Measuring Connections

Mapping Social & Professional Networks

NJIT Provost and ADVANCE Co-PI, Dr Priscilla Nelson, addresses the Women Engineers in Advanced Academic Positions Workshop (WEAP).

ADVancing Women at the New Jersey Institute of Technology through Collaborative Research Networks

Overview of Year 2: The most serious problem facing women in science and engineering is isolation. NJIT ADVANCE uses a variety of strategies to address this issue, linking women researchers to each other, to male peers, and to female counterparts in industry. By supporting interdisciplinary research synergy in this manner, we believe we can help expand women’s professional networks, improve information flow, stimulate social capital formation, and increase the number of women leaders. We report our Year 2 achievements in four categories:

Supporting Women-Led Research Teams: The ADVANCE Geospatial Technologies group, consisting of women faculty from four disciplines, continued its innovative research project designed to assess coastal water quality. The GT team reached out to other scientists in the area, exploring the possibility of a regional environmental research consortium. Through its annual Seed-Money Competition, ADVANCE funded another woman-led collaboration, between a physicist and a chemist doing research on the frontiers of biology. Both research groups showcased their work at ADVANCE seminars. ADVANCE also awarded travel grants to seven faculty in five different departments. (The winning 2008-2009 Seed Funding proposal will be announced in late May.)

Network Building: To foster interdisciplinary collaboration, ADVANCE sponsored a five-part seminar series, focusing on cross-cutting research areas (e.g., “Information Management Systems”). Faculty from various disciplines presented their current research and then met in small groups to discuss how they might work together in the future. ADVANCE representatives participated in the “Women, Minorities, and Interdisciplinarity” conference at Columbia University in November, and the conference organizer, Diana Rhoten, spoke at an NJIT ADVANCE seminar in December. In addition, ADVANCE hosted a “Strategies for Maximizing Your Research Resources” workshop for all assistant professors.

Disseminating Best Practices in Recruitment and Retention: An NJIT team participated in the July LEAD conference and disseminated LEAD materials via ADVANCE presentations to the university’s Committee on Academic Affairs and Deans’ Council. In January, ADVANCE co-hosted a two-day, NSF-funded Women Engineers in Advanced Academic Positions Workshop (WEAP) during which women provosts and deans of engineering from across the country addressed crucial issues in engineering education. ADVANCE created a WEAP website and maintains a Webboard to facilitate ongoing discussion among the participants. ADVANCE developed a faculty search committee toolkit; conducted training sessions with search committees in seven departments; and created three interrelated websites: Work/Life Balance Resources, Resources for Prospective Faculty, and Dual Career Resources.

Collecting Data and Assessing Impacts: ADVANCE completed construction of an interactive faculty publications database. Using information obtained from the database and from the project’s Year 1 Networks Survey, ADVANCE is mapping (via UCINET, NetDraw, and HyperGraph) the professional networks of individual faculty members and analyzing the collaborative patterns of selected academic departments. These dynamic maps will allow researchers to better understand the structure of “invisible colleges” within the university and to analyze changes in organizational culture, as well as to provide feedback to faculty engaged in P&T. The results of NJIT ADVANCE activities have been disseminated in conference papers and journal articles.

Supporting Collaboration

NJIT ADVANCE promotes faculty interconnection by offering seed money grants to woman-led interdisciplinary research collaborations.

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