one of the Rice School of Continuing Studies' English instructors.

Graduate students praised her approach to building their confidence and changing their speaking habits.

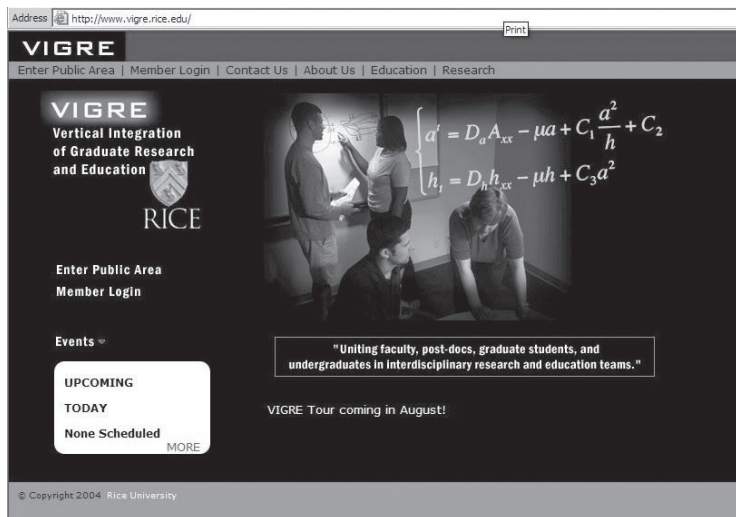
Jamie is acting as a consultant for the Cain Project on the development of a web site with resources on technical vocabulary pronunciation that will be available worldwide. Her work extends an earlier pilot project conducted by her friend and colleague at SCS, Amy Bargfrede.

## Students Bring Home Trophy



Bob Cunningham's students in MECH 407/408 hold the trophy they brought back from the SAE Aero Design Challenge in Deland, Florida, where they won the Award for Engineering Design Excellence for the best oral presentation. The award went to our Rice University team, which scored 29.36 out of a possible 30 points. Presentation points mattered a great deal in the overall competition, where three top teams' totals varied by less than one point. The team practiced with the Cain Project before competing against teams from the US, Brazil, and Canada. A broken element grounded their plane in later trials, but their talk was the BEST!

# New Virtual Home for VIGRE PFUGs!



The screenshot shows the VIGRE website interface. At the top, there is a navigation bar with links for 'Enter Public Area', 'Member Login', 'Contact Us', 'About Us', 'Education', and 'Research'. Below this is a main content area with the VIGRE logo and the text 'Vertical Integration of Graduate Research and Education'. A central image shows four people in a meeting, with mathematical equations overlaid:  $a' = D_a A_{xx} - \mu a + C_1 \frac{a^2}{h} + C_2$  and  $h_t = D_h h_{xx} - \mu h + C_3 a^2$ . A quote reads: "Uniting faculty, post-docs, graduate students, and undergraduates in interdisciplinary research and education teams." Below the image is a box for 'UPCOMING TODAY' with 'None Scheduled' and a 'MORE' link. A footer note says 'VIGRE Tour coming in August!' and '© Copyright 2004 Rice University'.

The new VIGRE On-line site will have a public face (shown) as well as a private side where each PFUG will have access to its research materials and course materials. Members of PFUGs from 2003-2004 are shown in the photos on the main page.

## Does a PFUG Make Music?

No, but a PFUG can be in harmony this fall. The research and learning groups called PFUGs have a new on-line community designed to facilitate their interaction. The acronym plays on the musical term fugue, a form in which each voice's melodic line interacts with other voices harmoniously. The PFUGs were formed as part of a National Science Foundation funded project involving the Departments of Mathematics, Statistics, and Computational and Applied Mathematics.

The on-line community was developed by Web Services and readied for use this summer by Suganya Ramadas, the VIGRE web editor. The site puts at members' fingertips several hundred .pdfs, course materials, threaded discussions, sample algorithms, and links to electronic databases and other resources. Each group's "home" simultaneously displays research and academic materials, news for the day, the group's own discussion list, the larger project discussion list, and communication resources prepared by the Cain Project. Members can easily announce events for their own group or the project as a whole or post announcements for the entire University.

Rice's VIGRE On-Line is a dynamic Web-based environment in which interdisciplinary groups working on parallel themes can achieve the full potential of vertical integration and the merging of education and research. It was designed to ensure that members at all levels will be able to contribute to work in many fields and appreciate the broad relevance of mathematical sciences. The site will be ready for participants at the beginning of the fall semester.

## The Need for VIGRE On-line

Several groups in the Rice VIGRE Program are working on similar themes (such as problems in gene networks, biochemical networks, and statistical genomics) and are likely to learn from one another and "leapfrog" in their problem solving. However, interest across groups was at first impeded by lack of a central communication source and immediate opportunities to see what other groups are doing.

Because participants in a group are from various levels and different majors and departments, a group as a whole cannot be assembled frequently to ask questions, demonstrate their techniques or problems, and engage one another—although interest in doing so is remarkably high. VIGRE participants are especially enthusiastic about their emerging projects and have been eager to try out and play around with one another's equations and data sets.

Moreover, this environment is a valuable laboratory for the Cain Project in Engineering and Professional Communication's research on communication functions, curricular development, and group dynamics over the course of the VIGRE program.

Ramadas is creating an on-line tour to help prospective students learn about how the VIGRE groups work. Students interested in becoming members of a group should contact any of the leaders listed on the website at <http://vigre.rice.edu>.

## Ramadas Joins Project

Suganya Ramadas holds a Bachelor's in Business Administration and Certifications in Graphic Design and in Website Development. She has worked with different aspects in the information technology area, but her greatest creative, personal satisfaction lies in website design and development, her main challenge in the VIGRE ON-LINE project.



Having worked on many web design projects, she says she enjoys working with people to create, build, and maintain quality websites that meet the needs of an organization. Over the coming academic year she will work closely with the PFUGs to discover new functions that can be added to the Program site.

# Cain Project in the News

The US News's *America's Best Graduate Schools 2005*, which came out in May, featured an article on "Dilbert's Dilemma." The article began as follows:

Poor Dilbert, armed with only a pocket protector and a skinny strip of a tie, this sad little engineer makes his way through a bewildering corporate workplace, socially clueless in a nerd-hostile world. Sure, he's just a comic strip character, but in engineering education, Dilbert represents the problem. 'He's the stereotype that engineers have been saddled with forever,' says Albert Gray, executive director of the National Society of Professional Engineers. . . . It's also an image that engineering schools and professional societies across the country have been trying to combat for the past several years.

Caroline Hsu, who authored the piece, reviews what engineering schools across the country have been doing, and concludes with an upbeat assessment of the George R. Brown School of Engineering's approach:

In 1998, Rice University received a \$5 million gift to establish the Cain Project, a program dedicated to improving communication skills in engineers and scientists. Through voluntary, no-credit courses, faculty teach workshops that help grad students develop writing and presentation skills. The thesis writing workshop is perpetually over-enrolled; students don't dare miss a session for fear of permanently losing their seat to a wait-listed candidate. And they are learning that better soft skills make better engineers.

Since the article was written, the Cain Project has expanded its workshops for graduate students and now offers a Leadership and Professional Development Program with over twenty workshops of varying lengths as well as the thesis writing groups. It's nice to be recognized in a national guidebook to graduate education!



## Cain Project Is a 2004 Conference Sponsor

The Seventh National Writing across the Curriculum Conference was held in St. Louis in May with support from Cornell University, Washington University,

and Rice University's Cain Project. The Cain Project was host to the sixth national conference earlier in 2002. The 2004 Conference attracted over 400 faculty from many disciplines who are involved with teaching students about writing and presentations in their courses.

The theme of the conference was "Writing across the Curriculum from an International Perspective." The Cain Project sponsored a video made up of contributed photos and video footage from WAC programs across the world. Representatives from universities from Europe, Australia, Asia, and the Americas participated in the conference. The Cain Project has been providing new opportunities for students to learn about international issues through sponsorship of "Preparing to Communicate in Five Countries, Many Cultures" and participation in the new *Mayan Resorts Academic Conferences*.

Get Ready for Your Career!  
Register for LPD Workshops



## Cain Project

The Cain Project in Engineering and Professional Communication helps Rice students become expert speakers and writers. Because of Gordon and Mary Cain's generous gift, undergraduate and graduate students in science and engineering are developing the communication skills necessary for successful professional leadership.

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Project Director

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## Leadership and Professional Development

The Leadership and Professional Development Workshops are designed for graduate students only. The workshops are non-credit, and participation is voluntary. Some workshops have size limits. Most are held on Thursday or Friday afternoons. A few are held on Saturday mornings. A full schedule of dates and times can be found on the web site: <http://www.owl.net.rice.edu/~cainproj>.

Managing a Thesis Project  
Responding to Student Writing  
Giving Lab Lectures & Chalk Talks  
Technical Presentations (beginner)  
Reading Journal Articles  
Presenting a Business Plan  
Writing for Publication  
Thesis Writing Groups

Presenting Data (slides & papers)  
Designing a Teaching Portfolio  
Building Interviewing Skills  
Using Professional Ethics  
Presenting Research Orally  
(advanced)  
Defending a Proposal or Thesis  
Writing for Business