GECCO 2022
Workshop Schedules
Timeslot: 110 minutes

11th International Workshop on Genetic Improvement
GI@GECCO 2022

NB DO NOT OVERLAP WITH GI TUTORIAL Saemundur Haraldsson et al.

Allocated slots - hybrid: 3, online: 0

Organizers:
- Bobby R. Bruce, UC Davis, BBruce@ucdavis.edu
- Vesna Nowack, Fixie Project, Lancaster University, UK, V.Nowack@lancaster.ac.uk
- Aymeric Blot, CREST, UCL, UK, A.Blot@cs.ucl.ac.uk
- Emily Winter, Fixie Project, Lancaster University, UK, E.Winter@lancaster.ac.uk
- Bill Langdon, CREST, UCL, UK, W.Langdon@cs.ucl.ac.uk
- Justyna Petke, CREST, UCL, UK, J.Petke@ucl.ac.uk

Programme:

# Session 1: Chair, Bobby R. Bruce, Justyna Petke

Welcome: 5 minutes, Bobby R. Bruce

Keynote: (total 65 minutes)
  Introduction 5 Minutes, Bobby R. Bruce
  Dr. Westley Weimer, University of Michigan
  45 minutes plus 15 minutes Q+A

Long: 25 (20+5) in person
- Amaru - A Framework for Combining Genetic Improvement with Pattern Mining
  *Oliver Krauss*
  https://doi.org/10.1145/3520304.3534016

Short: 15 (10+5) in person
- Genetic Improvement in the Shackleton Framework for Optimizing LLVM Pass Sequences
  *Shuyue Stella Li*, Hannah Peeler, Andrew N. Sloss, Kenneth N. Reid, Wolfgang Banzhaf
  https://doi.org/10.1145/3520304.3534000

# Session 2 Chair Bobby R. Bruce, Vesna Nowack

Long: 25 (20+5) in person
- Evaluation of Genetic Improvement Tools for Improvement of Non-functional Properties of Software
  Shengjie Zuo, *Aymeric Blot*, Justyna Petke


Short: 15 (10+5) in person
Opportunities for Genetic Improvement of Cryptographic Code
Chitchanok Chuengsatiansup, Markus Wagner, *Yuval Yarom*
https://doi.org/10.1145/3520304.3534049

Short: 15 (10+5) in person?
Towards evolution-based autonomy in large-scale systems
*Damien Anderson* (Strathclyde), Paul Harvey, *Yusaku Kaneta* (Rakuten Mobile), Petros Papadopoulos, *Philip Rodgers* (Rakuten Mobile), Marc Roper
https://doi.org/10.1145/3520304.3533975

Long: 25 (20+5)
Genetic Improvement of Shoreline Evolution Forecasting Models
*Mahmoud Al Najar*, Rafael Almar, Erwin W. J. Bergsma, Jean-Marc Delvít, Dennis G. Wilson
https://doi.org/10.1145/3520304.3534041

Short: 15 (10+5)
The case for Grammatical Evolution in test generation
*Aidan Murphy*, Thomas Laurent, Anthony Ventresque
https://doi.org/10.1145/3520304.3534042

Short: 15 (10+5)
Leveraging Fuzzy System to Reduce Uncertainty of Decision Making in Software Engineering Automation
*Yueke Zhang*, Yu Huang
https://doi.org/10.1145/3520304.3533991

# Session 3 Chair Aymeric Blot, Vesna Nowack

Long: 25 (20+5) in person
Dissecting Copy/Delete/Replace/Swap mutations: Insights from a GIN Case Study
Sherlock A. Licorish, *Markus Wagner*
https://doi.org/10.1145/3520304.3533970

Long: 25 (20+5)
Py2Cy: A Genetic Improvement Tool To Speed Up Python
*James Zhong* and *Max Hort*, Federica Sarro
https://doi.org/10.1145/3520304.3534037

Short: 15 (10+5) in person
Automatically Exploring Computer System Design Spaces
*Bobby R. Bruce*
https://doi.org/10.1145/3520304.3534021

Industry+Student+Faculty event: 40 Chair Aymeric Blot
Prizes & Closing: 5 Vesna Nowack, Bobby R. Bruce