Left to right: Eric Sethna, Amir Panahi, Michael Xiao, Menaka Kiriwattuduwa
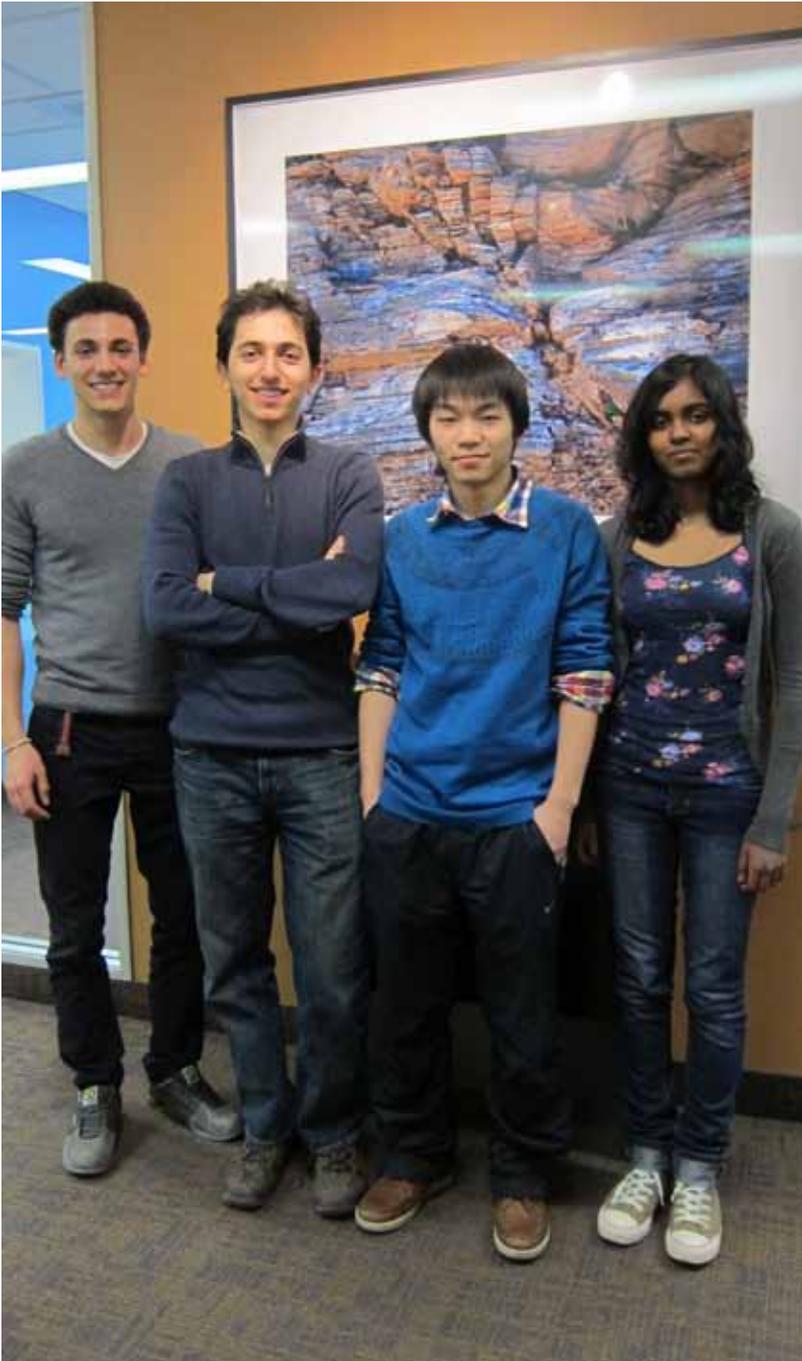Co-op students from the University of Waterloo

Rocscience Student Interns - Winter 2013

Eric Sethna   I joined Rocscience because I have a strong interest in the integration of computer modeling and modern engineering. It's tools like those developed by Rocscience that help us understand the behaviour of our engineered structures in such a complex and unpredictable geotechnical world. My work was mainly rooted in researched based verification for the new 3D finite element stress analysis software, RS^3. Learning to simulate complex practical problems while being sensitive to real world constraints offered challenging experiences on a daily basis. I was motivated to work in a high-paced, high-energy atmosphere that feeds on new ideas and fresh perspectives.

Amir Panahi   I mainly worked on *RocFall* 5.0 and RS^3 which gave me the opportunity to apply what I learned in my dynamics courses and to use it in practice. It was a very interesting experience for me to learn about the impact mechanics theory and how real-world problems such as rock fall can be approached with this theory. Besides, I got the chance to work with the developers who created the finite element code for the new product RS^3. I have always encountered finite element analysis software in my previous internships and I was always curious about its fundamentals. I am very glad to have worked with the finite element and mesh developers at Rocscience where I learned the basics of this method. In Rocscience I was always encouraged to get involved in challenging tasks and I was always provided with great support and help to get the task done. The atmosphere in Rocscience is very friendly and I had a very enjoyable time working here.

Michael Xiao   I worked in Rocscience for my second co-op term. I started by implementing visualization contour vectors correlated to its max length and spacing, followed by 3D-modeling of RS^3, specifically 3D bolts visualization and 3D Mesh Deformation. It was very interesting and challenging to visualize 3D models using OpenGL. It was amazing to see how my programming knowledge could be applied and contribute to the development. My supervisor, Eugene, was very helpful; He tended to lead me to the solution instead of solving it for me. Rocscience has so far the best atmosphere I've seen. Not only did I gain valuable working experience and improve my programming skills, but I also was well trained in table tennis.

Menaka Kiriwattuduwa   During my co-op term I participated in a project that introduced new features to *Settle^{3D}*. One such feature was the addition of non-horizontal soil layers using borehole data. This was a great project as it provided me with the opportunity to improve my programming skills and gain experience with both research and development. Overall, I found that the atmosphere at Rocscience was very friendly and supportive, resulting in a great co-op experience.