

Increasing the representation and advancement of women in academic science and engineering careers

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AdvanceVT Distinguished Lectures Spring 2005



Dr. Helen Boussalis, February 2nd

Dr. Boussalis is Chair of the Electrical and Computer Engineering Department at California State University at Los Angeles. Her research interests include large-scale sub-systems, stability, decentralized control, neural networks, and vibration control.

Ms. Jeanne Rosario, March 1st

Ms. Rosario is the Vice President and General Manager for Commercial Design for Reliability and Services for GE Aircraft Engines. Ms. Rosario received her BS from the University of Michigan in Mechanical Engineering



Dr. Linda Katehi, March 4th

Dr. Katehi is Dean of Purdue's Schools of Engineering where she is professor of Electrical and Computer Engineering. Dr. Katehi holds a number of awards and recognitions including Distinguished Educator Award of the IEEE Microwave Theory and Techniques Society.

Dr. Elaine Oran, April 6th

Dr. Oran is a Senior Scientist at the US Naval Research Lab. She pioneered a computer technology that has unified engineering, scientific, and mathematic disciplines into a methodology for solving complex reactive flow problems. Dr. Oran is a member of the National Academy of Engineering.



"Even though you read this in all the books, teaching takes more time than I expected."

- Male, Engineering

"You have so much thrown at you the first few years and then you're expected to go out and do research and get money and do all of these things at the same time."

- Female, Engineering

"I think the requirements [for P&T] are very clear and I don't have any questions there. If I do have questions I feel really comfortable talking with people I have as mentors."

-Female, Engineering

Male and Female Second Year Science & Engineering Faculty Year 1 in Retrospect: "Laying the Foundation"

Cohort 2003, Summary of Year 2 Interviews
Prepared by Elizabeth Creamer, *AdvanceVT* Assessment Director

As part of *AdvanceVT*'s assessment program, all tenure track faculty in the colleges of science and engineering hired in the fall of 2003 were interviewed in the fall of 2003 and again in the fall of 2004. This cohort will continue to be interviewed annually during the course of Virginia Tech's *Advance* grant.

RESEARCH

- All had submitted grants; some as many as 10; most had at least 1 funded.
- Getting funding remained their top concern.
- With the amount of time spent in writing proposals, few had time to write for publication.
- Almost all expressed concern about getting space and dismay at how political the process was.

TEACHING

- Most spent considerably more time on teaching than they expected.
- Most began the second year with increased expectations to supervise graduate students.
- A few had received very positive feedback about their teaching; most were adjusting their approach based on student feedback.

MENTORING

- Although most had fairly regular contact with a departmental mentor, this was one area where there was considerable variability.

SERVICE

- All had minimal service obligations.

COLLABORATION

- Virtually all reported success in finding research collaborators either inside or outside their department.

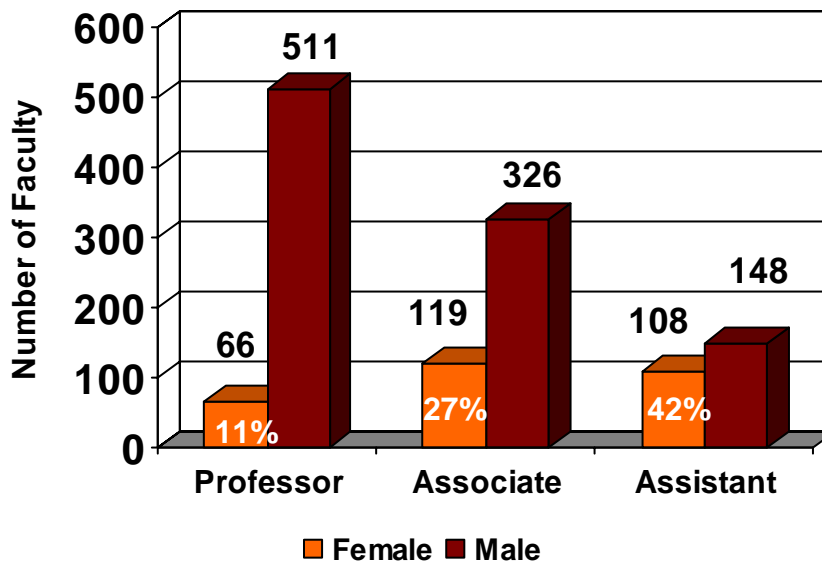
PROMOTION AND TENURE

- Most had attended at least one event that offered information about P&T requirements. Most had received clear feedback about their performance, either from their department head and/or from a departmental personnel committee. Most were not too stressed about the issue, saying they knew they could always go somewhere else if they didn't get tenure at VT.

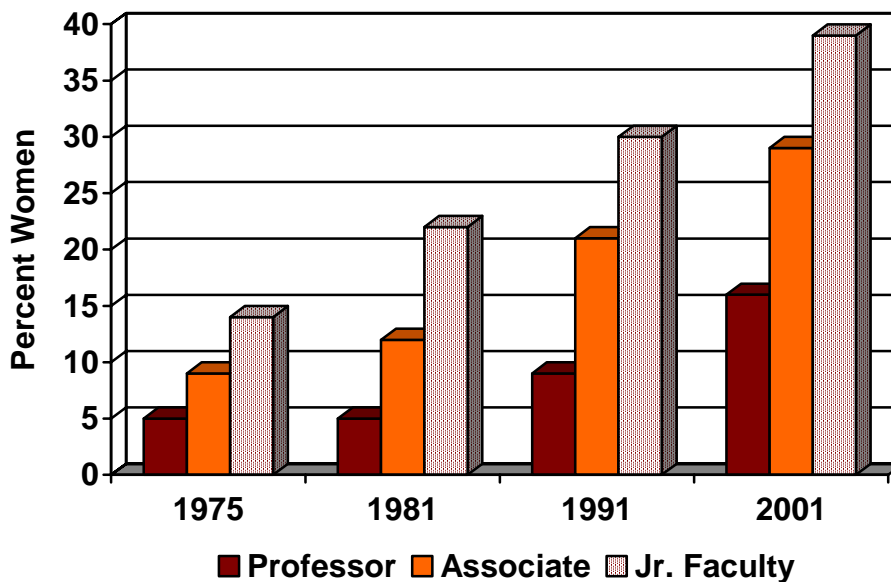
WORK-LIFE

- Spouse's/partner's employment options remained a concern for a sizable minority.

Virginia Tech Tenure Track Faculty by Rank and Gender, Fall 2004



Doctoral S&E Faculty by Rank, Nationwide, Selected Years



Source: NSF Science and Engineering Indicators 2004

National Benchmarks % women

Top 30

Professor	17%
Associate	32%
Assistant	37%

SHEV Peers

Professor	16%
Associate	32%
Assistant	39%

Compared with male faculty, female faculty remain relatively more heavily concentrated in life sciences and psychology, with correspondingly lower shares in engineering, physical sciences, and mathematics.
- National Science Foundation, Science and Engineering Indicators 2004

Ask Gail

Virginia Tech's Advance proposal describes the experiences of "Gail", a fictitious female junior faculty member in engineering, and how her relationships with her male peers change as a result of AdvanceVT program activities.

"Gail" has taken on a life of her own as a metaphor for the Advance program. The AdvanceVT Team offers its collective wisdom about being a woman in science and engineering to anyone who would like to send a question to AskGail@vt.edu.

Comments and observations are also welcome. Please be sure to indicate if the response should be confidential, otherwise questions and responses will be posted on the AdvanceVT web site.

Faculty Work-Life Questionnaire

As part of *AdvanceVT*'s assessment program, Virginia Tech's Survey Research Center will distribute an on-line Faculty Work-Life Questionnaire in early January to all full-time instructional and research faculty. The goal of the survey is to provide data about work satisfaction, access to resources, networks, and mentoring, recruitment practices, departmental climate, performance evaluation processes and outcomes, work-life issues, interest in leadership and leadership development opportunities. A high response rate from male and female faculty across the university is critical to accurately assessing the full range of faculty experiences. Please complete the survey at your earliest convenience.

2005 Faculty Development and Support Opportunities

AdvanceVT Leadership Development Program

Deadline: January 28th, 2005

The *AdvanceVT* Leadership Development Program will select a cohort of women faculty from across the university who demonstrate an interest in and potential to assume leadership roles. *AdvanceVT* will develop a series of workshops to build specific leadership skills based on an assessment of the current skills and developmental needs of the initial cohort.

AdvanceVT Doctoral Fellowships

Deadline: January 28th, 2005

Fellowships for Ph.D. students from Virginia Tech's College of Engineering or College of Science who aspire to pursue an academic career.

AdvanceVT Post-Doctoral Fellowships

Deadline: January 28th, 2005

Fellowships for scientists or engineers who completed their Ph.D. outside of Virginia Tech, whose success will further the efforts of *AdvanceVT* to promote the advancement of women into academic careers, and who meet Virginia Tech's Postdoctoral Associate classification.

AdvanceVT Research Development Grants

Deadline: January 28th, 2005

Seed grants for junior faculty members to assist them in preparing and submitting a proposal for external research funding. Preference will go to faculty in the Colleges of Science and Engineering.

AdvanceVT Colloquia: AdvanceVT Scholars

No deadline, proposals accepted on an ongoing basis.

Funding is available to invite potential faculty candidates, especially mid- or early-career faculty, post-doctoral researchers and advanced graduate students, for short campus visits, to attract their interest in future faculty positions.

Detailed descriptions and application information can be found at www.advance.vt.edu.

