EE368c

- Advanced Topics in Image, Video and Multimedia Systems

- Targets students interested to carry out research in this area

- Prerequisites: EE261, EE278, recommended EE368b

- Emphasis on systems aspects

- Topics covered depend on students' interests

People

- Bernd Girod, Professor, EE&CS, *bgirod @stanford.edu*

- Eckehard Steinbach, Consulting Assistant Professor, EE, *steinb @stanford.edu*

- TA: t.b.a., temporarily Sung-Won Yoon,

- ISE lab TA: Sung-Won Yoon, *yoons1 @stanford.edu*

- Course admin: Kelly Yilmaz, *yilmaz @stanford.edu*

Areas of interest

- Media server architectures

- Audio and video streaming over the Internet

- Internet telephony

- Wireless multimedia

- Watermarking and authentication of multimedia documents

- Synthetic-natural hybrid coding

- Vision and graphics techniques in image communication

- Networked video and graphics applications

EE368c format

- **Presentations by students, guest lecturers, and instructors**

- **Students pick topic for a small research project at the start of the quarter**

- **Project groups encouraged**

- **Each project group presents twice**
  - Background and project proposal after 3-4 weeks
  - Final presentation in March

- **Will support travel for a conference presentation of outstanding project(s)**

EE368c grading

- NO exams

- First in-class presentation **10%**

- Final in-class presentation **15%**

- Quality and originality of project **35%**

- Web report **20%**

- Peer review of other proposal **10%**

- Peer review of other project **10%**

EE368c schedule

- Two regular slots per week for class meetings:

  ## *Tu, Th 4:15-5:30*

- See Web for current class schedule

- Some of the guest lectures will be joint with EE392J, *Mo, We, 4:15-5:30 p.m.* Students with conflicts can be excused.

Guest lectures

- Michaela van der Schaar, Philips Research: Video Coding with Fine-grained Scalability

- Minerva Yeung, Intel: Multimedia Technology and Infrastructure for Emerging Applications - from Desktop to Wireless to Peer-to-Peer.

- Kannan Ramchandran, UC Berkeley: Distributed Compression: Theory and Practice

- Ali Tabatabai, Sony Research: An Introduction to MPEG-7 Standards

- Avideh Zakhor, UC Berkeley: Unicast and Multicast video streaming over packet switched networks.

- More have been invited . . .

Picking your project topic

- Form teams and declare area *by Thursday, Jan. 11*

- Begin reading papers immediately

- Identify open question(s) or new idea(s) that you want to investigate

- It is o.k. if open questions/new ideas are related to your ongoing research

- Submit a written project proposal (400 words + workplan + references) by email by Feb. 2, earlier if you can.

- Approval of project shortly after submission of written proposal and class-room presentation