

**LATENT CLASS ANALYSIS OF 1997 NSF SURVEY DATA ON
SCIENCE PHDs**

by

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ABSTRACT

The field of Information Technology (IT) has provided extraordinary job growth in the United States over the last two decades; however, women and some minority groups are severely underrepresented in IT occupations, especially in management positions. These groups also on average receive lower salaries than their counterparts. The National Science Foundation's SESTAT database is created from biennial nationally representative surveys of U.S. scientists and engineers. SESTAT provides detailed information, such as employment history, educational background, and demographic characteristics. These data are analyzed here using latent class analysis, which is an exploratory technique that can be used to cluster cases based on categorical variables. The data are from the 1997 Survey of Doctoral Recipients. The subset of respondents received Ph.D.'s between 1990 and 1996 in either than physical or biological sciences or in engineering and work at higher educational institutions. There are a few significant differences between men and women in desired work activities, job search resources, and adequacy of doctoral training. There are many large, significant differences in limitations when searching for a job, work activities, and family and career status. Latent class analysis helped identify important subgroups of females and males based on clustering simultaneously on several categorical variables.