



**SEEDS You Choose 2010 Application:
Effective Writing and Writing Mentorship for Engineering and Applied Sciences
Faculty by Dr. Judith Swan**

Helena Solo-Gabriele, PhD
Associate Dean for Research and Professor
College of Engineering
Room 252 McArthur Engineering Building
1251 Memorial Drive
Coral Gables, FL 33146
(305) 284-2908
hmsolo@miami.edu

Blythe Nobleman
Director of Outreach and Communications
College of Engineering
Room 250 McArthur Engineering Building
1251 Memorial Drive
Coral Gables, FL 33146
(305) 284-2413
bnobleman@miami.edu

Abstract

Written language is the primary means by which engineers and scientists create public awareness and understanding of their work, apply for essential grant funding, and also communicate and publish within and across disciplines. Typically, writing instruction rarely extends beyond freshman composition courses that impose curriculum designed for the general academy, and that need to give greater attention to the language needs and idiosyncrasies of non-native speakers of English. Engineering and science faculty, in particular, will benefit from this project, which will provide a writing workshop at the Coral Gables campus by Dr. Judith Swan, a renowned engineering and science writing expert. This proposal is patterned from a workshop organized at the RSMAS campus by Dr. Paquita Zuidema. That workshop was very well received and a complementary workshop is proposed for the Gables campus. The added component of the proposed workshop is an emphasis on effective writing for faculty and post doctoral associates, and for those who attend to serve as writing mentors by sharing what they learned with others who were not able to participate, including other faculty, post-doctoral associates, graduate and undergraduate students.

Goals for the Project

As digital and electronic literacies abound, scientists and engineers produce and publish progressively more writing, and for wider audiences, than in previous decades. Written communication is the primary means by which we communicate to funding agencies, policymakers, research institutions and organizations, members of the media, and to each other. And as our global differences continue to decline, we must be responsible for working at and practicing better ways to communicate through the written word, our common vernacular, whether via grant proposals, journal articles, newspaper columns, blogs, or wikis.

The recent writing workshop sponsored by a SEEDS You Choose grant awarded to Dr. Paquita Zuidema, Assistant Professor of Meteorology and Physical Oceanography at the RSMAS campus, was hugely successful, indicating not only the need, but also the desire to sponsor another, similar event. Dr. Judy Swan, Associate Director for Writing in Science and Engineering at Princeton University, who also has a Ph.D in biochemistry from M.I.T, gave the workshop. Dr. Swan is the co-author of the recent article, "The Science of Scientific Writing," published in *American Scientist*. With 175 participants attending a daylong writing workshop, served not only RSMAS attendees, but also those who attended from other campuses. Sponsoring a writing workshop by Dr. Swan will provide a continuation and expansion of the previous session, though placing a somewhat stronger emphasis on faculty writing needs in the applied sciences and engineering, and on writing mentorship.

Holding the workshop on the Coral Gables campus may attract a different constituency of participants, and may also appeal to those who missed the previous session. Workshop participants from the medical campus will easily be able to take advantage of public transportation, and after learning about the success and usefulness of Dr. Swan's past workshops, will be sure to take part in this session.

Additionally, developing strong writing skills, especially using a reader-centered approach, takes practice over time. By endorsing Dr. Swan's return, participants may choose to revisit her techniques and methods for developing effective writing by attending this session.

As host to the event, the College of Engineering will provide the workshop facility, most likely the Wilder Auditorium, and the outdoor patio area for networking and gathering, as well as lunch. The grant funds would also be used to pay Dr. Swan's fee for the workshop, travel and hotel (see budget detail), and to provide lunch for participants. Cost share will be provided by the College of Engineering to cover food, beverages, and any ancillary expenses.

Enhancement to Career and Scholarly Goals

Helena Solo-Gabriele, PhD

Associate Dean for Research and Professor, College of Engineering

Promoting research within the College of Engineering is one of Dr. Solo-Gabriele's responsibilities as an Associate Dean. This workshop is consistent with these responsibilities as it will help engineering faculty improve their writing skills which, as a result, will improve faculty grantsmanship. Although Dr. Solo-Gabriele's focus is on engineering research productivity, the College of Engineering also promotes inter-school and inter-campus collaboration among its faculty. This workshop is also viewed as a means to encourage faculty from science and engineering at the University to interact thereby contributing to the goals of promoting interdisciplinary research. Moreover, inclusion of University faculty as a whole results in a global benefit to the University that ultimately promotes overall productivity including the productivity of engineering.

Blythe Nobleman

Director, Outreach and Communications, College of Engineering

As an educator of scientific and technical writing for over 18 years, and now as an administrator in the College of Engineering, this project offers an essential outreach and communications opportunity for engineering and science faculty, students, staff, and members of the university community. The project will help Director Nobleman in her role within the college to edit and add value to the writing of major grant proposals, and to act as a writing mentor to faculty, administrators, and staff. By using the workshop materials, and by referring to Dr. Swan's techniques, Nobleman can assist researchers, faculty, administrators and staff within the College of Engineering to synthesize and practice specific methods of writing effectively in a variety of contexts and situations. Additionally, by using the common practices gleaned from the workshop activities and discussions, we can foster ongoing work not only through engineering outreach and communications, but also in our work across disciplines, schools, and colleges.

Budget

Item	Estimated Cost
Plane Fare RT/Boston	350.00
Hotel – one night’s stay	150.00
Ground Transportation	50.00
Per diem – two days	100.00
Workshop fee	1800.00
Signage & promotion	50.00
Food & Beverages (lunch)	1000.00
SUB-TOTAL	3500.00
Grant Funds	-2500.00
Cost Share – College of Engineering	-1000.00 (maximum)
Cost Share – Wilder Auditorium & Engineering Patio – College of Engineering	NC
Balance	0

Additional Budget Details: The College of Engineering will provide a cost share of up to \$1000 to cover the lunch during the workshop or unforeseen added expense. Also, unless Dr. Swan prefers renting a car, either Helena Solo-Gabriele and/or Blythe Nobleman will meet Dr. Swan at the airport upon her arrival and take her back upon her return. This will provide for a more personal touch visit by Dr. Swan’s as well as save funds associated with ground transport.

Curriculum Vitae

Name: Helena Solo-Gabriele, Ph.D., P.E.

Position: Professor of Civil & Environmental Engineering and Assoc. Research Dean

Address: College of Engineering, University of Miami, P.O. Box 248294, Coral Gables, FL 33124-0630, Tel: 305-284-2908, Fax: 305-284-3492, Email: hmsolo@miami.edu, Web page: www.eng.miami.edu/~hmsolo

Education:

Massachusetts Institute of Technology	Civil & Environmental Egnrng	Ph.D.	1995
University of Miami, Coral Gables, FL	Civil Engineering	M.S.	1988
University of Miami, Coral Gables, FL	Civil Engineering	B.S.	1987

Employment:

Assoc. Dean, Univ. of Miami	College of Engineering	Aug 2006 - Pres
Assoc./Interim Chair, Univ. of Miami	Civil and Environmental Engineering	2006 (Jan-Jul)
Secondary Appt., Univ. Miami	Marine Biology and Fisheries	2005-Present
Faculty Appt. U.S. Geological Survey	Water Resources Division (part-time)	1997-2000
Professor, Univ. of Miami	Civil and Environmental Engineering	2005-Present
Assoc. Professor, Univ. of Miami	Civil and Environmental Engineering	2001-2005
Assist. Professor, Univ. of Miami	Civil and Environmental Engineering	1995-2001

Fellowships and Honors (selected):

College of Engineering Johnson A. Edosomwan Researcher of the Year	2008
College of Engineering Johnson A. Edosomwan Scholarly Productivity Award	2005
Japanese Society for the Promotion of Science Research Fellowship	2005

Publications (5 recent):

- Abdelzaher, A., Wright, M., Ortega, C., Solo-Gabriele, H., Miller, G., Elmir, S., Newman, X., Shih, P., Bonilla, J.A., Bonilla, T.D., Palmer, C.J., Scott, T., Lukasik, J., Harwood, V.J., McQuaig, S., Sinigalliano, C., Gidley, M., Plano, L., Zhu, X., Wang, J.D., Fleming, L., 2009. Presence of pathogens and indicator microbes at a non-point source subtropical recreational marine beach. *Applied and Environmental Microbiology*, (accepted).
- Wright, M.E., Solo-Gabriele, H.M., Elmir, S., Fleming, L.E. 2009. Microbial load from animal feces at a recreational beach, *Marine Pollution Bulletin*, 58: 1649-1656.
- Elmir, S.M., Shibata, T., Solo-Gabriele, H.M., Sinigalliano, C.D., Gidley, M.L., Miller, G., Plano, L., Kish, J., Withum, K., Fleming, L., 2009. Quantitative evaluation of enterococci and Bacteroidales released by adults and toddlers in marine water. *Water Research*, 43: 4610-4616.
- Abdelzaher, A.M., Solo-Gabriele, H.M., Wright, M.E., and Palmer, C.J., 2008. Sequential Concentration of Bacteria and Viruses from Marine Waters using a Dual Membrane System. *Journal of Environmental Quality*, 37: 1648-1655.
- Shibata, T., Solo-Gabriele, H.M., Fleming, L., Elmir, S., 2004. Monitoring Marine Recreational Water Quality Using Multiple Microbial Indicators in an Urban Tropical Environment. *Water Research*, 38: 3119-3131.

Synergistic Activities:

Associate Dean for Research, University of Miami, College of Engineering: Fall 2006 to present. Promote research activities within the college by raising awareness of research opportunities, promote inter-departmental and inter-campus collaboration, facilitate activities which aim to further foster the

research culture within the College, and manage the College research proposal submittal process including an emphasis on the implementation of College guidelines for graduate student offers. Specifically the tasks involve managing the process for issuing research alerts to the College faculty as a whole and targeted announcements to individuals and groups of faculty members. Facilitating the Collaborative Research Exchange Forums (CREF) which consist of half-day workshops around a central inter-disciplinary theme. Coordinating and managing the College of Engineering Distinguished Speaker Series. Coordinating the yearly College of Engineering Awards program which serves to recognize faculty research and faculty/staff service. For research proposal submissions, tasks include coordinating proposal submissions (preparation of budgets, tuition waiver requests, indirect cost waivers, proposal transmittals, and facilitate support letters from Dean and/or Provost) from College faculty to the centralized Office of Research Administration. Address conflict of interest issues associated with proposal submissions in consultation with the Dean. Manage the process for archiving submissions and maintaining open files for active research awards. Draft template letters for engineering graduate student offers and responsible for evaluating offers made by Departments for consistency with College of Engineering policy. Responsible for the distribution of \$0.3 million in transitional graduate student stipend and health insurance coverage and \$1.2 million in graduate tuition waivers including documentation needed to transfer charges from research accounts where applicable. Participate in College promotion and tenure advisory committee meetings and draft updated versions of College promotion and tenure guidelines in consultation with the Dean, Associate Dean, and Department Chairs.

Seminar/Workshops Developed, Dr. Solo-Gabriele has worked extensively with high school outreach groups funded through NSF and NIH. Many of these outreach activities focused on introducing engineering to minority and female grade-school students, and introducing academic careers to engineering undergraduate students. She is currently working on the Steering Committee of a recent ADVANCE grant (SEEDS, Scientists and Engineers Expanding Diversity and Success) that was awarded to the University of Miami.

Conference Administration, Dr. Solo-Gabriele has served as session moderator for several different conferences and meetings. The most extensive of her involvement in conference and meeting organization include bi-annual public/technical meetings for the past 10 years for research on pressure treated wood (see <http://www.ccaresearch.org/projectadmin.htm>) and her involvement in organizing an international conference on the, "Environmental Impacts of Preservative Treated Wood Conference (<http://www.ccaconference.org>).

Broadening the Participation of Underrepresented Groups, Dr. Solo-Gabriele has directly supervised 7 high school students (5 female and 3 hispanic), 39 undergraduates (19 female, 8 hispanic, 6 african american), 13 MS students (5 female, 1 hispanic, 1 african-american), 8 Ph.D students (2 female and 1 hispanic).

Service to the Scientific and Engineering Community, Dr. Solo-Gabriele has served on national committees. The most recent include as an Expert Participant at the Water Environmental Research Foundation Workshop during Feb. 2009. She is currently also actively serving as a voting member on the Chromogenic Substrate Committee for *Standard Methods for the Examination of Water and Wastewater*.

Collaborators & Other Affiliations

- (i) Collaborators in the last 48 months: TG Townsend (Univ of Florida), B Dubey (Univ of Florida), C Palmer (Univ of Florida), LE Fleming (Univ of Miami), D Childers (Florida Int'l Univ.), Y Cai (Florida Int'l Univ.), L Fieber (Univ. of Miami), L Leonard (Univ. N. Carolina-Wilmington), S Elmir (Miami-Dade Dept. of Health), JD Wang (Univ of Miami). Also see co-authors on publications.
- (ii) Graduate advisors, Thomas D. Waite M.S. Advisor, and Frank E. Perkins Ph.D. Advisor
- (iii) Recent Thesis Advisor and Postgraduate-Scholar Sponsor for: Postgraduate: Yang Deng, Guoqing He Graduate: Samir Elmir, Tomoyuki Shibata, Gary Jacobi, Amy Omae, Amir Abdelzaher, Jose Bazante, Mary Wright, Hasan Abdel Fattah

BLYTHE D. NOBLEMAN
Director of Outreach and Communications
College of Engineering - University of Miami
1251 Memorial Drive, Room 250, Coral Gables, FL 33146, (305) 284-2413
bnobleman@miami.edu

EDUCATION:

MASTER OF FINE ARTS, CREATIVE WRITING SPRING, 1995
FLORIDA INTERNATIONAL UNIVERSITY MIAMI, FLORIDA
BACHELOR OF SCIENCE, VISUAL ARTS WINTER, 1982
FLORIDA STATE UNIVERSITY TALLAHASSEE, FLORIDA

PROFESSIONAL EXPERIENCE:

LECTURER FALL 2005 – SPRING 2009
University of Miami, Coral Gables, Florida
Office of English Composition

Instructor of the following courses: ENG 105: English Composition, ENG 107: Writing about Science and Technology, ENG 330: Advanced Business Writing

MINORITY AFFAIRS AND COMMUNICATIONS COORDINATOR
APRIL 2003 – JUNE 2004

Salt Lake City Office of the Mayor
Salt Lake City, Utah

Appointed staff position for the Salt Lake City Mayor in communications and minority community outreach with the following duties: Collaborated with Mayor, Chief of Staff, and City Council to develop and implement public relations and communications strategies for Salt Lake City and the Mayor's Office on behalf of underrepresented minority communities; researched, wrote, and edited speeches, talking points, letters, press releases, articles, web copy, brochures, and other documents in addition to print and broadcast writing to provide interface and dialogue between minority community groups and constituents-at-large. Delivered speeches, lectures, and on-camera responses for broadcast, film, and radio; worked with consulates and representatives of other countries, serving as the Mayor's representative for minority community outreach.

LECTURER APRIL 1996 – MAY 2004
University of Utah, Salt Lake City, Utah
University Writing Program

Faculty member and instructor of the following courses: WRT 2010: Intermediate College Writing and Research; WRT 3400: Professional and Technical Writing (classroom and online); WRT 1010: Introduction to College Writing; Taught via electronic learning environments, wrote online curricula and created web sites for the University of Utah web-based courses such as Writing 3400: Professional and Technical Writing; Beta-tester and reviewer for initial release of WebCT (Web Course Tools) software for online courses; Coordinated service-learning counterparts for local not-for-profit organizations such as: Wasatch Community Gardens, Operation Smile, Ronald McDonald House, and the American Cancer Society; wrote department-wide curriculum for advanced scientific and technical writing courses.

LEAP WRITING PROGRAM COORDINATOR AUGUST 1996 – APRIL 2003

Administration and instruction of the comprehensive Liberal Education Accelerated Program (LEAP), a year-long, freshman writing seminar across the disciplines; Created and designed composition curricula in addition to staffing, scheduling, and all administrative duties within the LEAP Writing Program; Managed advisement for over 600 freshmen; supervised five writing instructors and coordinated with 12 instructors from the Undergraduate Studies Program; Structured, developed, and implemented the interdisciplinary tutorial writing center that grew from a LEAP-only facility to a university-wide writing center; trained and supervised new instructors as writing tutors.

DOCUMENTATION DEVELOPER/TECHNICAL WRITER MARCH 2000 – APRIL 2003
Scientific Computing and Imaging Institute

University of Utah, Salt Lake City, Utah

Edited, organized, and wrote documentation for initial and current software releases and technical publications; Instructed faculty/staff /engineers in scientific writing, software documentation, papers for publication, and presentation documents; Developed methods for translating the existing documentation system to online and printed forms for future software releases and book form documentation; Edited and web site content, scientific papers for publication, major grant applications (National Institutes of Health, National Science Foundation, US Departments of Defense); Managed complex projects such as online instructional manuals and tutorials; Wrote marketing materials, web content, software documentation; Edited masters and doctoral dissertations for computer science and bioengineering candidates.

SYNERGISTIC ACTIVITIES AND SERVICE

Presenter at 2008 Computers & Writing Conference: *Visual and Experiential Digital Language: Collaboration in Critical Spirit and Conceptual Execution* (interiversity collaboration with Allegra Pitera, Director of Digital Media Studies, Assistant Professor, School of Architecture, University of Detroit Mercy)
Presenter at 2007 Computers & Writing conference: *Virtual Spaces, Real Work: Podcasting in Discipline-Specific Writing Courses*

Presenter at 2006 Computers & Writing conference: *Pushing Transparency*

Undeclared Arts & Sciences Advisor: 4 years

Presenter at 2008 *Lunch-n-Learn* series for Instructional Advancement Center on uses of Blackboard Technology v. 7.2: *Wikis, Blogs, and Podcasting*

Volunteer for pilot of online course evaluations for College of Arts & Sciences; University of Miami Testing Center

Administrator of composition ABET assessments for the College of Engineering/English Composition English 105 student projects (visual/textual animation of a scientific process) submitted to NSF *Science and Engineering Visualization Challenge*

UM-Uganda Service Connection Faculty Advisor (service organization dedicated to providing medical supplies to AIDS orphans in Africa)

Assistant Director of English Composition: wrote and reviewed faculty observation/evaluation reports
Taught for Department of Biology's Howard Hughes Medical Institute Undergraduate Education Program, *Research in Ecology* (community outreach program that groups seventh grade public school students, middle school teachers, and UM faculty together to explore a topic in ecology and science)

Featured in *Veritas* article, "Hi-tech Learning", March 2009: <http://everitas.univmiami.net/2009/03/02/high-tech-learning/>

RECENT PUBLICATIONS

Miami magazine, 2007 freelance writing of feature, profile, and journal articles

National Foundation for Advancement in the Arts, *YoungARTS* magazine, feature writer

Real Things: Popular Culture in American Poetry Anthology, "Tabloid News" (Indiana University Press)

Edited: "Controlled Support MEG imaging," *NeuroImage* 33(Elsevier) Srikantan S. Nagarajan, Oleg Portniaguine, Dosik Hwang, Chris Johnson, and Kensuke Sekihara

Quarterly West, Review of Campbell McGrath's *Spring Comes to Chicago*