



BA/MA/SA/Group/Lab:

## Intelligent Crowds

Pathfinding for single agents on a graph is a well-studied problem. *Multi-agent* pathfinding is a far newer discipline, whose applications have grown a lot in recent decades. Movies such as Lord of the Rings want to display huge armies clashing, but without paying an actor for each combatant. Real-time strategy games incorporate larger and larger amounts of units and players expect predictable and efficient unit movement. Finally, building safety researchers predict the movement and behaviour of human crowds during an emergency evacuation through simulation.

Previous theses at our group have explored different approaches and technologies for simulating a realistic crowd: from employing *Miarmy*<sup>1</sup> using simple condition-reaction rules to creating a small framework modeling human eye-sight, attention and memory. We are now looking to go the last mile and create a demonstration of a convincingly “intelligent” crowd, based either on the aforementioned frame-



work or a customizable game engine supplying state-of-the-art pathing algorithms such as *Starcraft II*. There are many ways one might try to make something appear intelligent. You are welcome to bring in your own approaches on this topic!

**Interested? Please contact us for more details!**

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<sup>1</sup><http://www.basefount.com/miarmy.html>