



COST action CA20111 EuroProofNet

Work and budget plan
for Nov 23 - Oct 24

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COST is supported
by the Horizon 2020
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Deliverables planned for Nov 23 - Oct 24

March 2024:

- ▶ Detailed technical report on the evaluation of techniques for learning proof search guidance and premise selection in automated theorem provers

January 2025:

- ▶ Software for translating proof formats used by automated theorem provers to Dedukti.

Goals for Nov 23 - Oct 24

1. Support young researchers from inclusive-target countries
→ 2 ITCGs, priority for STSMs and meetings
2. Advertise the work of women in EuroProofNet and inform EuroProofNet members on gender biases
→ Women in EuroProofNet workshop (WEPN) during Hausdorff trimester on formal mathematics in Bonn, Germany
3. Report on the achievements of the action wrt to its objectives and planned deliverables
→ online MC meeting in October
4. Train young researchers on advanced topics in type theory, linguistics, proof theory and formal mathematics
→ school on Proof and Computation, Fischbachau, Germany

Goals for Nov 23 - Oct 24

- 5.** Train young researchers on state-of-the-art techniques in automated theorem proving
→ SAT/SMT/AR school during IJCAR'24 in Nancy, France
- 6.** Develop tools to handle proofs generated by automated theorem provers and SMT solvers
→ TPTP Tea Party during IJCAR'24 in Nancy, France
→ Inter-WG developers meeting in Val d'Ajol, France
- 7.** Bring together industry designers and researchers on formal methods to share ideas and experiences on how to improve the tools to reduce the barrier to adoption of formal methods
→ WG3 meeting in Dresden, Germany
- 8.** Express new proof system features in the Dedukti logical framework
→ WG1 meeting in Fréjus, France

Goals for Nov 23 - Oct 24

9. Translate proof libraries from some systems to others and make them easily available

→ Inter-WG developers meeting in Val d'Ajol, France

10. Bring together interactive proof system developers and users to share their experience and tools for developing, searching and maintaining large libraries of proofs

→ WG4 meeting during ITP'24 in Tbilisi, Georgia

→ Inter-WG developers meeting in Val d'Ajol, France

11. Promote the use of proof systems in mathematics and program verification

→ Workshop on proof systems for mathematics and verification in Lausanne, Switzerland

Goals for Nov 23 - Oct 24

12. Share knowledge on the use of large language models in formal mathematics

→ Workshop on proof systems for mathematics and verification in Lausanne, Switzerland

13. Align proof systems and machine learning techniques

→ WG5 meeting in Vienna, Austria

14. Define a common framework for defining and reasoning on type theories

→ WG6 meeting in Leuven, Belgium

15. Develop a framework to represent and check sets of axioms for geometry, that can be easily integrated in educational applications

→ WG2 developers meeting on ATP tools for geometry in Krakow, Poland

Proposed events for Nov 23 - Oct 24

WG	event	city	country	date	days	budget
*	ITCG					4000
*	STSM					38357
1	WG1 meeting	Fréjus	FR	Jan	4	12270
3	WG3 meeting	Dresden	DE	Feb	3	12372
2	geometry ATP	Krakow	PL	Mar	3	6700
5	WG5 meeting	Vienna	AT	Mar	2	12316
6	WG6 meeting	Leuven	BE	Apr	2	16020
1,2,4	dev meeting	Val d'Ajol	FR	May	4	12270
2,3,5	math & verif	Lausanne	CH	Jun	2	12274
*	WEPN	Bonn	DE	Jun	1	7090
2	AR school	Nancy	FR	Jul	5	9030
2	TPTP Tea Party	Nancy	FR	Jul	1	6130
4	WG4 meeting	Tbilisi	GE	Sep	2	11940
6	PC school	Fischbachau	DE	Sep	5	10970
TOTAL						171739
+FSAC 15%						197500

Proposal for 2025 (last year of EuroProofNet)

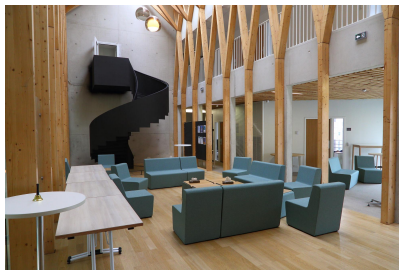
Have all WG meetings during one month between January and June 2025 at the Institut Pascal (IPa) of the University Paris-Saclay, 1 hour by train from Paris

université
PARIS-SACLAY

INSTITUT
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Institut Pascal



Institut Pascal



Call for proposals of the Institut Pascal

Institut Pascal funds accommodation and meals but not travels

Deadline: 10 November 2023

Proposed (preliminary) programme:

- ▶ one week on the theory of type theories (WG6)
- ▶ one week the encoding of proof systems in Dedukti (WG1)
- ▶ one week on dev, maintenance, search of proof libraries (WG4)
- ▶ one week on proof translation tools (WG1,2,4)
- ▶ one week on automated theorem provers certification (WG2)
- ▶ one week on machine learning techniques in proofs (WG5)
- ▶ one week on program verification (WG3 meeting)
- ▶ one week on using proof systems in education (PAT school)
- ▶ one week on using natural language in proofs (WG5,4)
- ▶ one week on computational linguistic (WG5,4,6)