

Research

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In the early days of computing it was often stated that computers could never exhibit "intelligence" because they could only carry out tasks that their programmers had anticipated and pre-programmed solutions for. Advances in areas such as Artificial Intelligence, Machine Learning, Evolutionary Computation and Automated Reasoning have shown that computers are capable of far more.

My research focusses on systems that are able to adapt their response to the data, knowledge or environment in which they are working. My students and I study and develop computational systems that employ learning, optimisation and modelling techniques to improve system performance on complex problems.

1. Techniques

Some techniques we extend and employ include:

- Artificial Intelligence
- Evolutionary Computing and Genetic Algorithms
- Biologically Inspired Computing (eg Swarms)
- Machine Learning
- Neural Networks
- Statistical Analysis

2. Applications

Some current application areas of interest include:

- Motion planning strategies
- Visual object tracking
- Computational Linguistics (eg Discourse Analysis)
- Intelligent Software Analysis and Assessment

More information can be found at the [Adaptive Systems Research Group](#) site.

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