



**Georgia Institute  
of Technology**

# **Increasing the Diversity of the Engineering Pipeline**

By

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# Panelists

- Ray Mellado, Chairman and CEO, Great Minds in STEM, K-12 STEM Pipeline
- Ashok Saxena, Dean, College of Engineering, University of Arkansas, The Undergraduate Pipeline
- Sarah Rajala, Dean of the Bagley College of Engineering, Mississippi State University, The Graduate Pipeline
- Darryll Pines, Dean, College of Engineering, University of Maryland, The Faculty Pipeline

## Why the leaky pipeline?

- Economic
- Lower expectations
- Lack of mentors, community, role models
- Organizational biases: central vs local
- Lack of commitment from individuals in position to make changes
- Discrimination

# Solutions

- Make it a priority: speak loud and clearly
- Make it a priority: insist on commitment from those you appoint or respond to you
- Make it a priority: act, be pro-active, provide check and balances, walk the talk
- Raise expectations and recognition
- Provide resources
- Team up, the solution cannot be locally sustained

## Best Practices @ GT

- Speak Loud and Clearly: VP For Institute Diversity – cabinet member, strategic plan statement
- Insist on Commitment: first African American woman dean, first hispanic provost
- Act, be pro-active, provide check and balances, walk the talk: search committees, role of VPD, OME, Office of Hispanic Initiatives
- Raise expectations and recognition: 50<sup>th</sup> year 1<sup>st</sup> African American students, SURE, FOCUS, FACES
- Provide resources: 2.5M tuition waivers, target of opportunity hires
- Team up: Moorehouse, Spellman, Goizueta, state-outreach

# Results

- Fall 2010 freshman class diversity:
  - Female students in the Freshman class 37%
  - African Amer. Freshmen up 53% in one year (93 to 148)
  - Hispanic Freshmen up 63% in one year (114 to 188)
- Underrepresented minority Tenure/tenure-track faculty
  - African American Faculty increased 25% in four years
  - Number of Hispanic Faculty up 58% in four year
- First MS, PhD degrees to African Americans
- First US Grad Eng School by Hispanic Business



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- Question to Ray for K-12 Pipeline—Why should universities be interested in becoming more involved in K-12 education if the institution’s academic mission is one devoted to higher education?
- Question to Ashok for Undergraduate Pipeline—why do companies and industries always decry the fact there are not enough engineers, but fail to provide the incentives and salaries to engineers as other industries provide for other professionals.

- Question to Sarah for Graduate Pipeline—why aren't graduate schools seeing the same increase in diversity of students that is occurring at the undergraduate level? Is one of the factors the fact that admissions offices for undergraduate education are centrally administered while graduate schools have admission committees by departments or other smaller groups?
- Question to Darryll for Faculty Pipeline—We have seen that progress has been made with respect to women entering the professorial ranks but why is there not a track record of similar success with respect to the number of minorities entering academia?