Annual Event
2024

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2023 Highlights

VeTSS-Aligned Projects (2023-26)

Making Memory Management More Secure (M4Secure)

Create an open-source framework for customisable memory management libraries that meet formal user requirements for security and performance.

University of Glasgow — UNIVERSITY OF LEEDS — Meta

Jeremy Singer   Zheng Wang   Alice Miller

SecuriTy SummaRies for SecUre SofTwarE Development (TRUSTED)

Provide provable security guarantees of systems that make use of third-party open-source software.

Newcastle University — UNIVERSITY OF LIVERPOOL — Google — OCaml PRO

Narges Khakpour   Steven Schewe   Dominik Wojtczak

Safe And seCure REmote Direct Memory Access (SACRED-MA)

Develop a foundational approach to verifying safety and security for RDMA-based systems.

UNIVERSITY OF SURREY — Imperial College London — NVIDIA — arm

Brijesh Dongol   Azalea Raad   Gregory Chockler

Events – Summer School 2023

Held at the University of Surrey, from Tuesday 22nd to Thursday 24th August 2023.

Five taught sessions and one student-led session:

- **Algebraic Semantics and Verification**
  Georg Struth, University of Sheffield
- **Build your Own Scalable Static Analysis with the Infer Platform**
  Jules Villard, Meta
- **Neural Network Verification with Vehicle**
  Ekaterina Komendantskaya, Southampton University
  Luca Arnaboldi, University of Birmingham
- **Inductive and Coinductive Theorem Proving in Isabelle**
  Andrei Popescu, University of Sheffield
- **C Bounded Model Checker (CBMC), Bounded Model Checking for Software**
  Daniel Kroening, Amazon Web Services
- **PhD Lightning Talks**

"Fantastic organisation with effective and informative communication. Expert speakers providing insights from range of tools and theory. Diverse cohort of attendees making for grounds for strong network and community."

Community-Building Activities

Fun in the REPL

Programming Languages Research Group, Bristol

One-day joint meeting of the 'Fun in the Afternoon' and 'S-REPLS' communities, This meeting was held at the Engine Shed on Wednesday 1st November.
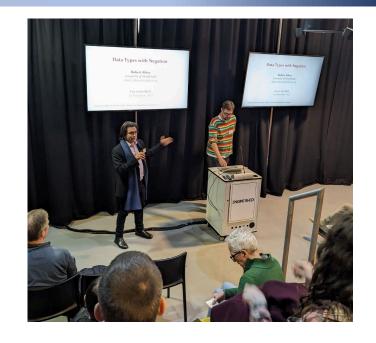
Organisers & Sponsors

This event is made possible by the generous sponsorship of the UK Research Institute on Verified Trustworthy Software Systems.

The event is organised and part funded by the Programming Languages Research Group (PLRG) at the University of Bristol. For any queries, please contact: Alex Kavvos and Steven Ramsay on pl-rg@bristol.ac.uk.
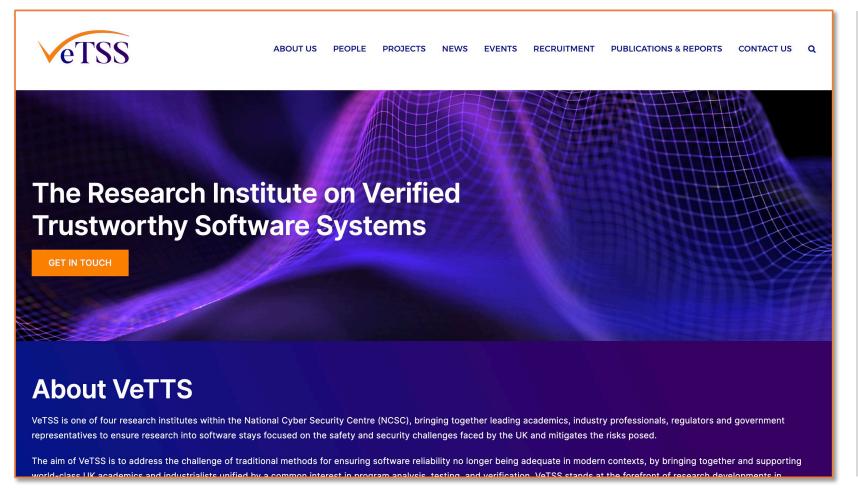
Webpage Contents

- Main aspects are now up-to-date
  - List of projects and publications
  - Videos of talks
  - EDI statement
  - Annual reports

- X/Twitter feed and Zulip are also regularly updated and receiving some engagement

Webpage New Look (coming soon)

- Undergoing a **further professional re-design**

- **Searchable index of publications**

- **Videos**

Advisory Board: New Members

Industry

Sophia Guerra (Adelard)

Peter O'Hearn (Lacework)

Alastair Reid (Intel)

Greta Yorsh (Jane Street)

Jade Alglave (arm)

University

Ekaterina Komendantskaya
(University of Southampton)

Peter Sewell
(University of Cambridge)

Marta Kwiatkowska
(Oxford University)

Funders

Greg Smith (EPSRC)

Robert Ashmore (DSTL)

Brad Martin (DARPA)

Looking Ahead

Problem Book Details

- A (non-exhaustive) repository of key verification problems and challenges for VeTSS

- **_Three Dimensions_**
    1. Ease of Use vs Strength of Guarantees
    2. Compute Stack
    3. Verification Technology Readiness Levels

- **_Six Themes_**
    1. Specification
    2. Verified Resilience
    3. Verified Protocols
    4. Verified Software Systems
    5. Programmer and Language Support
    6. Proof Robustness and Maintainability

https://tinyurl.com/VeTSS-ProblemBook2024

Submit your feedback
contact@vetss.org.uk

Looking Ahead

- VeTSS Summer School 2024 (Aug) -- Propose your tutorials

  https://tinyurl.com/VeTSS-SummerSchool24

- SREPLS 15 / Kent Concurrency Workshop (July)

  https://cw-srepls-24.github.io/

- INI Big Specification at the Newton Institute (Oct)

  https://www.newton.ac.uk/event/bspw01/

Keep in Touch

Website

https://vetss.org.uk/

Twitter

https://twitter.com/VeTSS_RI

Zulip (invite link sent out on mailing list)

https://vetss.zulipchat.com

E-mail

contact@vetss.org.uk

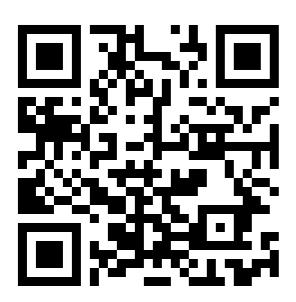# Today's Program

https://vetss.org.uk/vetss-annual-meeting-2024/

Enjoy!