

Exjobb – Thesis Work



Turbulence: mathematical computation based on GPU technologies

The objective of this project is to create a tool capable of calculating aircraft wake vortex turbulence generation in real time. Due to the advances in heavy computation using Graphics Processing units the benefit of this type of heavy calculation has already provided great results in other fields like tsunami simulation and meteorological prediction. This technological advantage will provide decisive advantage reducing calculation time for a single or multiple aircraft turbulence generation in heavy condensed scenarios. This scenario calculation is key to understanding and calculating the safe distance separation between aircrafts, which nowadays is critical in flight management and time based operations.

Your task will be to migrate an existing turbulence calculation routine from Matlab into the GPU using CUDA or OpenCL. You will have to design the parallel algorithms and explore the possibilities of the platform to improve the performance of the calculations to a whole new level.

Requirements:

Languages: ANSI C, python
Matlab

PS. We are also looking to hire new employees within the following areas:

- Junior Database
- Senior Database
- Junior C++
- Senior C++
- Web Developer

For more information on these job offerings please visit our homepage: www.avtech.aero

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