

FSCD Declaration:

*It is our thesis that formal elegance is
a prerequisite to efficient implementation.*
– Gérard Huet [4]

We, the communities behind the RTA [1] and TLCA [2] conferences, believe that our field has evolved and developed richer connections with many both practical and theoretical aspects of computer science and logic research since the inception of RTA in 1983 and TLCA in 1993. In particular, the scope of the two original conferences widened to include a significant overlap, and in fact the conferences have already collaborated by having most of our meetings since 2003 as the joint RDP [3] conference.

We have therefore decided to propose a new conference,

Formal Structures for Computation and Deduction (FSCD)

which not only combines our scope but further extends it to cover all the inter-related formal areas that researchers in formal structures for computation and deduction engage in.

The name of the new conference comes from an unpublished but important book by Gérard Huet [4] that was a strong influence on many researchers in our area. We are grateful to Gérard for allowing us to reuse the name.

The extended scope of the conference will include all research related to formal structures for computation and deduction, in particular all areas/categories included in the attached non-exhaustive list of topics.

We look very much forward to serve the scientific community with this new conference, which inherits as well as updates and modernizes the scope of the conferences it replaces.

References.

- [1] <http://rewriting.loria.fr/rta/>
- [2] <http://www.mimuw.edu.pl/tlca/>
- [3] <http://users.dsic.upv.es/~rdp03/>
- [4] [http://pauillac.inria.fr/~huet/PUBLIC/
Formal_Structures.ps.gz](http://pauillac.inria.fr/~huet/PUBLIC/Formal_Structures.ps.gz)

Topics. FSCD initial non-exhaustive list of topics (intended to extend the current RTA and TLCA scope, and expected to evolve over time):

1. Calculi
 - (a) Lambda-calculus
 - (b) Rewriting formats (string, term, higher-order, graph, conditional, ...)
 - (c) Proof theory (natural deduction, sequent calculi, proof nets, ...)
 - (d) Strategies in computation and deduction
2. Type Theory and Logical Frameworks
 - (a) Type systems (recursive, intersection types, polymorphism, ...)
 - (b) Dependent types and homotopy type theory
 - (c) Linear logic and other constructive logics
 - (d) Implicit complexity
3. Fundamentals of Functional and Declarative Programming
 - (a) Unification and narrowing
 - (b) Tree automata
 - (c) Continuations and control operators
 - (d) Coinduction and infinitary systems
4. Semantics
 - (a) Abstract machines
 - (b) Categorical semantics
 - (c) Denotational and game semantics
 - (d) Quantitative models (timing, probabilities)
5. Algorithmic Analysis of Formal Systems
 - (a) Type inference and type checking
 - (b) Complexity analysis
 - (c) Checking termination, confluence, and related properties
 - (d) Formalisation and certification
6. Tools and Applications
 - (a) Proof assistants and interactive theorem proving
 - (b) Automated deduction (completion, constraints, equational logic...)
 - (c) Symbolic computation
 - (d) Implementation techniques for formal systems
 - (e) Case studies and applications based on formal systems

FSCD Rules:

1. Formal Structures for Computation and Deduction (FSCD) is an annual conference.
 2. The General Meeting (abbreviated GM in the sequel) is held during every conference. GM is legal no matter how many participants attend. All participants can attend and vote. Voting is open unless stated otherwise.
 3. The agenda of GM includes at least the following items:
 - a. Report of the PC (Program Committee) Chair;
 - b. Report of the organizers;
 - c. Election of new SC (Steering Committee) members as defined in 4;
 - d. Presentation of the PC Chair for FSCD+1, according to 8;
 - e. Presentation of and selection of CC (conference chair) and proposals to organize FSCD+2 as defined in 10;
 - f. Publication policy (at least once every 5 years).
 4. The Steering Committee (abbreviated SC) of FSCD consists of the SC Chair, one former SC Chair, 6 elected members and 3 former PC Chairs. Every year the SC is joined by the current PC Chair and 2 new SC members are elected by a secret ballot. Each SC member normally serves for 3 years. Former PC co-chairs share a single vote.
 5. Names of candidates for SC should be submitted to the SC Chair two weeks before the conference and made available to participants prior to the conference.
 6. The SC Chair is elected before every third conference from within the SC excluding the current and former SC chairs, and takes the office after that conference. The SC chair serves 3 years, and then becomes the former SC chair and remains on the SC for the following three years.
 7. The SC is responsible for the following tasks:
 - a. To select the PC chair, according to 8;
 - b. To solicit proposals for the organization of FSCD in the future;
 - c. Call and preside over the GM;
 - d. To solicit nominations for SC as defined in 5;
 - e. To solicit nominations for FSCD+2 organization as detailed in 10;
 - f. To select the Publicity Chair.
 8. The PC chair is responsible for the scientific program of the conference. The PC chair is selected by the SC and presented to the GM as defined in 3d. The PC Chair selects the remaining members of the PC.
 9. The PC Chair cannot submit papers. A paper authored or co-authored by a PC member should be accepted only if it is well above the borderline and requires no serious discussion.
 10. The organization (including financials) of the conference is the sole responsibility of the CC, who selects the remaining members of the organizing committee. The CC is elected at the GM two years before the conference. The final decision is the responsibility of the SC, who must respect the choice of GM.
 11. The Publicity Chair is responsible for advertising and other issues concerning publicity of the conference, in particular keeping a record of all relevant data and maintaining the conference webpage.
 12. The composition of the SC in the initial period 2015-2020 is defined in the Appendix.
 13. These rules are effective during the period 2015-17. The SC will prepare a final proposal of the rules for the 2017 meeting.
- Appendix:** We start FSCD with the following "bootstrap" measures to get the conference rolling:
1. The initial SC of the FSCD conference is populated as follows:
 - (a) The three past PC chair slots are filled with past PC chairs for RTA+TLCA:
 - Femke van Raamsdonk, Masahito Hasegawa (with co-chair status) until 2016;
 - Gilles Dowek until 2017;
 - Maribel Fernandez, Thorsten Altenkirch (with co-chair status) until 2018.
 - (b) The former SC chair slot is filled by the SC chairs of RTA and TLCA but with the special provision that they cannot vote in the SC.
 - (c) The RTA SC selects three initial members to seed three elected positions, explicitly managed as if elected in 2013, 2014, and 2015 (with one for each).
 - (d) The TLCA SC selects three initial members to seed three elected positions, explicitly managed as if elected in 2013, 2014, and 2015 (with one for each).
 - (e) The SC selects its first SC chair at its first meeting; the first SC chair may be chosen from outside the SC.
 2. The first FSCD conference will be in 2016, with
 - (a) PC co-chairs: Delia Kesner (Paris) and Brigitte Pientka (McGill);
 - (b) Conference Chair: Sandra Alves (Porto).