

NSERC DESIGN ENGINEERING CHAIR DESIGN FOR EXTREME ENVIRONMENTS

Undergraduate Capstone Design Project

The NSERC-McGill Design Chair is continuously seeking to work in partnership with industry. An interesting opportunity for innovative companies is to participate in a Mechanical Engineering full-year **Design Project** as part of a two-semester Mechanical Engineering Project course.

Objective of this project: to design, build and deliver a working prototype

- ❖ Each **Design Project** is assigned to a team of two to four students who work with the client's engineers, for one full academic year, to define the problem, search for alternative solutions, and finally, to build a prototype.
- ❖ Faculty members from the Department of Mechanical Engineering, together with highly experienced engineers from industry, work with the students to guide and supervise them.



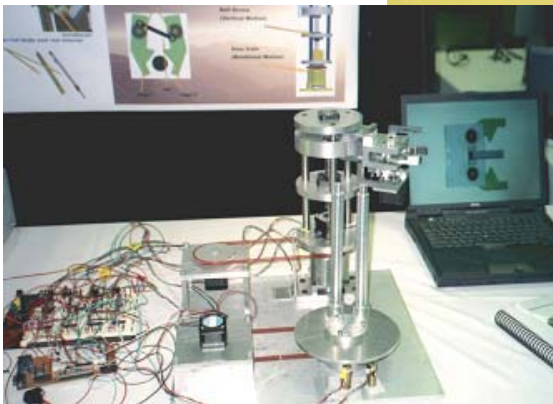
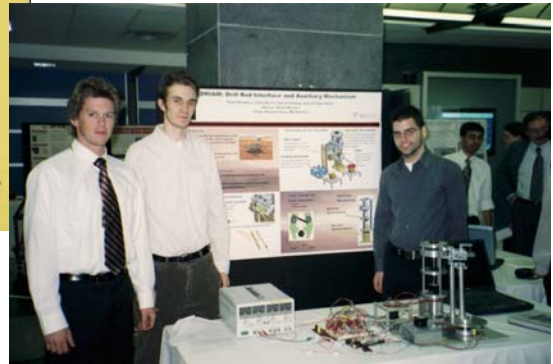
This collaboration is an excellent way to move forward new projects or others which have been on "the back burner" for years and to see them designed, tested, evaluated, etc., and to do this at a reasonable cost.

Over the last two years we have had some 200 students working on nearly 60 different projects. Of these projects, 13 came from industry (pharmaceutical, manufacturing, rehabilitation, aeronautical), 20 came from student competitions (Formula SAE, Mini-Baja, Clean Snowmobile, Solar Car), and the balance from research laboratories at McGill (Mechanical Engineering, Mining, Metals & Materials, Bio-Medical Engineering).

Among our partners in these projects, we have:

- **Canadian Space Agency**
- **MDA Corporation Ltd.**
- **123Certification Inc.**

In July 2005 two project teams won a tied 2nd prize at the Undergraduate Student Design Competition within the 2nd International CDEN Conference in Kananaskis, Alberta.



Design Chair members and students of the winning teams in Kananaskis, July 27, 2005



We are inviting companies to collaborate in these projects with McGill students, researchers and professors.

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