



COST action CA20111 EuroProofNet

Summary of the second grant period

Nov 22 - Oct 23

Frédéric Blanqui



COST is supported
by the Horizon 2020
Framework Programme
of the European Union

Core group composition

chair: Frédéric Blanqui (France)

vice-chair: Sandra Alves (Portugal)

communication: Ornela Dardha (UK), Dmitriy Traytel (Denmark)

grants: Simona Kašterović (Serbia), Ambrus Kaposi (Hungary)

training: Luigia Petre (Finland), Marija Mihova (North Macedonia)

gender-balance: Anja Petković Komel (Slovenia)

WG1: Jesper Cockx (Netherlands), Catherine Dubois (France)

WG2: Alexander Steen (Luxembourg), Mathias Fleury (Germany)

WG3: Alicia Villanueva (Spain), Mădălina Erașcu (Romania)

WG4: Angeliki Koutsoukou-Argyaki (UK) Claudio Sacerdoti (Italy)

WG5: Cezary Kaliszyk (Austria), Peter Koepke (Germany)

WG6: Benedikt Ahrens (UK), Roussanka Loukanova (Bulgaria)

young 50% women 50% Inclusive Target Country (ITC) 32%

Countries represented in the MC

35 including **1 new** ITC in 2023: **Ukraine**

evolution:

- ▶ submission: 24 (50% ITC)
- ▶ Oct 2022: 34 (50% ITC)
- ▶ Oct 2023: 35 (51% ITC)

missing ITC: Bosnia and Herzegovina, Cyprus, Latvia, Malta, Moldova, Montenegro

plan for 2024: Malta

⇒ if you know colleagues in these countries, please contact them!

Working group members (statistics on 2 Oct 23)

members	405		(+34%)
young	224	55%	(+42%)
women	82	20%	
prefer not to say	14	3%	
ITC	80	20%	
non-ITC	300	74%	
non-COST*	21	5%	
WG1	127	31%	(+31%)
WG2	158	39%	(+38%)
WG3	202	50%	(+33%)
WG4	157	39%	(+29%)
WG5	99	24%	(+24%)
WG6	181	45%	(+29%)

* USA, Argentina, Brazil, Canada, Japan, Mexico, Singapore

Member countries

France (FR)	71	18%	+30
United Kingdom (UK)	49	12%	+16
Germany (DE)	37	9%	+11
Italy (IT)	32	8%	+5
Sweden (SE)	19	5%	+6
Netherlands (NL)	17	4%	+3
Spain (ES)	17	4%	
Portugal (PT)	15	4%	+4
Denmark (DK)	14	3%	+1
Belgium (BE)	13	3%	+3
Serbia (RS)	13	3%	+2
Austria (AT)	11	3%	+2
United States (US)	11	3%	+3
Romania (RO)	9	2%	+3
Switzerland (CH)	9	2%	+4
Hungary (HU)	6	1%	+1
Czech Republic (CZ)	5	1%	
Israel (IL)	5	1%	
Norway (NO)	5	1%	+1
Poland (PL)	5	1%	+1
Turkey (TR)	5	1%	+1

@MC members:
Ask the colleagues
and students of your
country to register!

Communication (statistics on 2 Oct 21)

web site <https://europroofnet.github.io> 109 pages (+55%)

news, events, grants, publications, tools, schools, job offers, conferences, teaching, gender balance, working groups, research groups, related projects, contacts

PDF reports/slides 243 (+242%), **videos** 18

Zulip chat 253 followers (+22%)

Facebook 34 followers (+100%), **Twitter** 125 followers (+54%)

photos 133 (+190%)

publications in conferences/journals 40

Budget

- ▶ Oct 2022: initial budget of 164,496 euros
STSMs, 2 ITCGs, 2 schools, 8 meetings
- ▶ March 2023: budget increased by COST to **196,546 euros**
increased budget for STSMs, schools and meetings
- ▶ May 2023: transformation of SONALF school into meeting
- ▶ June 2023: reallocation of unspent money to VTSA school
- ▶ Sep 2023: reallocation of unspent money to new meeting
(Fontainebleau)

Expenses

event	WG	budget1	budget2	final	diff
STSM		35000	42500	44785	+2285
ITCG		3000	3000	3990	+990
WEPN		7000	8200	2856	-5344
PAT school		14560	17280	16772	-508
SONALF school	5	10980	13710	0	-13710
VTSA school	3	0	0	9679	+9679
Fréjus	1,2,4	12400	8791	8791	0
Liège	2	12400	12420	10975	-1445
Val d'Ajol	1,2,4	0	14359	12408	-1951
Gif-sur-Yvette	2	6800	6680	4642	-2038
Timisoara	3	10200	11019	11019	0
Cambridge	4,5	10800	12900	16828	-3928
Prague	2,5	9450	9600	7933	-1667
Vienna	6	10450	10450	13527	+3077
Fontainebleau	1,2,4	0	0	2691	+2691
TOTAL		143040	170910	166897	-4013
+FSAC 15%		164496	196546	191931	-4615

Short-Term Scientific Missions (STSMs)

28% of the budget in 2023

3 calls: January 1st, March 1st, May 8

41 submissions, 27 accepted (66%)

average 1780 euros/STSM, 9.5 days/STSM

Events

Event	Dur	Onsite	Online	Total	Funded	%
Fréjus	4	15	0	15	15	100%
Timisoara	2	20	4	24	18	75%
Prague	3	25	0	25	13	52%
Vienna	2	66	0	66	20	30%
Liège	3	20	1	21	13	65%
PAT school	5	38	0	38	17	45%
Gif-sur-Yvette	1	24	5	29	8	50%
Val d'Ajol	4	15	0	15	15	100%
WEPN	1	25	0	25	4	16%
VTSA school	5	50	0	50	10	20%
Cambridge	3	27	0	27	16	59%
Fontainebleau	2	20	1	21	13	62%
TOTAL	35	345	11	356	162	47%

Reimbursements

Date	Event	Nb	Unsub	ToVerif	Ongoing	Paid
STSMs		27				100%
Jan 27-29	Fréjus	15				100%
Feb 8-9	Timisoara	18				100%
Apr 18-20	Prague	13				100%
Apr 24-25	Vienna	20			1	95%
May 11-13	Liège	13				100%
Jun 19-23	PAT	17			1	94%
Jul 13	Gif	8			1	87%
Jul 25-27	Val d'Ajol	15			1	93%
Jul 31	WEPN	4		1		75%
Aug 28-Sep 1	VTSA	10			10	0%
Sep 6-8	Cambridge	16			16	0%
Sep 26-27	Fontainebleau	13		3	13	0%
TOTAL		189		4	43	77%

Unsub = Unsubmitted, Ongoing = reimbursement within a month

Goals of Nov 22 - Oct 23

1. Finish inventory of the automated theorem provers producing proofs, the formats used and the corresponding checking tools

<https://github.com/EuroProofNet/ATP/wiki>

2. Write an inventory of the approaches used in the international Software Verification competition SV-COMP

<https://github.com/EuroProofNet/ProgramVerification/wiki>

3. Describe a mathematical framework for modular reasoning about type theories and their extensions

<https://europroofnet.github.io/deliverable4/>

4. Provide tools for translating proofs from Isabelle, Agda, PVS or Coq to Dedukti and back

<https://europroofnet.github.io/deliverable5/>

Goals of Nov 22 - Oct 23

5. Develop tools for generating Dedukti proofs from automated theorem provers and SMT solvers

<https://europroofnet.github.io/deliverable9/>

- ▶ Integration of Ekstrakto (TSTP to Dedukti) in TPTP World
- ▶ Extension of Carcara (Alethe checker) to output Lambdapi under development (PhD Alessio Coltellacci)

6. Teach how to formalize maths in controlled natural languages

<https://europroofnet.github.io/cambridge-2023/>

presentations and demonstration of Naproche

7. Support young researchers from inclusive-target countries

2 ITCGs, 22% of fundings, 15% of STSMs

⇒ we should stimulate more STSM proposals from ITC

8. Inform EuroProofNet members of gender biases and advertize the work of women

<https://europroofnet.github.io/women-epn-2023/>

Goals of Nov 22 - Oct 23

9. Train teachers on the use of proof systems in education

<https://pat2023.icube.unistra.fr/>

10. Inventory the existing datasets for guided neuro-symbolic synthesis and discuss the development of new data sets

<https://europroofnet.github.io/Prague23/>

11. Share practices on the efficient integration of machine-learning techniques in automated theorem provers

<https://europroofnet.github.io/Prague23/>

12. Provide a tool for searching a database of proofs

<https://europroofnet.github.io/deliverable7/>

extension of Lambdapi with indexing and searching commands

13. Specify requirements for developing a software prototype for automated inference of program specifications as logical axioms

<https://europroofnet.github.io/deliverable6/>

Deliverables 1/2

- ▶ Inventory of automated theorem provers producing proofs, description of proof formats, and inventory of checking tools for these proof formats.

<https://github.com/EuroProofNet/ATP/wiki>

- ▶ Comparison of the approaches used in the international Software Verification competition SV-COMP and other relevant ones.

[https://github.com/EuroProofNet/
ProgramVerification/wiki](https://github.com/EuroProofNet/ProgramVerification/wiki)

- ▶ Definition of a mathematical framework for modular reasoning about type theories and their extensions.

<https://europroofnet.github.io/deliverable4>

Deliverables 2/2

- ▶ Release of software for translating proofs coming from important proof systems based on type theory like Isabelle, Agda, PVS, Lean or Minlog, to Dedukti and back.
<https://europroofnet.github.io/deliverable5>
- ▶ Software prototype for the automated inference of program specifications as logical axioms.
<https://europroofnet.github.io/deliverable6>
- ▶ Tools for managing the dependencies between proofs, and querying and searching the database.
<https://europroofnet.github.io/deliverable7>
extension of Lambdapi with indexing and searching commands