



GECCO'13 Stack-based Genetic Programming Workshop Chairs' Welcome



Welcome to the first GECCO Workshop dedicated to Stack-based Genetic Programming. Since its introduction in the early 1990's, stack-based Genetic Programming has grown into a significant sub-field of GP through the independent work of multiple researchers. While generally characterized by the explicit use of stacks to support the evolution and evaluation of programs, there is significant diversity in the various stack-based approaches with respect to program expression, data typing, and evolutionary manipulation. The main purpose of this workshop is to provide a collaborative forum and discussion venue for practitioners of (and parties interested in) stack-based GP.

In this first workshop, we will explore the current state of stack-based GP through a combination of paper presentations, invited talks, and open discussion. Topic areas will include:

- What really differentiates Stack-based GP from traditional tree-based GP?
This topic will include an invited talk on "Stack correctness in Stack-based GP"
- Are there benchmarks that work well for stack-based GP?
This topic will include a paper presentation titled "Evolving a Digital Multiplier with the PushGP Genetic Programming System."
- Do stack manipulation operators really make a difference when solving problems?
Included in this discussion topic will be a review of solution effectiveness of several benchmark problems when solved with and without stack manipulation operators such as DUP, SWAP, and ROT.
- How do we move forward with stack based GP to increase its effectiveness?
This will include a paper presentation titled "Push-forth: a light-weight, strongly-typed, stack-based genetic programming language."

We would like to thank the authors of submitted papers and presenters for their contributions. Please join us for what should be lively and thought-provoking discussions.

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