## EECE.7110a

## High-Performance Computing on GPUs

Hands-on experience

GPU application development

Massive parallel computing

Tremendous data delivering rate

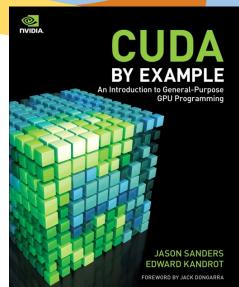
Massively parallel processors

More than 64 arithmetic operations per cycle

In-depth knowledge

Processor hardware features

Parallelism models of GPU architecture



Compute Unified Device Architecture (CUDA) programming projects

Massively parallel system

Commercial C/C++ extension

Tasks

Matrix operations

Vector reduction

Prefix-scan

Radix sorting

Graph computing

Machine learning

**Group work** 

Large and complex project

Ability to get your work published!

## Prerequisites

Data Structures or Computing II Microprocessors I or Assembly Language Programming

Computer Architecture Equivalent courses also acceptable

## Instructor



Spring 2018

Section

Class

Mondays:

6:30 p.m. – 9:20 p.m

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16402

Design credit to Taric S Alani