Opening Thoughts

• **Not** about obtaining tenure
• It is about
  – Becoming a dynamic faculty member
  – Making a significant impact
• My advice
  – Focus on impact
  – Tenure will work itself out
  – Don’t worry about it
Opening Thoughts

• Okay
• Enough of the platitudes
• Now I will tell you how to get tenure
Building a Research Program

• Scholarship
  – Find out what the requirements are and make sure you are within them
  – While there is no substitute for high quality scholarship, all of your publications will not be at the same level
  – Balance between highly respected and second tier journals
  – Stay away from journals that lack the respect of your colleagues
Building a Research Program

• Scholarship
  – Submit a list of suggested reviewers with every paper (reviewers that you know, and know you)
  – Use conferences and conference publications as a testing ground for new ideas
    • Use the preliminary program to determine what papers you will attend
    • Use the remaining time to network
    • Use the conference to generate new ideas for your own work
  – Learn to write and write well
    • You may need to sit in a writing course
Building a Research Program

• Know the cognizant program managers in all agencies related to your success
  – NSF hit rates are **below 10%**
    • If your research program **only** consists of NSF submittals, you are swimming up hill
  – Attend the pertinent conferences that these program managers attend, and let them know what you are doing
  – Be willing to *reinvent* yourself
    • Take what you *know* and apply it to other areas
    • Stay ahead of the curve
    • Investigate new areas
    • Talk to people outside of your research area
Building a Research Program

- Future research will be platform or application specific
  - Energy related research
    - environmental issues, resilience, sustainability
    - renewable energy, energy storage, smart grid
  - High Performance Computing
    - turbulence, combustion, astrophysics, geosciences
    - genomics, molecular dynamics, imaging, biomedicine
    - transportation, homeland security
  - Interdisciplinary Materials Research
    - biomaterials, photonic-based systems
    - materials exhibiting self-repair, diagnosis, and replication
  - Interdisciplinary Systems
    - biologically inspired systems, smart/intelligent systems
  - Think about how to leverage industrial related work
Building a Research Program

• **Building a strong reputation**
  – People **must** know you
  – No reputation is worse than a controversial one
    • The easiest way to become known is to work for it
      – Join a societal technical committee related to your research area and *volunteer* for something
      – Ask successful people if they need help and help them!
  – Spend at least **one** summer somewhere else (e.g., national labs, other universities, etc.)
  – Use your **local** network to give invited talks
Students

- **Students are extremely important to your success**
  - Interview potential students
    - Go beyond their undergrad university and GRE
    - Make sure their research interests truly fit your own
      - Ask questions
      - “What have you done that highlights your interests?”
  - Develop students from the undergrad level
  - Use faculty contacts at other universities
  - Look for the *fire in the belly*
Teaching

• Teaching is important but it is **binary**
  – Teaching is the **one** common thing
  – If you are exceptional in teaching, it helps
  – If you are a poor teacher, it hurts
  – Good teaching creates good students at all levels
  – Try to fuse your teaching and research
    • You learn best by teaching!
    • Develop or teach courses in your research area
    • Bring research examples into the class
    • Hire undergrads to build demonstrations or simulations for classes at all levels
Final Thoughts

• Develop 5 ways to **respectfully** say NO
• If you are doing what you are supposed to do,
  – you are successful, and
  – you are having problems,
  – tell Noel - we will work on solutions
• Find good mentors and use them
  – Your best mentors are close by
  – **But** you should have mentors from all walks of life
• Utilize the wealth of the people that you have around you
**Question:** Do untenured faculty walk faster than other faculty?
Here Is What the Study Revealed

[Cartoon with a professor saying, "Young Assistant Professor:"]

How to tell the difference between a tenured and an untenured professor:

- Walking speed
  - Tenure
  - Emeritus

Year as a professor

[Graph showing a decrease in walking speed over time, with a peak at tenure and a decline after that, leading to Emeritus status.]
Later You Will Be Able to Relax & Walk More Slowly

How to tell the difference between a tenured and an untenured professor:

Walking speed

Year as a professor

Tenure

Emeritus

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