2022 IEEE 16th International Workshop on Software Clones (IWSC 2022)

Limassol, Cyprus **2 October 2022**



IEEE Catalog Number: CFP2294S-POD ISBN:

978-1-6654-8448-0

Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP2294S-POD

 ISBN (Print-On-Demand):
 978-1-6654-8448-0

 ISBN (Online):
 978-1-6654-8447-3

ISSN: 2329-0595

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: (845) 758-0400 Fax: (845) 758-2633

E-mail: curran@proceedings.com Web: www.proceedings.com



2022 IEEE 16th International Workshop on Software Clones (IWSC) IWSC 2022

Table of Contents

Message from the General Chair and Program Chairs	
Organizing Committee	viii
Keynote Address	ix
Empirical Clone Studies	
igCloneBench Considered Harmful for Machine Learning Jens Krinke (University College London, UK) and Chaiyong Ragkhitwetsagul (Mahidol University, Thailand)	1
igCloneBench: A Retrospective and Roadmap Jeffrey Svajlenko (Independent Researcher) and Chanchal K. Roy (University of Saskatchewan, Canada)	8
An Empirical Evaluation of Competitive Programming AI: A Case Study of AlphaCode	10
Comparative Analysis of Clone Detection Techniques on SemanticCloneBench Sohaib Masood Rabbani (LUMS, Pakistan), Nabeel Ahmad Gulzar (LUMS, Pakistan), Saad Arshad (LUMS, Pakistan), Shamsa Abid (Singapore Management University, Singapore), and Shafay Shamail (LUMS, Pakistan)	16
A Similarity-Based Assisted Grading for Introductory Programming Course	23

Clone Detection Techniques

Towards Overcoming Type Limitations in Semantic Clone Detection	25
On Detecting Semantic Clones in Constraint Logic Programs Gonzague Yernaux (University of Namur, Belgium) and Wim Vanhoof (University of Namur, Belgium)	32
CodeBERT for Code Clone Detection: A Replication Study	39
Experiments on Code Clone Detection and Machine Learning André Schäfer (Friedrich Schiller University Jena, Germany), Wolfram Amme (Friedrich Schiller University Jena, Germany), and Thomas S. Heinze (Cooperative University Gera-Eisenach, Germany)	. 46
Clone Detection Method Selection Based on Bandit Algorithm: a Preliminary Analysis	. 53
Clone Analysis and Understanding	
City of Clones Rainer Koschke (University of Bremen, Germany) and Marcel Steinbeck (University of Bremen, Germany)	55
Comparing Execution Traces of Jupyter Notebook for Checking Correctness of Refactoring	62
An Insight into the Reusability of Stack Overflow Code Fragments in Mobile Applications	69
Author Index	. 77