CALL FOR PAPERS
Fourth International Conference on
Formal Structures for Computation and Deduction (FSCD 2019)
24 – 30 June 2019, Dortmund, Germany

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FSCD (http://fscd-conference.org/) covers all aspects of formal structures for computation and deduction from theoretical foundations to applications. Building on two communities, RTA (Rewriting Techniques and Applications) and TLCA (Typed Lambda Calculi and Applications), FSCD embraces their core topics and broadens their scope to closely related areas in logics, models of computation (e.g. quantum computing, probabilistic computing, homotopy type theory), semantics and verification in new challenging areas (e.g. blockchain protocols or deep learning algorithms).
Suggested, but not exclusive, list of topics for submission are:

1. Calculi: ● Rewriting systems ● Lambda calculus ● Concurrent calculi ● Logics ● Type theory ● Homotopy type theory ● Logical frameworks ● Quantum calculi

2. Methods in Computation and Deduction: ● Type systems ● Induction and coinduction ● Matching, unification, completion, and orderings ● Strategies ● Tree automata ● Model checking ● Proof search and theorem proving ● Constraint solving and decision procedures

3. Semantics: ● Operational semantics ● Abstract machines ● Game Semantics ● Domain theory ● Categorical models ● Quantitative models

4. Algorithmic Analysis and Transformations of Formal Systems: ● Type inference and type checking ● Abstract interpretation ● Complexity analysis and implicit computational complexity ● Checking termination, confluence, derivational complexity and related properties ● Symbolic computation

5. Tools and Applications: ● Programming and proof environments ● Verification tools ● Proof assistants and interactive theorem provers ● Applications in industry (e.g. design and verification of critical systems) ● Applications in other sciences (e.g. biology)

6. Semantics and verification in new challenging areas: ● Certification ● Security ● Blockchain protocols ● Data bases ● Deep learning and machine learning algorithms ● Planning, . . .

PUBLICATION The proceedings will be published as an electronic volume in the Leibniz International Proceedings in Informatics (LIPIcs) of Schloss Dagstuhl. All LIPIcs proceedings are open access.

SUBMISSION GUIDELINES Submissions can be made in two categories. Regular research papers are limited to 15 pages (including references, with the possibility to add an annex for technical details, e.g. proofs) and must present original research which is unpublished and not submitted elsewhere. System descriptions are limited to 15 pages (including references) and must present new software tools in which FSCD topics play an important role, or significantly new versions of such tools. Submissions must be formatted using the LIPIcs style files and submitted via EasyChair. Complete instructions on submitting a paper can be found on the conference web site.

IMPORTANT DATES All deadlines are midnight anywhere-on-earth (AoE); late submissions will not be considered.

Titles and Short Abstracts:	8 February 2019	**Authors Notification:**	8 April 2019
Full Papers:	11 February 2019	**Final version for proceedings:**	22 April 2019
Rebuttal period:	28 March – 1 April 2019		

BEST PAPER AWARD BY JUNIOR RESEARCHERS The program committee will consider declaring this award to a paper in which at least one author is a junior researcher, i.e. either a student or whose PhD award date is less than three years from the first day of the meeting. Other authors should declare to the PC Chair that at least 50% of contribution is made by the junior researcher(s).

SPECIAL ISSUE Authors of selected papers will be invited to submit an extended version for a special issue of Logical Methods in Computer Science.