



WORKSHOP SESSION



COLLABORATIVE DESIGN EDUCATION

Overview

Collaborative design education requires students to work together in teams on design projects to tackle problem solving tasks. This pedagogical practice acknowledges that learning is a social activity during which students will be able to improve their engineering design skills. This has many advantages for improving students' academic learning and team working as well as social integration with their peers. However, the nature of the work and how this work is shared can make it difficult to ensure that individual team members learning benefited from participating in this learning environment.

From a pedagogical perspective, this raises interesting questions regarding how we should engage our students both in terms of solving problems and the collaborative process, as well as the associated assessment of group project work. To ensure all students benefit we should ask; what might be appropriate learning outcomes and assessments to support students' learning? What range of practices academics could implement in prior and during the collaborative design student's projects?

This cross-SIG workshop will provide a novel forum for Collaborative Design and Design Education researchers to come together and discuss the context of their research, and exchange ideas relating to different experiences preparing and conducting collaborative project based learning classes. The workshop will be beneficial to researchers at all stages of their investigations.

Workshop format:

The workshop will last for two hours and will be formatted as follows:

An introduction will be delivered on the challenges of ensuring fairness in collaborative project work and then groups will be formed to discuss the workshop questions.

Participants in the workshop will engage in discussion about the benefits and challenges associated with collaborative design education and how we might improve the practice in the future.

Participants will be asked to share the findings of their group so that all who attend can benefit from the findings and might take away some knowledge to implement in their teaching and research.

This workshop will aim to answer the questions:

- What are the benefits of collaborative project based learning in engineering design education?
- What are the challenges in implementing collaborative design education?
- What pedagogical elements can encourage student's collaborative design process?
- What approaches can be used to support learning from all the participating students on a collaborative engineering design project?

This workshop has been developed by members of the Collaborative Design and Design Education SIG. The workshop will be chaired and co-chaired by Mr. Ross Brisco and Prof. Bryan Howell and facilitated by members of both SIG's.