



YCCSA Seminar Series Spring 2020

An interdisciplinary seminar series hosted by the York Cross-disciplinary Centre for Systems Analysis aimed at researchers from all disciplines

Putting the designer back into evolutionary design algorithms: Building a Mixed-Initiative Procedural Video Game Level Generator

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CSE/102&103, Computer Science, 13:30

Abstract:

Evolutionary algorithms are powerful tools to support design in a variety of contexts. They do not require the calculation of fitness function gradients and do not need a good design to help the optimisation process to begin with. These are important benefits in many real-world problems where calculating gradients can be difficult and when working in a truly new area where no good initial design exists. Even though these techniques have been developed by researchers over many years, and are quite mature, they have yet to make a big impact in many real-world design processes. Reasons for this are complex, but one core issue is that these algorithms tend to be created to push the designer out of the process. In this talk I will share my experience working with these algorithms in the context of aerospace engineering, and my recent work on building a designer centred procedural level generator for a dungeon crawler video game.

The seminar includes a refreshment break to fuel interdisciplinary discussion

***Ron Cooke Hub is on Heslington East Campus – accessible by free bus services
Nos. 66 and UB1 running at frequent intervals from Heslington West.***