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Department of Computing
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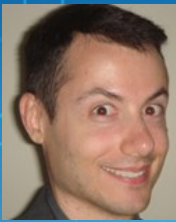
Domain-Specific Automated Program Repair

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Date : *4 Jul 2024 (Thu)*
Time : *10:30 am - 11:30 am*
Venue : *N003*

Abstract

Over a decade of research has greatly improved the applicability of automated program repair to realistic programs. Nevertheless, what makes general-purpose automated program repair practical, such as its reliance on tests for validation, also limits its ability to provide strong correctness guarantees. In this talk, I will present some research that applies the general idea of automated program repair to domains that are more restricted than general programs, where it is feasible to automatically generate patches that are likely to be correct with high confidence. In particular, I will discuss repairing different kinds of faults in Android mobile apps, as well as addressing the warnings of static code analysis tools such as SonarQube.

About the Speaker

Dr Carlo A. Furia is an associate professor in the Software Institute, part of the Faculty of Informatics of USI in Lugano, Switzerland. His research interests centre around developing rigorous techniques and tools to analyse and improve the quality, correctness, and reliability of software and systems.

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