

Report on the outcomes of a presentation and participation - Inclusiveness Target Countries Conference¹

Action number:

Grantee name:

Conference Details

Conference title: Proof, Argumentation, Computation, Modalities And Negation (PACMAN)

Conference web-page: <https://sites.google.com/view/pacman2025-rome/>

Conference venue²: Università degli Studi "Roma Tre", Rome, Italy

Conference start and end date: 14/05/2025 to 16/05/2025

Accepted contribution details

Title of the presentation: Proof Theory of Semi-Substructural Logics

Type of the presentation: oral

Co-authors: The talk is based on several works, some of which are joint work with Tarmo Uustalu and Niccolò Veltri.

Abstract:

In this talk, we introduce a series of results on semi-associative substructural logics, which are a family of logics that are situated between the associative and non-associative Lambek calculus.

These logics are motivated by recent work on skew monoidal categories which are from both mathematics and programming language semantics. These categories are a weaker version of monoidal categories, in the sense that the three structural laws of left and right unitality and associativity are not required to be invertible. They are merely natural transformations with a specific orientation.

We will focus on the sequent calculi, normalization via focusing, and (proof-relevant) interpolation of semi-associative substructural logics.

Other details of the presentation: specify here any additional details related to the contribution (e.g. title of the session / track of the conference programme in which the contribution is accepted)

Outcome of the conference participation

Description of the outcome of the presentation of the accepted contribution, in terms of grantee's

¹ This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.

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

visibility, including the establishment of new contacts for future collaborations

(max. 500 word)

The presentation at the workshop on Proof, Argumentation, Computation, Modalities And Negation went well and several audience members asked interesting questions. The most interesting question concerned the categorical interpretation of our work on interpolation. This has been an intriguing question including a more general question, what is a good characterization of interpolation in category theory, in our mind for a while, although we currently do not have a clear idea how to approach it. This experience gave me confidence knowing that the question is interesting not only to us but to the community, which provides additional motivation. I also met Dr. Giulio Fellin, who visited Tallinn last year and had discussions on our collaborative work. This attendance is undoubtedly an important experience for my career.

Acknowledgement of inclusion of necessary supporting documents to claim the grant

I confirm that the following documents have been uploaded on e-COST as an integral part of this report:

- the certificate of conference attendance.
- the programme of the conference or book of abstracts / proceedings indicating the presentation (oral) of the grantee.
- copy of the given presentation (oral).