Alpha Pi Mu Undergraduate Research Information Session
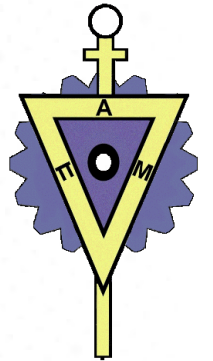
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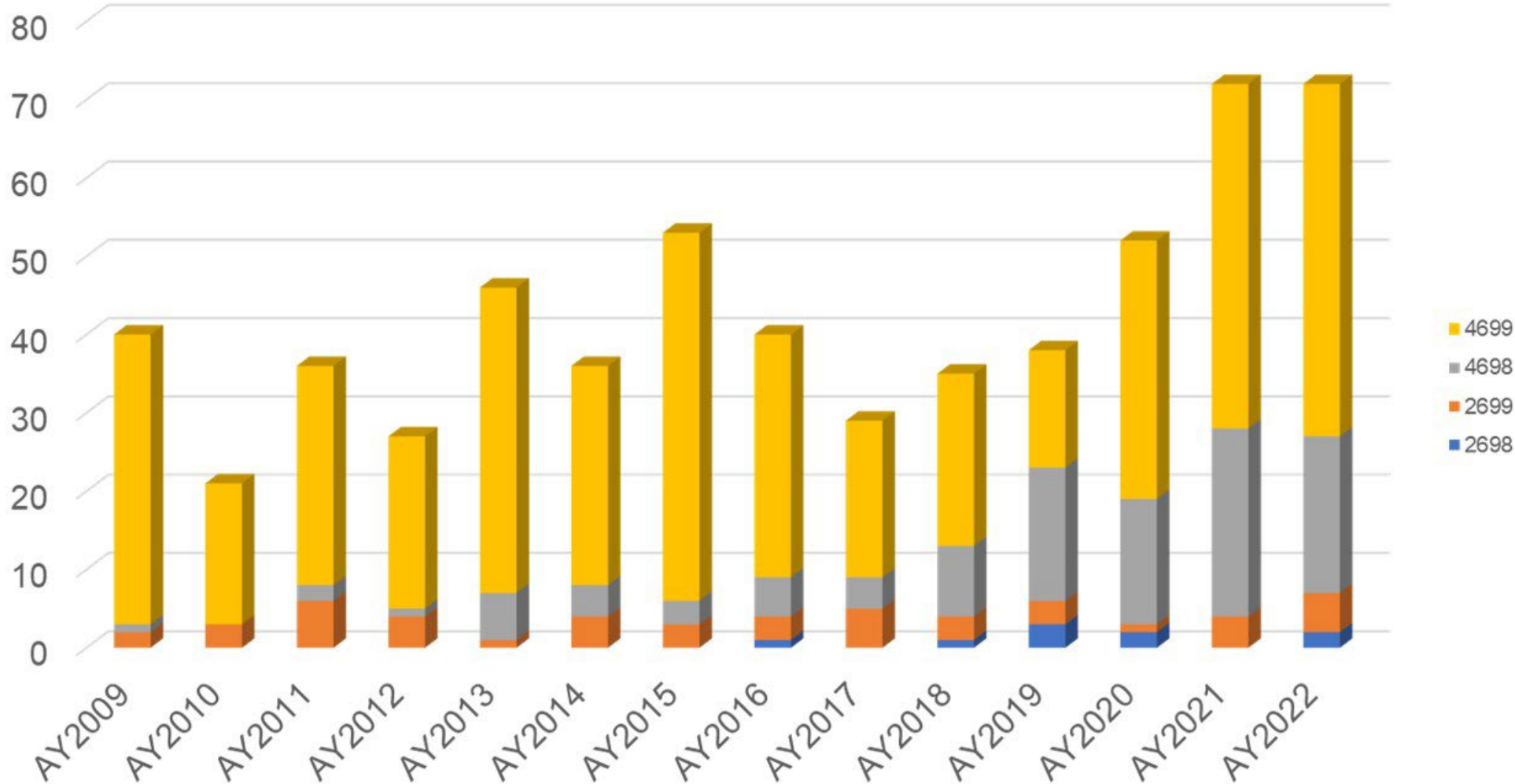
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Agenda

- Chen Zhou overview
- Professors Thomas, Yang and Delarue present their research
- Q/A

Students found research opportunities: Increasing!

Undergraduate Research Enrollment

Undergraduate Research

- Is
  - A way to learn something you are interested in and passionate about
  - Learn something new
  - Good preparation for graduate school, especially PhD
  - Free elective
  - 1 – 3 credits or pay
  - Letter grade or P/F, depending on faculty
- Is not
  - Best way to learn IE
  - GPA booster (faculty may not take low GPA students)
- President's Undergrad Research Award (PURA)
- GT Undergraduate Research Option*

What professors said

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

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Students participated in research suggest

- Engage with faculty early, build connection & interest

- Take your coursework seriously and learn beyond grade

- 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

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How to find research opportunity

- Do your homework
  - Faculty websites
  - Read this introduction

- Send good e-mail
  - Explain why you are interested in the research
  - Connect to your skillset and past experience to the faculty's research

- Show curiosity and aptitude in your classes

- …

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Partial list of faculty supervisors

- Alexopoulos: Simulation
- Ayer: health systems, fun things
- Deng: financial systems
- Dey: optimization
- Foley: applied probability
- Garcia: analytics for health
- Gebraeel: prognostics
- Goldsman: fun things
- Gupta: On-line learning
- Huo: machine learning
- Keskinocak, humanitarian logistics
- Kim: simulation

- Lu: analytics
- Mei: statistics, data mining
- Maguluri: Resource in data centers
- Montreuil: SC, Physical Internet
- Nazzal: Election system
- Pananjady: Analytics on fairness
- Paynabar: analytics
- Peeta: Smart transportation
- Serban: health system analytics
- Steimle: Health systems
- Sokol: sports analytics
- Thomas: energy, sustainability

- Tovey: interesting things
- Van Hentenryck: Mobility
- Xie: analytics
- Yang: Health, data analysis
- Zhang (Chuck): 3-D printing
- Zhao: Machine Learning
- Zhou (Chen): Healthy food SC, cost of low-cost food, cost of unwell

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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, on-line 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.

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