### 1.1 CS7034: Augmented Reality

**Aims:**
- To provide students with a solid background in alternative 3D compositing techniques using computer vision with applications in interactive interfaces – most notably augmented reality interfaces on mobile devices.
- Provide students with a comprehensive knowledge in 3D vision
- Develop skills in the design and development of interactive augmented reality games

**Prerequisites:** Students must have successfully completed a course in computer vision e.g. CS7008/CS4053 and Graphics e.g. CS4052/CS7033 or equivalent.

**ECTS:** 5 ECTS

**Teaching Semester:** 2nd Semester

**Module Coordinator:** Professor Aljosa Smolic

**Delivery:** 2 Lectures and 1 Tutorial per week

**Learning Outcomes:**
*When students have successfully completed this module they should be able to:*
- Develop interactive augmented reality applications for both PC based mobile devices using a variety of novel input devices
- Demonstrate a knowledge of the research literature in Augmented Reality for both compositing and interactive applications

**Syllabus:** Specific themes addressed within the module include:
- 3D Vision.
- Approaches to Augmented Reality
- Lighting and Illumination Issues in AR

**Assessment:**
This module is assessed 100% on the basis of course work. Assessments will include:
- 2 individual programming assignments in AR for 70%
- A research paper and/or presentation on AR for 30%

**Supplemental assessment:**
An assignment, followed by a report and a presentation for 100% (must be completed within date of the exam boards).

**Website:**
On blackboard