

# ITC Conference Grant

## - APPLICATION FORM<sup>1</sup> -

**Action number: CA20111**

**Applicant name: Szumi Xie**

### **Conference Details**

Conference title: 9th International Conference on Formal Structures for Computation and Deduction

Conference web-page: <https://cs.ioc.ee/fscd24/>

Conference venue<sup>2</sup>: Tallinn University

Conference start and end date: 10/07/2024 to 13/07/2024

### **Accepted contribution details**

Title of the presentation: Second-order generalised algebraic theories: signatures and first-order semantics

Type of the presentation: oral

Co-authors: Ambrus Kaposi

Other details of the presentation: n/a

### **Relevance of the Conference topic to the Action**

Description of the relevance of the Conference to the Action (e.g., MoU objective, deliverable or WG task).

*(max. 500 word)*

FSCD is a conference about formal structures for computation and deduction from theoretical foundations to applications, it connects the area of formal calculi including type theory with methods in computation, semantics, and applications. FSCD usually has 100 participants, and it will be colocated with Logic in Computer Science (LICS). The topic of my presentation is directly connected to the aim of WG6, the development of a general theory of type theories. I will present the theory of second order generalized algebraic theories (SOGATs), which can be used to define the well-typed quotiented syntax of type theories. I will demonstrate the translation of a SOGAT to a first order generalized algebraic theory to obtain the semantics for the SOGAT.

### **Motivation and expected impact**

<sup>1</sup> This form is part of the application for a grant to present the work of the applicant at a conference. It is submitted to the COST Action MC via-e-COST. The Grant Awarding Coordinator coordinates the evaluation on behalf of the Action MC and informs the Grant Holder of the result of the evaluation for issuing the Grant Letter.

<sup>2</sup> For an online conference, specify virtual participation; for hybrid conferences, specify whether it is an in-person or virtual participation.

Description of the applicant's motivation to participate in the conference and potential impact on the applicant's career.

*(max. 500 word)*

I am a first-year PhD student and this will be the first paper that I will present at a conference, and this is a great opportunity for me to present my work in front of a large audience. My career will benefit from the experience of giving the talk and from the feedback and discussion with the audience.