

# Rocscience Student Interns - Winter 2014



Left to right: Aldo Katragjini, Michael Liao, Alan Lai  
Co-op students from the University of Waterloo

**Aldo Katragjini** My time at Rocscience was spent in their research department. My tasks for the 4 months that I was here involved calibration and verification of geotechnical software. I was involved primarily with rockfall analysis. My goals were to explore the impact that probabilistic slope roughness has on paths followed by rocks travelling downslope. I found the work I was doing here very stimulating. My research and work into rock-fall analysis inspired me to try to create my own rock fall program on my own time. Overall the experience of working in such a fast-paced high energy environment was a very good learning experience for me.

**Michael Liao** Over the four month work term in Rocscience Inc, I have worked on several projects. The largest one was on researching the existing solutions for storing large data sets associated with 3D geometry at different forms, as well as implement these solutions to the 3D finite element analysis application. The main goal of my project was to determine an efficient and effective way to store all of the data, including 3D geometry data and other meta data that the software uses for engine computations. In addition, I also worked on 3D modeling which was very challenging since I had to apply mathematics that I have learned in university. The projects I did provided me with experience in research and software development which I can put to use in my future work including both university and future work places. My experience with Rocscience Inc over the four month co-op term was challenging and rewarding at the same time. All the staff in the company was extremely helpful, patient and willing to answer any questions I had. Along with the daily ping pong breaks and office treats, it was definitely one of the most enjoyable co-op terms I had.

**Alan Lai** During my four month co-op term at Rocscience Inc., I primarily worked on implementing new features into the company's *Phase<sup>2</sup>* Finite Element Analysis software. Through the process of being exposed to the company's source code and from the supervision of Thamer and Damir, I have gained an abundance of new insight and knowledge about the software design. In addition, this co-op position has given me firsthand experience in working with professional software development tools such as Microsoft's Visual Studio and the development framework Microsoft Foundation Class. Everyone in this organization was welcoming and helpful and the work environment was very friendly and relaxed. As an undergraduate in Computer Science, this co-op position was an excellent experience for me to hone my programming craft.