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## Teaching STAR-CCM+ in the University of Southampton



At the University of Southampton, the author has been teaching and designing the M-level module-applications of CFD using software such as CD-adapco's STAR-CCM+ since 2009. This 10-credit module is for MSc and MEng of Aero, Mech and Maritime programmes.

Students enjoy using the latest CFD technology and learning updated case studies. Although these increase teaching workload, they are worthwhile indeed. Some examples will be given in the presentation. As the class has evolved over the last 6-year, the number of students taking the module has been growing steadily from over 40 to over 60 in last year's class, and to nearly 80 in this year's. This indicates an increase in interest for the module.

Also taught is a CFD Surgery session (1 hour per week tutorial class) in semesters 1&2 since 2008, which support students doing their Individual Projects (IP) and Group Design Projects (GDP) using the CFD software. For example, Race Car MSc programme students use STAR-CCM+ for their GDPs. Students come to this session with a wide range of questions. In this year there are more than 240 students in this tutorial module, with responses that are extremely positive.

This presentation will address several opportunities and challenges in teaching CFD in a university setting, such as dealing with an even bigger class sizes (e.g. >100 students) and using super-computing systems (e.g. >500 cores) while teaching CFD software.

### **Author Company:**

University of Southampton

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### **Industries:**

[Academic](#)<sup>[2]</sup>

### **Products:**

[STAR-CCM+](#)<sup>[3]</sup>

### **Conference:**

[STAR Global Conference 2014](#)<sup>[4]</sup>

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