# 2017 Faculty Salary Equity Study <br> <br> Computer Sciences 

 <br> <br> Computer Sciences}

## Overview

In 2015, a joint Administration-Academic Senate Committee redesigned our annual campus pay equity study of ladder rank faculty salaries. The analysis includes an examination of equity by gender and ethnicity for the campus overall and by academic school that go beyond the annual residual analysis conducted in the past (1997-2014). Analysis of salary data from October 2016 indicate no evidence of systemic disparity in pay associated with gender and/or ethnicity at the campus level when experience, discipline, and rank are included in the model.

## Methodology (see campus level report)

## Results

1. Salary data for all ladder rank faculty plotted as a function of rank/step/gender and rank/step ethnicity.

Graph 1: ICS, Salary by Rank/Step and Gender


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Graph 2: ICS, Salary by Rank/Step and Ethnicity

2. Multiple regression analysis of salary vs rank/step. As indicated in Table 1, the simplest model with only demographic variables shows that relative to white male faculty, women earn salaries that are $0.5 \%$ higher, Asian faculty earn $13 \%$ and URM faculty earn $13 \%$ lower. Only $6 \%$ of salary variation is explained by this model. After all control factors are added, $94 \%$ of salary variation is explained by a model with demographic, experience, field, and rank variables. After adjusting for covariates, relative to white male faculty, salaries are $1 \%$ lower for faculty who are women, $2 \%$ higher for Asian, and $5 \%$ lower for URM faculty. This model also shows demographic variables are not statistically significant.

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Table 1.

| Submodel ${ }^{1}$ | R-sq | Significant <br> Variables | Salary Difference |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Women vs White Men | Asian vs White Men | URM vs White Men |
| 1 Demography | 0.06 |  | 0.5\% | -13.1\% | -13.4\% |
| 2 Demography, Experience | 0.74 | Experience*** | -5.5\% | 2.9\% | -9.8\% |
| 3 Demog, Exper, Field | 0.77 | Experience***, Field* | -5.0\% | 2.5\% | -12.1\% |
| 4 Demog, Exper, Field, Rank | 0.94 | Market**, Rank** | -1.1\% | 1.5\% | -3.7\% |
| 5 Demog, Exper, Field, Rank ${ }^{2}$ | 0.94 | $\begin{aligned} & \text { Experience**, Field**, } \\ & \text { Rank*** } \end{aligned}$ | -1.2\% | 1.9\% | -4.5\% |
| ${ }^{*}$ p<0.05, **p<0.01, ${ }^{* * *}{ }^{\text {p }}<0.001$ |  |  |  |  |  |
| ${ }^{1}$ Experience includes years of services, years since degree, decade of hire. Field includes department and the market ratio of salaries tied to the faculty member's department. Rank includes their starting rank at UCI, their current rank at UCI, and where they stand in relation to normal progress. |  |  |  |  |  |
| ${ }^{2}$ Final model corrected for collinearity. |  |  |  |  |  |

3. Progress Rate plotted as a function of gender and ethnicity

Graph 3: ICS, Salary by Progress and Gender


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Graph 4: ICS, Salary by Progress and Ethnicity

4. Progress Rate Analysis: Using a simple t-test, the results indicate that there is no statistically significant difference in progression rate means by gender when compared to white male faculty. However, URM faculty progress at a rate that is 2.4 years slower than white males ( $\mathrm{p}=.020$ ).

Progress Rate (in years) Comparison

| Comparison | $n$ | Mean | t | df | p-value |
| :--- | :---: | :---: | :---: | :---: | :---: |
| White Male vs | 35 | 1.91 |  |  |  |
| Women | 17 | 1.71 | -0.16 | 50 | 0.875 |
| URM $^{\text {a }}$ | 4 | -0.50 | -2.49 | 25 | 0.020 |
| Asian | 18 | 2.17 | 0.18 | 51 | 0.860 |

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[^0]:    ${ }^{\text {a }}$ Homogeneity of variance assumption not met. Satterthwaite variance estimator used.

