

Presentation Abstract

# Verifying Session-Typed Concurrent Programs Using Typed PPX in OCaml

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This presentation introduces the design and implementation of `kmclib`: an OCaml library that supports the development of correct message-passing programs. The development workflow in `kmclib` utilises type inference and PreProcessor eXtension (PPX) in OCaml. The `kmclib` primitives allow the vanilla OCaml typechecker to infer the communication structure of a program. The preprocessor for `kmclib` is typed: it exploits OCaml's `compilerlib` to extract session types and verify their compatibility (k-MC). Well-typed programs, written with `kmclib`, do not lead to communication errors and cannot get stuck.

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This is the abstract of an unrefereed presentation, and it should not preclude subsequent publication.

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