YEAR TWO REPORT

October 1, 2002 through September 30, 2003

EXTERNAL EVALUATION OF ADVANCE PROGRAM
GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA

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and
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March 17, 2004
Outline

Evaluation of ADVANCE Program at Georgia Institute of Technology

Year Two

I. Introduction: Brief Overview of the Evaluation Plan ....................... Page 4
II. Evaluation Design ........................................................................... Page 5
III. Reports: Year One versus Year Two ............................................. Page 8
IV. Data and Methods ......................................................................... Page 9
V. Findings (Objectives 1-4) ............................................................... Page 10

1. Faculty at Georgia Tech

   Faculty Distribution (Gender and Ethnicity) ......................... Table 1

2. Objectives of ADVANCE Project:

   Objective 1: Equitable Faculty Recruitment Patterns

   Faculty Hired by Rank and Gender ......................................... Table 2

   Objective 2: Promotion and Retention of Women

   Rank of Faculty ................................................................. Table 3a
   Average Years Spent in Each Rank ........................................ Table 3b
   Tenure Status ........................................................................ Table 4
   Promotion and Tenure Outcomes ............................................ Table 5
   Attrition Statistics ............................................................... Table 6

   Objective 3: Greater Representation of Women in Leadership Positions

   Positions Held by Women Faculty ................................. Table 7
   Endowed Chairs/Professorships ......................................... Table 8a
   by Gender ............................................................................ Table 9a
   Participation in Promotion and Tenure Committees .... Table 8b
   by Gender ............................................................................ Table 9b
Objective 4: Equitable Allocation of Resources

i. Start-up Packages:

Initial Salary ..................................... Table 10a
Months of Summer Support.................. Table 10b

ii. Compensation:

Faculty Salaries (All GT faculty)......... Table 11

iii. Space Allocation:

Office and Lab Space......................... Table 12

iv. Workload:

Faculty Workload by College............. Table 12a
Faculty Workload by Rank.................. Table 12b

Summary of Findings............................... Page 17

VI. Comments on Policy Changes (Objectives 5-9)................ Page 17

VII. Future Reports.................................. Page 18

VIII. Appendix I

Tables Listed Above

IX. Appendix II

Tables on Years of Service at Georgia Tech
Introduction

The ADVANCE Program at the Georgia Institute of Technology (Georgia Tech) was funded in 2001 by the National Science Foundation (NSF). The main goal of ADVANCE is to develop and implement an innovative model that uses an integrated approach to influencing organizational features and factors that shape outcomes for women faculty in science and engineering. At Georgia Tech, the model seeks to reform central organizational features of the institution in order to achieve the project’s main goal of increasing the full participation and advancement of women—particularly senior women—in academic science and engineering. Project objectives are summarized in the Georgia Tech proposal to NSF as follows:

1) making and marking the advancement of women an organizational priority via leadership and action taken; 2) weaving women into the fabric of institutional structure and decision-making; 3) creating means for equitable distribution of resources; 4) assessing evaluation practices, and defining criteria for advancement that are clear and unbiased by gender; and 5) enhancing family-friendly practices.

Shortly after being funded by NSF, Georgia Tech commissioned an external evaluation to document and assess the accomplishment of its main goal—to be measured in terms of (1) increases in the recruitment, promotion, tenure and retention rates of women faculty in science and engineering, and (2) increasingly more equitable distribution of resources between male and female faculty in these fields. The external evaluation, which will supplement an internal evaluation conducted by Georgia Tech, draws from various data sources, including departmental and institutional data files and records made available by the institution.

This report lays out the design of the external evaluation, presents data collected in the second year of the ADVANCE project as well as baseline data against which this second year data will be compared, and reports on differences highlighted by these comparisons.
Evaluation Design

The external evaluation focuses specifically on collecting summative evaluation data to measure the project’s success in meeting the objectives set forth in Figure 1 below. The figure shows, by objective to be addressed in the external evaluation, the measures that will be used to determine the success of the project in meeting each objective, the indicators corresponding to each set of measures, the sources of data, and the time period for which these data will be collected. The objectives to be addressed by the external evaluation focus on:

1. Promotion and retention of female faculty;
2. Representation of women in the higher echelons of the administrative hierarchy;
3. Recruitment practices; and
4. Resource allocation.

In addressing these objectives, the external evaluators will analyze and present data on the twelve indicators required by NSF, as well as on several additional indicators. Those required by NSF are (generally by college and/or department):

- Faculty in science and engineering by gender (#, %)
- Faculty in tenured/tenure-track positions by gender and rank (#, %)
- Faculty in non-tenure-track positions by gender and rank (#, %)
- Faculty in administrative positions by gender (#, %)
- Faculty in endowed/named chairs/professorships by gender (#, %)
- Faculty on promotion and tenure committees by gender (#, %)
- Tenure promotion outcomes (baseline and during grant) by gender
- Years in rank by gender
- Time at institution and differential attrition by gender
- Salaries of scientists and engineers (faculty) by gender (with controls)
- Space allocation by gender (with controls)
- Start-up packages of newly hired S&E faculty by gender (with controls)

As Figure 1 shows, however, the evaluation will analyze additional data as well. Specifically, the evaluation has organized the required indicators around the four main objectives of the ADVANCE program. The NSF indicators were selected to ensure comparability of data across ADVANCE institutions, many of which may or may not be implementing similar interventions. Consequently, the evaluators added a few indicators (such as teaching loads and recruitment patterns) to ensure that all objectives pursued by ADVANCE as implemented at Georgia Tech were adequately addressed. Additional indicators are flagged in the Figure 1 through an asterisk next to the indicator name.
<table>
<thead>
<tr>
<th>Objective Number</th>
<th>Objective</th>
<th>Indicators</th>
<th>Measures</th>
<th>Data Sources</th>
<th>Data Sources Provided by</th>
<th>Time Period†</th>
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<tbody>
<tr>
<td>Promotion and Retention</td>
<td>1. (Main) Promotion and retention of senior women will rise</td>
<td>Promotion and retention information</td>
<td>By college (N=4), department (N=23), rank (N=3), and ethnicity (N=4): • # and % women faculty • # and % women in tenure-track positions • # and % women in non-tenure-track positions • # and % women in administrative positions • # and % women in endowed/named chairs • tenure promotion outcomes • time in rank • time in institution • attrition</td>
<td>IRP data (based on departmental and institutional data files)</td>
<td>Office of Institutional Research and Planning (IRP)</td>
<td>7/00 – 6/01 7/01 – 6/02 yearly updates until 2006</td>
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<td></td>
<td>2. Senior women will gain greater representation in administrative hierarchy (Unit, College, Institute)</td>
<td>Representation of women in leadership positions</td>
<td>By college, dept, rank, and ethnicity: • # and % women by job title (N=12)</td>
<td>IRP data (based on departmental and institutional data files)</td>
<td>IRP 7/00 – 6/01 7/01 – 6/02 yearly updates until 2006</td>
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<td></td>
<td>3. Faculty recruitment patterns will reflect more gender</td>
<td>Committee Assignments / Administrative Posts</td>
<td>By college, dept, rank, and ethnicity: • # and % women on promotion and tenure committees</td>
<td>Reviews of Faculty Senate rosters, CVs, promotion packages, and/or interviews with department chairs</td>
<td>IRP</td>
<td>7/00 – 6/01 7/01 – 6/02 yearly updates until 2006</td>
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**Equity—Recruitment**

3. Faculty recruitment patterns will reflect more gender

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<th>Objective</th>
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<td>3.</td>
<td>Faculty recruitment patterns will reflect more gender</td>
<td>Recruitment patterns*</td>
<td>By college, dept, rank: for given position, know hire date, person hired (sex, ethn) and sex/ethn of applicants, sex/ethn of visitors,</td>
<td>IRP data (based on departmental and institutional data files)</td>
<td>IRP</td>
<td>7/00 – 6/01 7/01 – 6/02 yearly updates</td>
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### Figure 1: ADVANCE Project Objective

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<td>4.</td>
<td>Start-up packages</td>
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<td>By college, dept, rank, and other controls:</td>
<td>Reviews of offer letters; perhaps interviews with unit business manager</td>
<td>IRP</td>
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<td>Space allocation</td>
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<td>By college, dept, rank and years in rank:</td>
<td>Annual resources allocation data</td>
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<td>• space allocation by gender and ethnicity</td>
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<td>Teaching loads*</td>
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<td>By college, dept, rank, and years in rank:</td>
<td>Curriculum inventory report</td>
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<td>• # undergraduate hours</td>
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<td></td>
<td>Research support*</td>
<td></td>
<td>By college, dept, rank, and years in rank:</td>
<td>GT Data Warehouse; Grants and Contracts Accounting System</td>
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<td>Annual salary</td>
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<td>By college, dept, rank, and years in rank:</td>
<td>IRP data (based on departmental and institutional data files)</td>
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<td>• salary of faculty by gender and ethnicity</td>
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**Notes:** † 2000-2001 and 2001-2002 are baseline years; yearly updates will be provided between 2003 and 2006. * Indicator not required by NSF.
Data needed to address most of the above objectives are available for all faculty (both men and women) in the four participating colleges at Georgia Tech. The only exceptions to this are data on (1) years in rank, (2) time in institution, (3) space allocation, (4) start-up packages, and (5) workload measures—all of which are available for the ADVANCE sample only. Staff at Georgia Tech have informed us that collecting these data, which required a review of institutional documents on each faculty member, was a very time-consuming task that could not be performed for all faculty. These data are, however, available for all women at the four GT colleges as well as for a sample of male faculty members (for more information on the ADVANCE sample, see the “Data and Methods” section.)

Reports: Year One versus Year Two

In the first evaluation report, baseline data were reported for each of the indicators associated with objectives 1-4 (see the Year One External Evaluation Report). This year, Year Two, data on each of these indicators are compared to baseline data in order to determine progress towards the stated objectives. For example, Year Two promotion and tenure rates for women in the sample are compared to those for women in the baseline data to assess whether or not there has been an increase over the previous year. In addition, all outcomes of interest will be compared between men and women at Georgia Tech, either for the entire faculty population or a sample.¹ It is important to note here that data reported this year (Year Two) for the baseline years may or may not be the same as that reported last year in the Year One evaluation report. This is because baseline data were resubmitted by Georgia Tech this year, and have been reanalyzed herein, due to small discrepancies uncovered last year.

The external evaluation will also comment on the project’s yearly progress towards revising policies related to five additional project objectives that are evaluated in an internal review of project outcomes (conducted by Georgia Tech). Labeled objectives 5-9—to distinguish them from objectives 1-4 addressed by the external evaluation—these objectives include goals such as achieving a more “family friendly environment” (see Figure 2 below). While these objectives are outside the scope of the external evaluation, our report will comment briefly on progress made towards achieving these goals. These comments will not, however, be based on independent analyses of information, but rather on a review of reports and other information made available by the ADVANCE project team at Georgia Tech.

¹ For a description of the sample and other sources of data, please see the “Data and Methods” section.
Data and Methods

While the overall evaluation will use a mixed-methods approach, the external evaluation consists mainly of the analysis of quantitative data to be supplied by the Institutional Research and Planning Office (IRP) at Georgia Tech.

**Data Sets.** IRP staff delivered two sets of data to the evaluation. The first contains aggregate statistics for the entire population of faculty (both men and women) at the four colleges participating in the ADVANCE project, namely, Computing, Engineering, Ivan Allen, and Sciences. This data set includes key indicators such as number of faculty, gender, and salaries. The second data set contains a sample of faculty at Georgia Tech and contains individual records with very detailed information, such as date and rank of hire, salary, tenure status, workload, etc. This sample was drawn by Georgia Tech's IRP office by selecting all female faculty in the four colleges that are participating in ADVANCE, and then finding an “appropriate” male match within Georgia Tech. An “appropriate” male match was defined as a male faculty member in the same department/discipline, with about the same number of years of tenured/tenure-track service, who was initially hired at the same rank and with the same tenure status. In the few instances in which no adequate matches could be found within the same department, a male faculty member in a different department (who met other required criteria) was selected. Every year, this sample is updated with new information for each sampled faculty member. Newly hired female faculty (along with suitable male matches) are added every year as well.

*Baseline Data versus Intervention Years Data.* Evaluators requested that data submitted cover as many years before the ADVANCE project began as possible. The goal was to “stabilize” the baseline measure against which outcomes during the intervention years would be compared. Georgia Tech was able to provide two years to serve as baselines for comparison, 2000-2001 and 2001-2002. The evaluation intended to use this information to provide an average baseline measure for each outcome of interest. We were recently informed, however, that due to technical problems during a conversion
to a new data system at Georgia Tech, the 2000-2001 data underreport research faculty. After reviewing these data, as well as data provided for 2001-2002, we determined that the latter year (2001-2002) would be used as the baseline measure. Data for the previous year (2000-2001) are included in this report, but will be excluded from subsequent ones.

**Methods.** Data were analyzed to address each outcome required by NSF as well as those that are needed to assess all goals of ADVANCE as implemented at Georgia Tech. Hence, descriptive statistics are provided for all required outcomes (listed above). Most of them are provided based on statistics for the entire population of faculty at Georgia Tech. Hence, no statistical testing is needed to assess whether differences or changes observed over time are indeed present. In the case of analyses based on the ADVANCE sample created by Georgia Tech, statistical testing is used to determine if differences found (say, in starting salaries) are statistically significant. Lastly, at the request of Georgia Tech, evaluators also investigated the possibility of conducting multivariate analyses to study differences in salary among men and women faculty. Preliminary analyses (OLS regression models) were conducted following the “Paychecks” method.² If the additional data needed are provided, we will consider conducting multivariate analyses not only on salaries, but also on the other outcomes where controls are recommended—namely, start-up packages and space allocation.

**Findings (Objectives 1-4)**

**Faculty at Georgia Tech**

As Table 1 shows, women represent a small percentage of faculty at Georgia Tech. In the baseline year, 2001-2002, women accounted for only 16% of all faculty. After the first intervention year, this percentage rose to 17%. Both of these averages, however, conceal quite a bit of variation. At Ivan Allen College, these figures are 35 and 34 percent, while at the College of Engineering female faculty represented 13% of all faculty in 2002 and 14% in 2003. This variation is also evident among departments within each college, with some departments boasting much higher rates of female faculty enrollment than others (e.g., 9% in the Aerospace Engineering in 2002 versus 29% in Biomedical Engineering in the same year).

The one percent rise in women faculty between 2002 and 2003 is also unevenly distributed by department and college. For example, while the percentage of women faculty in Industrial and Systems Engineering remained constant (24%) between these two years, it rose by six percentage points in Biomedical Engineering and dropped by three percentage points in Regional Engineering. At the college level, the representation of women (as a percentage of all faculty) rose in engineering and sciences, and dropped in computing and social sciences (Ivan Allen). **But the number of women at each college**

rose in three of the four colleges participating in ADVANCE—namely, engineering, sciences, and Ivan Allen.

A review of the ethnic distribution of female faculty at Georgia Tech reveals that the great majority of faculty are white, with a small number of Asian/Pacific Islanders, a smaller number of Blacks and an even smaller number of Hispanics. This distribution stayed constant between the baseline and first intervention years, but the relative share held by minority faculty (as a whole) increased slightly. In the baseline year (2002), White faculty accounted for 75% of all faculty; in 2003, this figure dropped to 73%, as more minorities were hired in proportions in line with the aforementioned distribution of minority faculty.

Analysis by ADVANCE Objective:

Objective 1: Equitable Faculty Recruitment Patterns

A review of faculty hired in the last two academic years, 2001-2002 and 2002-2003, shows that about 21% of all new hires in 2001-2002 were women, versus about 19% of those hired in 2002-2003. In the College of Sciences, however, the percentage of new hires who were women increased in 2002-2003 from the previous year. As Table 2 shows, in the baseline year, women were hired at the assistant or associate professor rank. No rank data were available to compare hiring by rank in 2003 to the baseline.

Objective 2: Promotion and Retention of Women

Promotion and retention outcomes for women faculty are studied herein by analyzing the following: faculty rank, average time spent in each rank, tenure status, promotion and tenure, and attrition.

Faculty Rank

The above remarks regarding faculty recruitment patterns are confirmed by an analysis of rank data among Georgia Tech faculty. Table 3a presents data on faculty at each college by rank. It shows that women tend to hold assistant professor and associate professor ranks; 24% and 18%, respectively, of all faculty in these ranks were women in 2002. In contrast, women accounted for only 5% of professors and no Regents professors in that year. By 2003, this distribution had changed, at least in part as a result of promotions. This is suggested by the percentage of women assistant professors, which decreased from 24% to 20% while that of associate professors and professors increased (by 2 and 4 percentage points respectively).

A review of non-tenure-track positions suggests that women are overrepresented among these ranks. As mentioned earlier, women account for approximately 16-17% of all faculty. Yet, they account for 52% and 43%, respectively, of instructors and lecturers
in 2002 and 2003. While there was a drop in 2003, the opposite is true in the rank “non-professorial faculty,” where the percentage of women rose from 33% in 2002 to 67% of 2003. One caveat is warranted here. There are very few faculty in some of these categories. As a result, very small changes in faculty composition can have large proportional effects. (The departure of three male faculty from the non-professorial rank led to the aforementioned rise in the percentage of women in this category, although no new women were hired in this position.) Lastly, women also represent a large percentage of post-doctoral fellows (about 22%), and this has not changed much from the baseline, as both more women and more men were hired in 2003.

In the research faculty ranks, no significant changes occurred between baseline and 2003. Those (small) changes that appear at first sight are actually driven by changes in the number of male faculty. More interestingly, following the same pattern described above for the academic tenure-track positions, women tend to be in the Research I (25% average) and Research II (21%) positions, with a much smaller representation in the Senior Research ranks (5%).

As expected, these overall findings vary by college in familiar patterns. Ivan Allen tends to have much higher percentages of women faculty in higher ranks (22% of professors, compared to 2% in engineering in 2002), while the opposite is true of Engineering. This is confirmed by the distribution of gender within each rank (see the column labeled ‘% Women, of women faculty’ in Table 3a).

**Time Spent in Rank**

Table 3b presents data on the average number of years that faculty spend in each rank, by gender and year. This analysis is based on the ADVANCE sample at Georgia Tech, which contains all women faculty and a matched sample of men faculty. Overall, women faculty seemed to spend slightly more time (9 months) at the associate professor rank than men in 2002, but slightly less (3.7 months) in 2003. These differences were not, however, statistically significant. A review of these data by college shows that women seem to stay in rank longer at Ivan Allen and Sciences, but less time in Computing and Engineering. Given the small numbers of faculty used to calculate these differences, it is not surprising that none are statistically significant. It is interesting to note, however, that at the rank of professor, all differences go in the same direction: women spending less time than men in rank. Since there is no position after professor, this may reflect the fact that women are more recently hired (or promoted) to this rank than men. But these findings are also not significant.

**Tenure Status**

A study of tenure status reveals the same findings discussed above under rank. Table 4 shows the percentage of all faculty in any given year, position and tenure status who are women. Moreover, it also flags these percentages according to whether they imply that women are over-, under- or equitably-represented in each category. (The coding scheme underlying this typology is detailed in the “notes” section of Table 4.)
Overall, the analysis shows that women are more likely to be in non-tenured and tenure-track positions than men, and less likely to be tenured. They are also more likely to be assistant or associate professors (tenure track), and less likely to be full professors or senior researchers. In other words, they are overrepresented in the lower ranks and in tenure-track/non-tenure-track positions, and underrepresented in the higher ranks and in tenured positions. This pattern tends to hold for both academic and administrative positions.

There are indications, however, of positive improvements between the baseline and first intervention year. For example, the percentage of instructors and lecturers (non-tenure/non-tenure track) who are women declined between the two years. Similarly, the percentage of tenured professors in administrative positions increased as well. Again, one should not overemphasize these findings, as they are driven by very small changes in faculty. Moreover, more time has to elapse to see whether these patterns continue and lead to more equitable and permanent tenure outcomes for women faculty.

Promotion and Tenure Outcomes

The above analysis has suggested that women are being promoted at Georgia Tech. Table 5 addresses this issue directly. It shows that women constitute about 20% of all faculty considered for promotion in 2002, and 22% of those in 2003. This is above the 16% and 17% share of faculty positions held by women in those years. Moreover, 18% of all faculty recommended for a promotion in 2002 were women, and this figure rose in 2003 by six percentage points. The same is true among faculty considered for tenure, a pattern that becomes even more striking among those recommended for tenure. In 2002, 19% of all faculty recommended for tenure were women; in 2003 this figure rose to 36%.

Another way of analyzing this information is to look at the percentage of women who are recommended for a promotion among those considered for a promotion, or the percentage who are recommended for tenure among those considered for tenure. These figures show that 78% of women considered for a promotion in 2002 were indeed promoted (compared to 86% of men), a figure that rose to 90% for women and dropped to 80% for men in 2003. Similarly, 87% of women considered for tenure in 2002 obtained it (compared to 91% of men), but the following year 100% of women considered for tenure in 2003 obtained it (versus 84% of men). A clear change, in favor of promoting female faculty, is evident between 2002 and 2003.

Attrition

The last component of the analysis of promotion and retention of women focuses on the attrition rate. In 2002, the percentage of women and men who were terminated or who resigned was about the same (around 2%), reflecting of course much smaller numbers of actual faculty departures (3 women versus 16 men). In 2003, however, a slightly larger percentage of women than men left Georgia Tech (see Table 6). These overall rates do conceal quite a bit of variation by college, particularly in 2002. In
addition, one should note that in terms of absolute numbers, more men leave Georgia Tech than women. But since there are fewer women at Georgia Tech than men, a small number of women can have a greater impact on the size of the attrition rate. For example, in 2003, one female faculty in the College of Computing terminated or resigned, which led to a 6.25% drop in the female faculty representation in that college. One male departing from the same college in the same year, however, led to a drop in the proportion of male faculty of 1.2%.

Objective 3: Greater Representation of Women in Leadership Positions

To investigate the extent to which women were represented in leadership positions at Georgia Tech, data on the types of positions held by women faculty, as well as faculty participation on promotion and tenure committees were analyzed. Table 7 shows that, over the three years for which data are available, only two school chairs, one associate chair and one assistant dean academic position are held by women. The only change appears in 2003, when a woman associate dean academic is added. Moreover, in 2002, women accounted for only 12% of all chairs and professorships (a figure below the 16% of women faculty in the institute that year). This figure dropped in 2003 to 9% (or 8 positions). Very few women, then, hold leadership positions within the administrative structure of the colleges (see Tables 8 and 9). This is also true of participation on promotion and tenure committees. In 2002, 14% of committee members were women. With the net departure of 2 women in 2003 from these committees, this percentage dropped to 11%. Women are, therefore, still underrepresented in leadership positions.

Objective 4: Equitable Allocation of Resources

The last major objective of the ADVANCE project (that may be analyzed quantitatively) is the intention to move towards an equitable allocation of resources among Georgia Tech faculty. To study the allocation of resources at Georgia Tech, evaluators requested data regarding start-up packages, compensation (salaries), research support, space allocation, and workload. Evaluators will work with IRP at Georgia Tech to obtain a variant of the research support data submitted, which will be analyzed and reported next year. Data on all other measures were also submitted and their analyses follow.

Start-Up Packages

Sample data were analyzed on two important components of start-up packages: initial salary and months of summer support. Initial salary was calculated as the salary of the given faculty the year he or she was hired. On average, across ranks, women would appear to earn less than men, but these differences are not statistically significant. This is likely due, however, to the low number of observations (see Table 10a). Moreover, when studying salary differences by hire rank, it becomes evident that in some instances women earn more than men (assistant professors in 2002 and associate professors in
2003), while in others the reverse is true (associate professors in 2002 and full professors in 2003). There is also variation by college. Again, none of the differences are statistically significant. Based on the sample data, there is no evidence of gender differences in initial salary.

The other component of start-up packages analyzed was number of months of summer support offered to faculty upon hire (see Table 10b). As was the case with initial salary, no statistically significant differences were found between men and women faculty on number of months of summer support. There are, however, differences by rank of hire. At the assistant professor rank, women in 2002 and in 2003 received less months of summer support than men. This was also true of associate professors in 2003, but not of associate professors in 2002. As the sample size grows over time, it will be possible to determine whether these differences are statistically significant.
(Alternatively, if information on start-up packages for the project years is collected for all new hires—in instead of all women and a sample of men—then we will be able to determine if differences exist, as we will be examining data on the “population of new hires.”)

Faculty Salaries

Salary information was provided and analyzed for all faculty at Georgia Tech. As Table 11 shows, overall, women faculty tended to earn less than men in 2002 ($22,079), but more in 2003 ($18,425). Analyses of these differences by rank and college indicate that these differences are driven by certain colleges and ranks. Specifically, in the colleges of engineering, sciences and Ivan Allen, women earned less than men in both 2002 and 2003. In the college of computing, however, a negative gap (against women) in 2002 became a positive gap in 2003. This change, combined with reductions in the gap at the other three colleges between 2002 and 2003, leads to the above finding. While there appears to be a large salary gap in favor of men at three of the four colleges participating in ADVANCE, it is important to note that this gap decreased in 2003.

Salary differences disaggregated by rank are also revealing. These show that women assistant professors and professors earned less than men in both years ($2,340 and –$12,940 average, respectively). Among associate professors, salaries appear to be more equitable, with a small gender difference in salary favoring women in 2002 ($3,170) and men in 2003 ($1,041). As seen before, these differences are partly explained by differences in colleges.

In the college of computing, female assistant and associate professors earned more than men, on average, in 2002 and 2003. The opposite was true in Ivan Allen college. This would suggest that in departments that tend to have larger numbers of women faculty, their salaries tend to be lower (e.g., Ivan Allen). Conversely, in departments that tend to have less female faculty, these command higher average salaries than men (e.g., Computing). This statement does not apply, however, to professors. Reversing the trend just described, women professors at Ivan Allen command higher salaries (on average) than men, though the gap narrowed between 2002 and 2003. The
opposite, however, is true at the college of computing, where men have higher average salaries and this difference widened over time. Lastly, in the college of engineering, average salaries among assistant and associate professors are higher among men faculty, but the difference narrowed somewhat between 2002 and 2003. This narrowing trend is even more striking among engineering professors, whose average $15,100 lead over women in 2002 was replaced by a $10,500 difference in favor of women in 2003.

Space Allocation

Another measure of equity studied was space allocation, both office and laboratory space. Overall, a significant difference was found in laboratory but not office space. Male faculty, on average, receive more lab space than women (see Table 12). This finding is largely driven by the college of engineering that has a large and significant difference in lab space in favor of men. This college also assigns more office space to men, another significant finding. Similarly, associate professors at Ivan Allen seem to receive more laboratory space than women. Aside from these exceptions, however, space allocation was not significantly different between men and women faculty at Georgia Tech.

Faculty Workload

To assess the average workload of male versus female faculty, evaluators analyzed data on faculty work with graduate and undergraduate students, looking at both average number of students served and average number of hours spent working with students (see Tables 13 a-b). One important caveat is warranted. We need to consult with IRP regarding these data to insure that the analysis presented herein is appropriate. A more complete discussion of findings will be incorporated into next year’s report. This report will discuss overall gender differences in workload by college and rank, but conclusions should be interpreted with caution.

Overall, men faculty seem to work with more students and for more hours than women faculty. This finding is only significant, however, for the average difference of number of graduate students served by male versus female faculty. Studying this finding by college reveals other significant differences, all indicating a heavier workload for men. This is true in the college of sciences and to a lesser extent in engineering and computing.

Workload differences by rank are more complex. At the graduate level, assistant and associate professors seem to carry a heavier load than women (this relationship is significant in 2002, but non-significant in 2003). The opposite is true among professors, with women faculty having more students and hours of graduate level work, but this difference is again not significant. At the undergraduate level, the mirror image of the graduate level patterns are observed. Assistant professors (instead of full professors) have a 2002 workload differential in favor of men, and then one in favor of women the following year. Among associate and full professors, men serve more undergraduate students for a greater number of hours than female faculty—a finding that is only
statistically significant in the average number of undergraduate students served by associate professors in 2003.

**Summary of Findings (Objectives 1-4)**

This report presents data on the first intervention year and a baseline for comparison. One year is not sufficient time to assess the impact of an intervention. Important findings are nevertheless summarized below, but with the caveat that they represent changes after only one year of ADVANCE.

Women represent a small percentage of faculty at Georgia Tech. In the baseline year, 2001-2002, women accounted for only 16% of all faculty. After the first intervention year, this percentage rose to 17%. A review of the ethnic distribution of female faculty at Georgia Tech reveals that the great majority of faculty are white, with a small number of Asian/Pacific Islanders, a smaller number of Blacks and an even smaller number of Hispanics.

Overall, the analysis shows that women are more likely to be in non-tenured and tenure-track positions than men, and less likely to be tenured. They are also more likely to be assistant or associate professors (tenure track), and less likely to be full professors or senior researchers. In other words, they are overrepresented in the lower ranks and in tenure-track/non-tenure-track positions, and underrepresented in the higher ranks and in tenured positions. This pattern tends to hold for both academic and administrative positions. Women are also underrepresented in leadership positions.

There are indications, however, of positive improvements between the baseline and first intervention year. For example, the percentage of instructors and lecturers (non-tenure/non-tenure track) who are women declined between the two years. Promotion data show clear changes in favor of promoting female faculty. Similarly, the gap in salary between men and women, while still in favor of men at three of the four colleges participating in ADVANCE, decreased in 2003. One should not overemphasize these findings, however, as it is still early in the intervention. More time has to elapse to establish clear patterns of change (if any), and to see if these lead to more equitable and permanent outcomes for women faculty.

**Comments on Policy Changes (Objectives 5-9)**

As described in the project’s Year Two report to the National Science Foundation, the ADVANCE project at Georgia Tech has made considerable progress towards addressing Objectives 5 through 9. A survey of all tenured and tenure-track women and a stratified random sample of male faculty has been conducted to obtain data on faculty experiences and perceptions of facilitating and inhibiting organizational barriers to tenure and promotion. The project also used a survey to document current promotion and tenure procedures. These two research-based activities provide baseline data against
which to measure the progress of the GT ADVANCE project in meeting Objectives 6 through 9. Regarding Objective 5, which may be evaluated already, the project continues to make progress towards strengthening family friendly policies and practices. During the second year it sponsored a second round of requests for the use of the “Active Service-Modified Duties” procedures to enable faculty members to receive a flexible workload for family leave. A site for the first of five lactation facilities was built and a childcare center (established in partnership with the local community) opened in January of 2003.

Future Reports

Reports to be prepared in the next two project years will, like this one, analyze project outcomes based on all previous project years. The final external evaluation report will provide an analysis of the effect of the ADVANCE project over the five-year period. The report will aggregate the data collected over the five years of the project to assess its success in attaining each of the stated objectives. If necessary data are available, it will also provide multivariate analyses of key outcomes of interest.