

Computer and
Information Science

Fachbereichs- kolloqium

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Separation Logic: a rich framework for reasoning about programs

Speaker and Title

Emanuele D'Ossualdo (University of Konstanz)

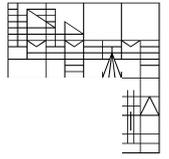
<https://www.emanueledossualdo.com/>

Time and Room

June 19th (Wednesday)

1:30pm - 3:00pm

R 611



Abstract

In this talk I will outline the main conceptual breakthroughs provided by Separation Logic, a successful framework to reason about programs with rigorous logics. Starting from a simple observation about the shortcomings of Hoare logic to reason about heap-manipulating programs, the concept of “separation” provided a new tool for thought that proved to be extremely useful beyond the initial application.

After a brief overview of Separation Logic, I will present the main ideas behind my Bluebell project, which proposes a new Separation Logic that can reason about probabilistic behaviour.

Speaker's Bio

Emanuele D'Oswaldo is a **Tenure-Track Professor** of Formal Methods for Software Engineering at the University of Konstanz.

Until April 2024, he was a Postdoctoral Researcher at Max Planck Institute for Software Systems (MPI-SWS) in Saarbrücken, working on verification of concurrent software with [Derek Dreyer](#).

Until September 2020 he was a **Marie Curie Fellow** at Imperial College London, working on verification of concurrent software with [Prof. P. Gardner](#).

From 2015 to 2017 he was a PostDoc in the [Concurrency Theory Group](#) at the University of Kaiserslautern, working with Prof. [Roland Meyer](#).

In 2015 he received a PhD (DPhil) in Computer Science from the University of Oxford. His supervisor was Prof. [C.-H. Luke Ong](#). His [dissertation](#) won the [2016 CPHC/BCS Distinguished Dissertation award](#).

Previously, he did his undergraduate and master's studies at the University of Udine, Italy, graduating with honors. His studies were supported by the [Scuola Superiore](#) scholarship.