

Graduate Student Workshop

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Introduction

This is the sixth year for the GECCO Graduate Student Workshop and it continues unabated, attracting young researchers from all over the world and introducing them to the evolutionary computing conference environment.

This single day workshop involves 12 selected students researching various aspects of Evolutionary Algorithms. Each presents a 15-20 minute synopsis of their current research to a mentor panel, other students and other selected participants, followed by questions and discussions prompted by a mentor panel. The panel consists of a rotating group of well known and established researchers participating in the Evolutionary Computation Conference. A limited number of other students is also invited to attend the workshop and join in the discussions.

The format is intended to offer feedback from the panel to the presenters regarding their results, research methodology, future direction and presentation style. It is also meant to benefit other attendees in terms of learning about the work of others, engaging in technical discussions and meeting researchers with related interests. The group of presenting students is chosen with the intent of creating a diverse group of students working on a broad range of topic areas. Most of the candidates have thesis topics that have already been approved by their university and who have been working on their thesis for between 6 and 18 months.

Workshop Theme: The Scientific Method

Great strides have been made in developing the theoretical foundations of evolutionary algorithms. However, most evolutionary algorithms, if not all, involve some degree of heuristic improvisation, and require significant empirical investigation. Consequently, the field of evolutionary computation has been, and will continue to be, subject to extensive experimentation, demanding a solid, statistically

sound and scientifically valid approach to algorithm analysis. The Scientific Method is ideally suited for such investigations and has been shown to be an invaluable framework for scientific discovery in general. To this end, the theme of the Graduate Student Workshop this year, is the application of the Scientific Method to the study of evolutionary algorithms and, more generally, to successful and rewarding research in computer science.