# EE 449 Computer Communication Networks

Instructor: Paul Schmitt

https://teaching.pschmitt.net/EE449\_Spring2023/

# **Introductions**

#### Who am I?

#### https://pschmitt.net

- Academic network connectivity and privacy researcher
  - Grad school at UC Santa Barbara
  - Postdoc and Research Faculty at Princeton
  - Startup co-founder
- Main focuses
  - Bolting privacy and security onto systems that we all use
  - Mobile networks
  - Connectivity in challenging environments





### Why networking, security, and privacy?

- Very broad area

- It's **important** and we are **terrible at it** 
  - Lots of research problems
  - Real-world impact

# **Course Overview**

#### Administrivia

- Class site <a href="https://teaching.pschmitt.net/EE449">https://teaching.pschmitt.net/EE449</a> Spring2023/

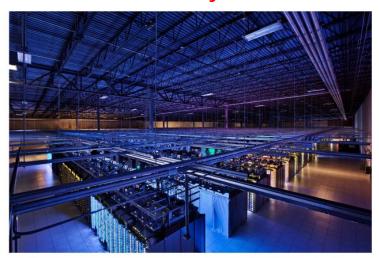
- Grading:
  - Midterm Exam: 35%
  - Final Exam: 35%
  - Exercises / Internet Routing Project: 25%
  - Class Participation: 5%

#### **Course Goals**

- Understand how the Internet works and why



from your network plug...



...to mega-scale data-centers

Naming Layering Routing Reliability Sharing

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How do you address computers, services, protocols?

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How do you manage complexity?

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How do you get from A to B?

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How do you communicate reliably using unreliable mediums?

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How do you divide scarce resources among competing parties?

#### Course Goals: Skills

Build, operate, configure networks