

Your Issues and Solutions

AP Seminar Fall 2014



COLUMBIA | ENGINEERING
The Fu Foundation School of Engineering and Applied Science



Assignment for Next Week

- What motivates your interest in applied physics?
- What are the leading issues facing our nation today? (no more than three)
- How can science (in general) and applied physics (in particular) contribute solutions to our nation's leading issues?

**Send by email to mauel@columbia.edu
before C.O.B. this Friday**

What motivates your interests in Applied Physics?

- Curiosity about the unknown, mathematics, and our beautiful universe (10)
- Applying knowledge to improve the world and our environment (4)
- Understanding how things work (3)
- Developing renewable/clean energy systems (2)
- Materials and condensed matter physics (1)

What are the leading issues facing our nation today?

- Global warming, climate change, clean/renewable energy, and over population (17)
- Unemployment, poverty, automation (9)
- Education and parenting (5)
- Social upheaval, racism, civil rights (5)
- Security, preventing war, and national defense (3)
- Political stalemate/gridlock (3)
- Disease (2)
- Advancing and protecting space technology (1)
- Supporting basic research (1)

How can science and applied physics contribute Solutions to our nation's leading issues?

- Develop clean/renewable energy sources and techniques to minimize climate change (14)
- Create new jobs, economic growth, advancing technology, and enhanced productivity of our national workforce (10)
- Improve education and promote social well-being (5)
- Discovery and invention (3)
- Cure disease and improve health care (2)
- Improving national security (2)

Science Policy Committees

Red

White

Blue

Green

Thaer Al-Sheikh Theeb

Isabel Baransky

Ross Basri

Sergio Becerra

Haris Durrani

Adrian Febre

Mark Greenan

Maksim Grinchenko

Minyong Han

Cole Stephens

Ari Turkiewicz

Anton Baleato Lizancos

Sean Ballinger

Joshua Cohen

Richard Creswell

Jonathan Fletcher

Omar Mahmood

Seth Olsen

Jason Williams

Lucas Zeppetello

Seminar Plan

- Ad hoc science policy panels: **4 committees of five**
- Present **draft charge letter** for my review and in-class discussion
- Gather information, discuss, develop group consensus
- Present **interim report** and in-class discussion
- Present **Science Policy Brief** to senior elected official/decision maker
- Draft **op-ed for NY Times**, advocating/explaining your policy recommendation to general public

Next Week

- Contact everyone in your policy committee
- Discuss and listen:

How can you apply your understanding of applied physics to address a national policy issue?

- Report one or more ideas next week.

(One or two sentences please.)