Diversity in the Minerals, Metals, and Materials Professions The Minerals, Metals and Materials Society Diversity Throughout Science and Engineering Mildred Dresselhaus Massachusetts Institute of Technology July 31, 2014


## Women physics faculty (\%)

|  | $\mathbf{1 9 9 8}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 1 0}$ |
| :--- | ---: | ---: | ---: | ---: |
| by rank |  |  |  |  |
| Full prof | 3 | 5 | 6 | 8 |
| Assoc prof | 10 | 11 | 14 | 15 |
| Asst prof | 17 | 16 | 17 | 22 |
| Instructor/adjunct | na | 16 | 19 | 21 |
| other | 13 | 15 | 12 | 18 |
| by highest degree |  |  |  |  |
| offered by dept |  |  |  |  |
| PhD | 6 | 7 | 10 | 12 |
| Master's | 9 | 13 | 14 | 15 |
| Bachelor's | 11 | 14 | 15 | 17 |
| Overall | $\mathbf{8}$ | $\mathbf{1 0}$ | $\mathbf{1 2}$ | $\mathbf{1 4}$ |

## Women new-hires, physics (\%)

|  | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 1 0}$ |
| :--- | :---: | :---: | :---: |
| Full prof | 9 | 10 | 20 |
| Assoc prof | 8 | 20 | 14 |
| Asst prof | 25 | 22 | 29 |
| Instructor/Adjunct | 23 | 23 | 24 |
| Overall | $\mathbf{2 2}$ | $\mathbf{2 1}$ | $\mathbf{2 6}$ |

## Physics new-hires



## Women faculty in physics \& astronomy departments, by highest degree granted by department



Physics department with any women faculty, by highest degree granted, 2009-10

| PhD | $91 \%$ <br> $(192)$ |
| :--- | :--- |

Master's 63\%
(63)

Bachelor's 52\%
(503)

Overall 63\%
(758)

## Percentage of PhD-granting physics

 departments by number of women faculty|  | 2006 | 2010 |
| :--- | ---: | ---: |
| 0 | 15 | 8 |
| 1 | 24 | 21 |
| 2 | 21 | 20 |
| 3 | 18 | 21 |
| 4 | 8 | 14 |
| $5+$ | 12 | 15 |

## Race and ethnicity, physics faculty

|  | Physics |  |  | All fields |
| :--- | ---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 0 9}$ |
| African-American | 2.0 | 2.2 | 2.1 | 6.6 |
| Asian | 10.6 | 13.2 | 14.3 | 6.0 |
| Hispanic | 2.7 | 3.1 | 3.2 | 4.0 |
| White | 82.2 | 80.0 | 79.2 | 74.9 |
| Other | 2.2 | 1.5 | 1.2 | 0.5 |

## Physics departments with any African-American or Hispanic faculty

|  | Highest degree |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | PhD | Master's | Bachelor's | Total |
| both | 16 | 3 | 9 | 28 |
|  | $8 \%$ | $5 \%$ | $2 \%$ | $4 \%$ |
| African-American and | 19 | 11 | 47 | 77 |
| no Hispanic | $10 \%$ | $18 \%$ | $9 \%$ | $10 \%$ |
| Hispanic and | 79 | 23 | 56 | 158 |
| no African-American | $41 \%$ | $38 \%$ | $11 \%$ | $21 \%$ |
| neither | 78 | 24 | 381 | 483 |
|  | $40 \%$ | $39 \%$ | $75 \%$ | $65 \%$ |
| total | 192 | 61 | 511 | 746 |

47\% of African-American physics faculty work at historically black colleges and universities (which hold $4 \%$ of all physics departments)

## Physics faculty,

highest degree granted by department


Diversity is slowly increasing with time Increases at full professor level are strongest, but percentages remain low Percentage increases are lowest at PhDgranting institutions, but percentages are lowest here

Physics and engineering continue to lag other fields More encouragement about career opportunities is needed

