

Project Assignment: Critical Review Presentation

Abstract Due: 5 p.m. 10/3/03

Paper Due: 5 p.m. 11/21/03

Oral Presentations: Dec. 3, 8, and 10, 8:00 – 9:20 a.m.

The oral presentation should include a very short summary of the critical review paper. Each speaker will be allotted a *strict* 8 min for the presentation, plus up to 4 min for questions and discussion. In order to provide a quick transition between speakers, Huijie has volunteered to use his AFS space for all presentations. Email Huijie ([hleng@nd.edu](mailto:hleng@nd.edu)) a copy of your presentation by 5 p.m. the day before your presentation

### Wednesday, December 3

Paul Nebosky	“Plastic deformation mechanisms during compression of open-cell metallic foams”
Jan Hryniewiecki	“Noise generation and friction material modeling in braking systems”
Anthony Pilcher	“The modeling of low cycle fatigue in particulate reinforced metal matrix composites”
Darrell Duffek	“Fatigue-Creep Behavior in solder joints under thermal and/or mechanical cycling”
Roman Kazban	“Testing of the mechanical properties of aluminum and its alloys at high strain rates”
Xiangyi Liu	“Ligaments and tendons: Structure vs. mechanical properties”

### Monday, December 8

Joshua Johnson	“Of viscous creep in grain boundaries of ceramics”
Gabe Converse	“Size-scale effects on mechanical properties of particle reinforced polymer composites”
Joe Van Nausdle	“Osteoblast response under various loading patterns: A quasi-critical review”
Weimin Yue	“Biomimetic hydroxyapatite-polymer composites for human bone repair”
Yifie Dai	“Critical review: Mechanical properties of cancellous bone”
Brent Mitchell	“Similarities of composite hydrogels and soft tissue”

### Wednesday, December 10

Huijie Leng	“Microdamage of cortical bone: Initiation, propagation and effects on mechanical properties”
Yue Li	“A review of materials used for cups and balls in total hip replacement”
Jules J. VanDersarl	“Microstructural mechanisms in cortical bone fracture”
Dan Masse	“Self-healing methods and mechanisms in composites”
Jingzhou Zhang	“Processing, microstructure and mechanical properties of YAG-Al <sub>2</sub> O <sub>3</sub> composites”
Alejandro Espinoza	“Cortical bone microstructure and anisotropy of mechanical properties”