

# UNDERGRADUATE RESEARCH INFORMATION

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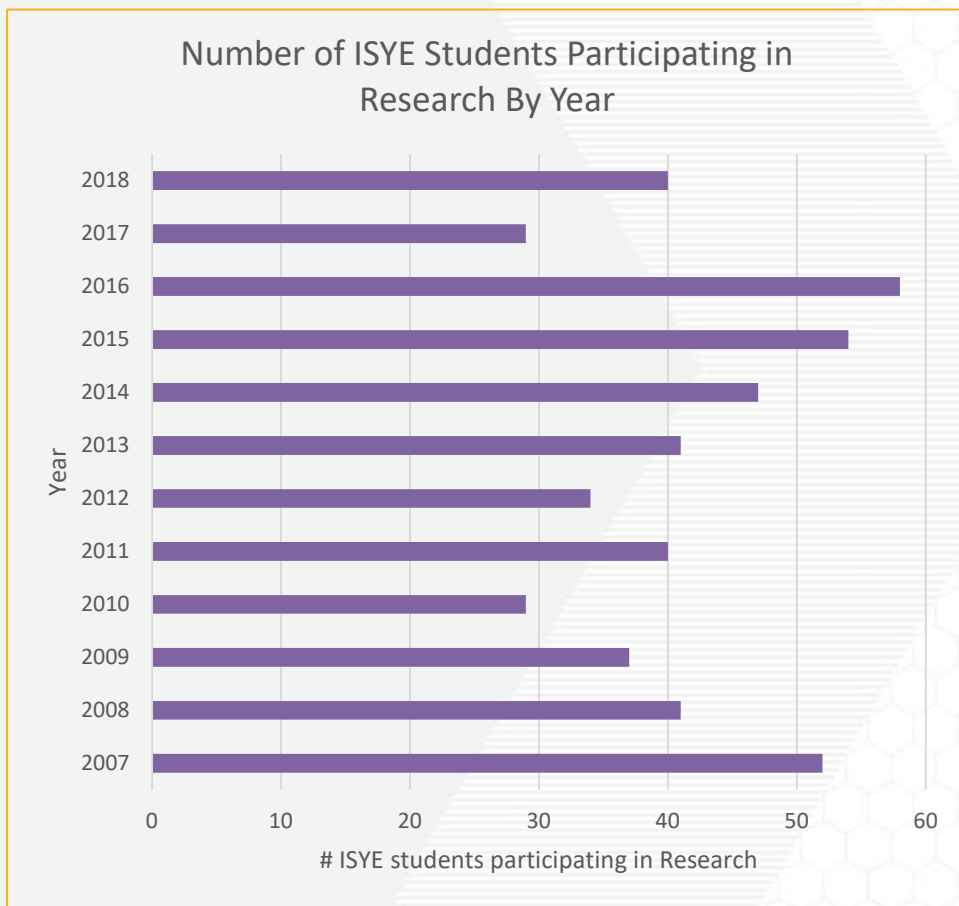
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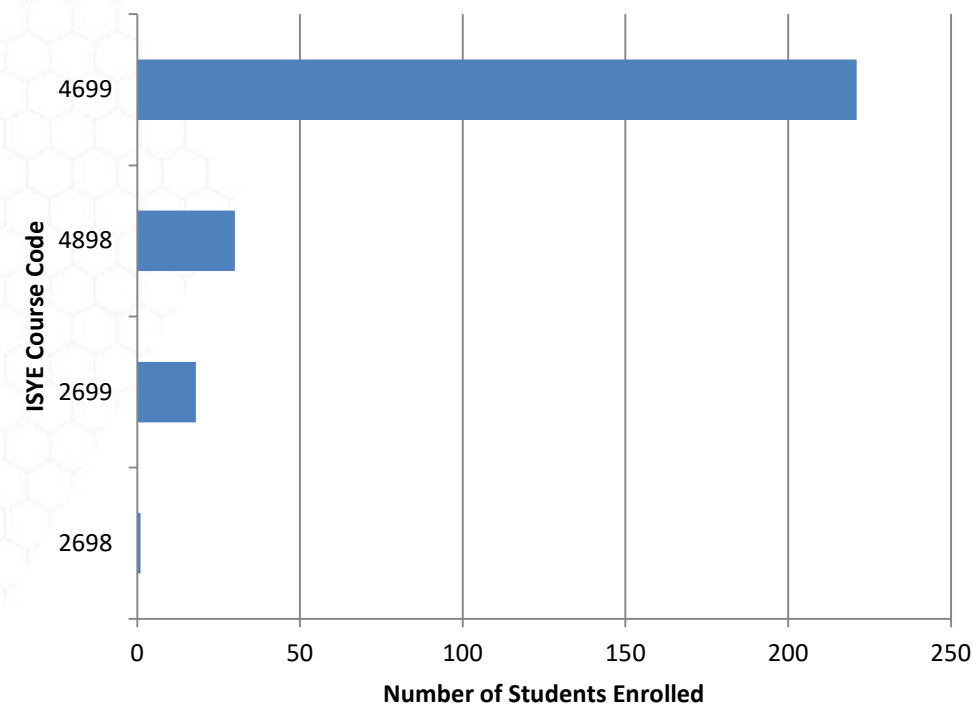
# Agenda

- Overview
- Professors talk about what they are looking for and potential projects
- Students share experiences
- Q/A

# Number of students found research opportunities



### Number of Students Enrolled in ISYE Research Courses



# Undergraduate Research

- Is
  - Free elective
  - 1 – 3 credits or pay
  - Letter grade or P/F, depending faculty
- Is not
  - Best way to learn IE
  - GPA booster (faculty may not take low GPA student)
- [President's Undergrad Research Award](#)

# What professors said

- Try something you are passionate about
- Try something for fun
- Be independent learner and researcher
- Be willing to take a risk: not afraid of failure
- Work with world class faculty members
- Have background or be good at what you want to do
  
- Past students have won awards!

# How to find research opportunity

- Do your homework
  - Faculty websites
  - Read this introduction
- Send good e-mail
- Show curiosity and aptitude in your classes
- ...

# Partial list of faculty supervisors

- Ayer, health systems, fun things
- Bartholdi, VIP projects
- Boland, optimization apps
- Deng: financial systems
- Dey: optimization
- Foley: applied probability
- Goldberg: applied probability
- Goldsman: fun things
- Gupta: On-line learning
- Huo: machine learning
- Keskinocak, humanitarian
- Kim: simulation
- Lu: analytics
- Mei: statistics, data mining
- Maguluri: Resource in data ctrs
- Montreuil: Physical Internet
- Nazzal: Robotic order picking
- Paynabar: analytics
- Pokutta: optimization
- Serban, health system analytics
- Sokol: sports analytics
- Sun: power system
- Thomas: energy
- Tovey: interesting things
- Van Hentenryck: Mobility
- Xie: analytics
- Zhang (Chuck): 3-D printing
- Zhao: machine Learning
- Zhou (Chen): Shared bikes, scooters, food supply chain and health

# Students participated research suggest

- Engage with faculty early, build connection & interest
- Develop computing skills in classes/internships
  - Python/R
  - SQL/Excel
  - Optimization, simulation, etc.
- Get pre-exposure to research
  - VIP, UROP, Summer REU, research fairs and presentations
  - Approach directions of focus with an open mind



# Registration Procedure

1. Student
  - Find an advisor
2. Request for Undergraduate Research Approval
  - For Credit: ISYE 2699/4699, [on-line form](#)
  - For Pay: ISYE 2698/4698, [paper form](#)
3. Advisor approval
  - Approval by Friday at 9 AM on last day of Phase II
4. Zhou approval
  - Approve or disapprove
5. Register if approved
  - make sure to select P/F or Letter grade, and number of credit.

# Questions?

