

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,
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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

<https://doi.org/10.1145/3520304.3534004>

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
Delvit, 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