Harness the Power of GPUs:  
An Introduction to GPGPU Programming  
Lab 8: Advanced OpenACC

Guido Juckeland  
Visiting Scholar  
Technische Universität Dresden, Germany

June 19, 2014
Task 1: Jacobi method refined

- Set up your Jacobi code to work with different vector and gang sizes. See how this changes performance.
Task 2: Matrix-Matrix Multiplication

• Write a program that allocates two matrices $a$ and $b$ of type float with 1,024x1,024 elements. Calculate the matrix-matrix multiplication of both matrices on the GPU using OpenACC.
• Test the `collapse` clause to see the performance improvement.