

Student Groups

Group A: Sollero/Todd/Williams

Marcus Abrantes (COPPE-UFRJ)
Harold Kess (Purdue)
Rodrigo Marques (VT)
Eduardo Menin (UnB)
Adriano Tebaldi (UNESP)

Group B:

Robertson/Kosmatka/Lopes

Roberto Amaro Baldeon (UEdC)
Shanna McCord (Stanford)
Dan Peairs (VT)
Danuza Santana (FUofU)
Sanderson Souza (COPPE-UFRJ)

Group C: Sohn/Pascual

Enrique Castodeza (COPPE – UFRJ)
Luke Martin (VT)
Viviana Meruane (UofChile)
Trevor Tippetts (LANL)
Jose Tarpani (Eng.Sch. Sao Carlos)

Group D: Hemez/Farrar/Rade

Cristiano Garibotti (UFRGS)
Ben Grisso (VT)
Nathan Flesher (Stanford)
Simone Hoeffel (UEdC)
Jose Moura (FUofU)

Group E: Roemer/Adams

Samuel da Silva (UNESP)
Ilvan Pedreira (FUofU)
Ajay Raghavan (UofM)
Mark Robinson (UCSD)
Joao Carlos Arantes (UFSC)

Student Projects

In order to help you become involved in Damage Prognosis and affect a "learn by doing" atmosphere we are splitting you up into 5 groups.

AT LEAST ONE MEMBER OF EACH TEAM SHOULD HAVE A LAPTOP.

The task of each group is to:

- 1) Define a mechanical structure/system of interest to every one in the group. (We have suggestions)
- 2) Once you have defined a structure to focus on, define a structural health monitoring approach for this structure.
 - Define damage of concern
 - What are economic/life-safety implications of successful damage detection and prognosis?
 - How would you “sell” the idea to corporate management and get them to invest?

Student Problems (Cont.)

- 3) With a damage model defined, and SHM completed, determine a damage prognosis model based on your SHM and knowledge of, or assumption of, future loads.
- 4) Write a description of how you would implement this prognosis method
 - Hardware and software
 - What tests are needed to determine predictive model parameters
 - What tests are needed to validate the predictive model
 - What technology can be applied directly
 - What are the gaps in current technology that must be overcome
- 5) Prepare this all in a final presentation of approximately 10 slides for the last day of the workshop.

Student Problems

- **Developing a damaged-based leasing approach for mining equipment**
- **Impact damage to composite wing in unmanned aerial vehicle.**
- **Monitoring and Prognosis of amusement park rides**
- **Damage to hinges on aircraft cargo loading doors**
- **Cracks in commercial air frames**