Submission data for 2023 CORE conference ranking process
Integrated Formal Methods

Wolfgang Ahrendt, Einar Broch Johnsen

Introductory Questions

Conference

Title: Integrated Formal Methods
Acronym : IFM
Rank: B

Requested Rank

Rank: B

Conference Details

Month: September
Publisher: Springer (LNCS)
Bi-annual: False
Multiconference: False
Component in a multi-conference or umbrella event: False
Colocated with other events: False
Alternative content: False

Proceedings Publishing Style

Proceedings Publishing: series
Link to most recent proceedings: https://link.springer.com/book/10.1007/978-3-031-07727-2
Further details: The IFM proceedings of recent years appear in the Formal Methods subline of LNCS (Springer). Every instances of IFM has to re-apply for inclusion into the subline. Applications are reviewed by the Subline Series Editors:
- Ana Cavalcanti, University of York, UK
- Annabelle McIver, Macquarie University, Sydney, NSW, Australia
and the Subline Advisory Board:
- Manfred Broy, TU Munich, Germany
- Marieke Huisman, University of Twente, The Netherlands
- André Platzer, Karlsruhe Institute of Technology, Germany, and Carnegie Mellon University, PA, USA
- Erik de Vink, Eindhoven University of Technology, The Netherlands
- Pamela Zave, AT&T Laboratories Research, Bedminster, NJ, USA

Most Recent Years

Most Recent Year

Year: 2022
URL: https://ifm22.si.usi.ch/
Location: Lugano, Switzerland
Papers submitted: 40
Papers published: 14
Acceptance rate: 35
Source for numbers: https://link.springer.com/book/10.1007/978-3-031-07727-2

General Chairs

Name: Carlo A. Furia
Affiliation: USI Università della Svizzera italiana, Switzerland
Gender: M
H Index: 29
GScholar url: https://scholar.google.com/citations?hl=de&user=pqbv1BAAAAAJ
DBLP url: https://dblp.uni-trier.de/pid/78/6422.html

Program Chairs

Name: Maurice H. ter Beek
Affiliation: Consiglio Nazionale delle Ricerche (National Research Council), Pisa, Italy
Gender: M
H Index: 27
GScholar url: https://scholar.google.com/citations?hl=de&user=4aDHDyoAAAAJ
DBLP url: https://dblp.org/pid/b/MHterBeek.html

Name: Rosemary Monahan
Affiliation: Maynooth University, Maynooth, Co. Kildare, Ireland
Gender: F
H Index: 14
GScholar url: https://scholar.google.com/citations?hl=de&user=oPrADWYAAAAJ
DBLP url: https://dblp.org/pid/77/733.html

Second Most Recent Year

Year: 2020
URL: https://ifm20.si.usi.ch/
Location: Lugano, Switzerland (held online)
Papers submitted: 55
Papers published: 22
Acceptance rate: 40
Source for numbers: https://link.springer.com/book/10.1007/978-3-030-63461-2

General Chairs

Name: Carlo A. Furia
Affiliation: USI Università della Svizzera italiana, Switzerland
Gender: M
H Index: 29
GScholar url: https://scholar.google.com/citations?hl=de&user=pqbv1BAAAAAJ
DBLP url:

Program Chairs

Name: Brijesh Dongol
Affiliation: University of Surrey, UK
Gender: M
H Index: 16
GScholar url: https://scholar.google.com/citations?hl=de&user=fjA_2-cAAAAJ
DBLP url:

Name: Elena Troubitsyna
Affiliation: KTH - Royal Institute of Technology, Sweden
Gender: F
H Index: 22
GScholar url: https://scholar.google.com/citations?hl=de&user=wQrIOnoAAAAJ
DBLP url:

Third Most Recent Year

Year: 2019
URL: https://ifm2019.hvl.no/
Location: Bergen, Norway
Papers submitted: 87
Papers published: 25
Acceptance rate: 29
Source for numbers: https://link.springer.com/book/10.1007/978-3-030-34968-4

General Chairs

Name: Volker Stolz
Affiliation: Western Norway University of Applied Sciences, Norway
Gender: M
H Index: 17
GScholar url: https://scholar.google.com/citations?hl=de&user=chQYb4MAAAAJ
DBLP url:

Program Chairs

Name: Wolfgang Ahrendt
Affiliation: Chalmers University of Technology, Sweden
Gender: M
H Index: 20
GScholar url: https://scholar.google.com/citations?hl=de&user=rFuqP-8AAAAJ
DBLP url:

Name: Silvia Lizeth Tapia Tarifa
Affiliation: University of Oslo, Norway
Gender: F
H Index: 12
GScholar url: https://scholar.google.com/citations?hl=de&user=zcRi-BcAAAAJ
DBLP url:

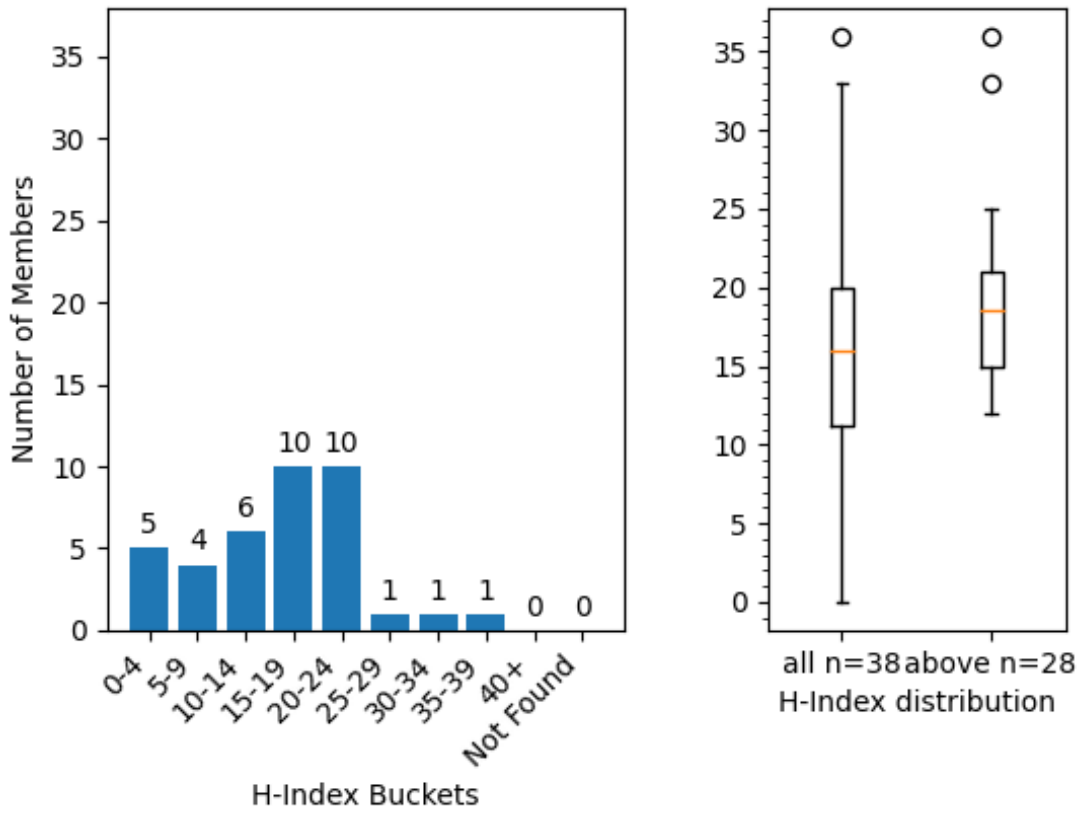
Policies

Chair Selection: IFM follows a two-step procedure. First, members of the Steering Committee (SC) nominate candidates for Chairs. Then, a two-round anonymous voting procedures is applied, with votes from the SC. The purpose of the first round is to identify the top candidates, the purpose of the second round is to identify the best pairing of candidates among the top candidates. The pairing should contain at least one woman according to our selection criteria. The SC also aims to pair one established scientist with one young and promising talent as the PC chairs of IFM.
No Policies.

Program Committee

Link to pc: https://ifm22.si.usi.ch/pages/committees/
File: http://portal.core.edu.au/core/media/2023/pc_members/PCiFM2022_DrLZumg.txt
H-index plot: http://portal.core.edu.au/core/media/2023/pc_graphs/higherrank_hindex_buckets_2137.png

Information contained within these graphs is derived using the Elsevier Scopus Database 2023.
Scopus h-index is generally about 30% lower than Google Scholar h-index.



Publishing of established researchers in the PC

http://portal.core.edu.au/core/media/2023/conf_submissions_clean_spc/higherrank2137_spc_report.csv
WPP Report: http://portal.core.edu.au/core/media/2023/wpp_reports/ANciz9KL.txt

1. International Conference on Integrated Formal Methods (IFM)
Core Rank: B

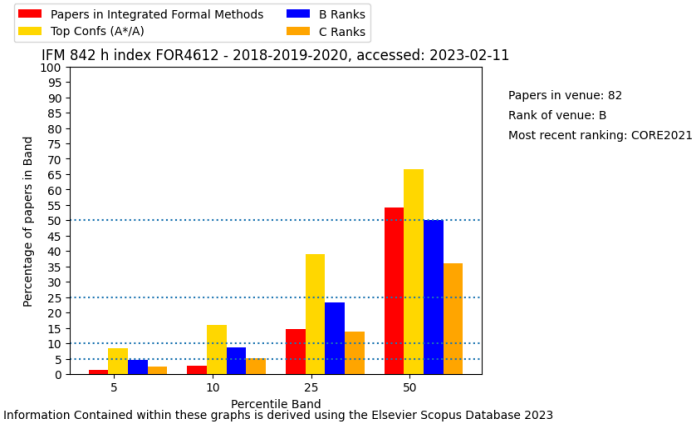
This venue was published at 19 times by 14 of 24 individuals in the last 5+ years.

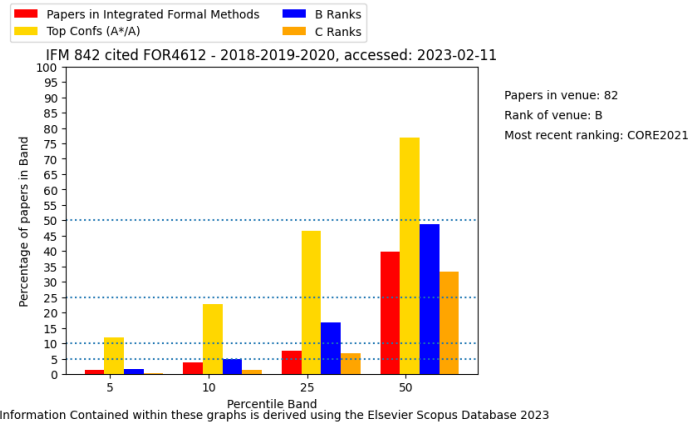
The individuals that publish at this venue are: Maurice H. ter Beek(3), Yamine Ait-Ameur(3), Burkhart Wolff(2), Einar Broch Johnsen(2), Erika Abraham(2), Frits W. Vaandrager(2), Louise Abigail Dennis(2), Alberto Lluch-Lafuente(1), Andrea Vandin(1), Dominique Mery(1), Gerhard Schellhorn(1), Heike Wehrheim(1), John Derrick(1), Volker Stolz(1)

In 2018, there were 4 publications by 5 individuals: Einar Broch Johnsen, Erika Abraham, Heike Wehrheim, John Derrick, Maurice H. ter Beek
In 2019, there were 6 publications by 7 individuals: Alberto Lluch-Lafuente, Andrea Vandin, Burkhart Wolff, Frits W. Vaandrager, Louise Abigail Dennis, Maurice H. ter Beek, Volker Stolz
In 2020, there were 5 publications by 5 individuals: Burkhart Wolff, Einar Broch Johnsen, Frits W. Vaandrager, Gerhard Schellhorn, Yamine Ait-Ameur
In 2022, there were 4 publications by 4 individuals: Dominique Mery, Erika Abraham, Louise Abigail Dennis, Yamine Ait-Ameur

14 out of the 24 individuals published at this venue in 1 or more years
7 out of the 24 individuals published at this venue in 2 or more years

Centile graphs of paper metrics





Top People Involvement

name: Michael Leuschel
h-index: 35
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=gNF8SogAAAAJ
Justification: :
Apart from a very high publication output, he provides numerous leading Formal Methods tools.
https://www.cs.hhu.de/en/research-groups/software-engineering-and-programming-languages/our-research/software
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
1	1	2	2	0

Attendance: Often (50-80% of the time)

name: Marieke Huisman
h-index: 32
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=ntTJhw8AAAAJ
Justification: :
- President of ETAPS association
- ERC grant recipient
- Associate Editor-in-Chief of the Software Track of Science in Computer Programming
- Winner of the Netherlands Prize for ICT Research 2013
see https://wwwhome.ewi.utwente.nl/~marieke/
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	2	2	1	1

Attendance: Often (50-80% of the time)

name: Maurice H. ter Beek
h-index: 27
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=4aDHDyoAAAAJ
Justification: :
- Editorial Board member of 5 journals: 1) Formal Aspects of Computing 2) Software Tools for Technology Transfer 3) Logical and Algebraic Methods in Programming 4) PeerJ Computer Science 5) Science of Computer Programming
- Steering Committee chair of FMICS: International Conference on Formal Methods for Industrial Critical Systems
- Steering Committee member of 1) COORDINATION 2) iFM: International Conference on integrated Formal Methods 3) SPLC: Systems and Software Product Line Conference
see http://fmt.isti.cnr.it/~mtbeek/
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
1	0	2	1	0

Attendance: Often (50-80% of the time)

name: Ana Cavalcanti
h-index: 34
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=fu6TM4wAAAAJ
Justification: :
- Chair of the Formal Methods Europe Board
- Editorial board member of 1) Formal Aspects of Computing, Springer 2) Journal of the Brazilian Computer Society, Springer 3) Journal of Software Engineering Research and Development 4) Science of Computer Programming, Elsevier
see https://www-users.york.ac.uk/~alcc500/
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	0	0	1	2

Attendance: Sometimes (20-50% of the time)

name: Frits Willem Vaandrager
h-index: 55
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=2bkjlMgAAAAJ
Justification: :
- More than 10K citations
- Best paper awards from FACS, ICALP, and FTRTFT
- Editor Software Tools for Technology Transfer (STTT)
- Editor Logical Methods in Computer Science (LMCS)
- Board member Dutch National Association for Software Engineering (VERSEN)
see https://www.cs.ru.nl/~fvaan/
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	1	1	0	0

Attendance: Sometimes (20-50% of the time)

name: Stefania Gnesi
h-index: 48
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=vkhTk-MAAAAJ
Justification: :
- Former chair of the Institute of Information Science and Technologies (ISTI) at the The National Research Council of Italy (CNR)
- Former deputy chair of the FME (Formal Methods Europe) association
- Member of the editorial Board of the International Journal on Software Tools for Technology Transfer
- Program chair of several conferences in the area of Formal Methods
see https://www.fmt.isti.cnr.it/m.Stefania.Gnesi.php
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	0	1	1	0

Attendance: Sometimes (20-50% of the time)

name: Einar Broch Johnsen
h-index: 28
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=MWLmvGkAAAAJ
Justification: :
- Board member of Formal Methods Europe
- Editorial board member of the journals Formal Aspects of Computing and Journal of Logical and Algebraic Methods in Programming
- Steering committee member of the conference series on Fundamental Approaches to Software Engineering (FASE), Integrated Formal Methods (iFM) and Formal Techniques for Networked and Distributed Systems (FORTE)
- PC chair of FASE 2022, SEFM 2018, TAP 2017, ESOCC 2016, iFM 2013 and FMOODS 2007
see https://ebjohnsen.org/
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	1	0	1	0

Attendance: Almost always (>80% of the time)

name: Erika Abraham
h-index: 32
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=LtW3iTwAAAAJ
Justification: :
- Steering Committee memberships: SMT, GE@ICSE, SNR, iFM, SC2, FORTE, ETAPS
- PC chair: ICTAC, FSEN, SVT-SAC, iFM, FORTE, TACAS
see https://ths.rwth-aachen.de/people/erika-abraham/
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
1	0	0	1	0

Attendance: Often (50-80% of the time)

name: Ferruccio Damiani
h-index: 29
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=FmFRiaAAAAAJ
Justification: :
- Member of the board of the European Association for Programming Languages and Systems (EAPLS)
- Member of the steering committee of the Integrated Formal Methods (iFM) conference series
- Member of the steering committee of the Conference on Coordination Models and Languages (COORDINATION) conference series
see http://www.di.unito.it/~damiani/

Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	0	2	0	2

Attendance: Often (50-80% of the time)

name: Falk Hower
h-index: 26
Google Scholar URL: https://scholar.google.com/citations?hl=en&user=pUqp2yIAAAAJ
Justification: :
Author of many leading tools in the area: - jConstraints: a constraint solver abstraction layer for Java - jDart: a framework for dynamic symbolic execution of Java programs - PSYCO: a symbolic behavioral interfaces for Java components - RaLib: an extension of LearnLib for Register Automata - LearnLib: a library for automata learning
see https://ls14-www.cs.tu-dortmund.de/cms/de/mitarbeiter/profs/Howar.html
Paper counts:

Most Recent:	Second most recent:	Third most recent:	Fourth most recent:	Fifth most recent:
0	2	0	1	0

Attendance: Sometimes (20-50% of the time)

Additional Data

Google Scholar Data

Sub-category url: https://scholar.google.com.au/citations?view_op=top_venues&hl=en&vq=eng_theoreticalcomputerscience
Position in sub-category: 20+
h5 index of 20th item in category: 22
h5 index for this conference: 14

Relationship to similar conferences

Partial ordering of similar conferences in the area, with argument as to where the current venue fits and why:
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FM (International Symposium on Formal Methods)

The FM Symposium (CORE2021 A rank) can be considered IFM's "bigger sister" conference, and it's not a coincidence that the two conference acronyms (FM and IFM) are so similar. Both conferences have a clear focus on formal methods research, with IFM being a somewhat narrower breadth (in particular, because it does not have the same visibility with and participation of industry practitioners as FM). Also in terms of quality of published work, FM is the stronger, more selective conference (for example FM's acceptance rate is usually below 30%). The two communities of researchers are, however, very similar, with IFM accepting a few more junior researchers. For example, 4 of the more senior researchers in IFM 2022's PC (Cavalcanti, Broch Johnson, Platzer, Zhan) also served in FM 2023's PC.
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SEFM (Software Engineering and Formal Methods)
ICFEM (Formal Engineering Methods)

The areas of SEFM (CORE2021 B rank), ICFEM (CORE2021 B rank), and IFM have a significant overlap of topics, with SEFM focusing more on the connections to software engineering, ICFEM on practical and industrial applications, and IFM on the combinations of different formal methods. In practice, the quality of the work published is very similar in all three venues; for example, SEFM, ICFEM, and IFM have a paper acceptance rate usually around 30-35%. Another indication that the three conferences have a significant similarities in scope and researcher community: 6 members (Cavalcanti, Jakobs, Sirjani, Werheim, Tapia Tarifa, Troubitsyna) of SEFM 2022's PC, and 6 members (Ait Ameur, Banach, Cavalcanti, Mery, Troubitsyna, Zhan) of ICFEM 2022's PC also served in the latest two editions of IFM (Ait Ameur as invited speaker, the others as PC members).
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FMCAD (Formal Methods in Computer-Aided Design)
ATVA (Automated Technology for Verification and Analysis)
RV (Runtime Verification)

FMCAD (CORE2021 B rank), ATVA (CORE2021 B rank), and RV (CORE2021 B rank) are three conferences that belong to the same general area as IFM, and hence their scopes overlap to a certain extent; however, they clearly have a different focus: FMCAD and ATVA target algorithmic formal verification (the area where CAV is arguably the top conference), whereas RV targets runtime and dynamic analysis. Both these topics are also of interest for IFM, but are among several other applications of formal methods (the area where FM is arguably the top conference) that feature at IFM. In fact, the researcher community of these conferences have some overlap but less extensive than for other aforementioned conferences: 2 members (Abraham, Bloem) of FMCAD 2022's PC, 2 members (Rümmer, Sanchez) of ATVA 2022's PC, and 2 members (Sanchez, Stolz) of RV 2022's PC also served in the latest three editions of IFM. Despite these differences in focus, the quality of published work is generally similar (at least comparable) in the three conferences. While it's hard to directly compare acceptance rates of conferences with different scopes, note that FMCAD and RV tend to have higher acceptance rate

than IFM (e.g. 45% for FMCAD 2022, and 42% for RV 2022), whereas ATVA tends to have lower acceptance rate (e.g. 26% for ATVA 2022, which was still a virtual event whereas IFM 2022 was in person). However, all four conferences have a program of similar size in numbers of presented papers (around 18-24 papers).
==========
FMICS (Formal Methods for Industrial and Critical Systems)
FTfJP (Formal Techniques for Java-like Programs)

FMICS (CORE2021 C rank) and FTfJP (CORE2021 C rank) are two venues whose general scopes have some similarities with IFM's, but have a clearly narrower focus: FMICS is especially interested in applications to industrial/safety critical systems, whereas FTfJP focuses on program verification of Java and similar languages. The similarities are also shown by the overlap in researcher community, which is larger for FMICS than for FTfJP: 6 members (Abraham, ter Beek, Kosmatov, Monahan, van de Pol, Troubitsyna) of FMICS 2022's PC, and 2 members (Huisman, Monahan) of FTfJP 2022's PC/SC also served in the latest two editions of IFM. It's also clear that IFM caters to a larger community and is more selective of high-quality work: for example, FMICS 2022's acceptance rate was 59% with a program of 13 papers; FTfJP 2021 accepted all 10 submitted papers.

Other Information

Other Relvant Info

Other relevant information: :
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Annual conference, but no IFM 2021:

Note that IFM is normally held every year, but the year 2021 was skipped because of Covid. Namely, IFM 2020 was supposed to take place in Lugano, Switzerland but had to be held online. Then, the SC decided to try again to have the conference in Lugano but with in-person participation; this was possible only in 2022. As usual, it is hard to know whether this interruption had any impact on the submission or participation numbers, but the PC selection process continued as usual. Now, the conference has resumed a yearly schedule, and the 2023 IFM edition is scheduled for later this year in Leiden, the Netherlands.
The fact that no IFM conference was held during 2021, for the above reasons, impacts of course the h5 index (14).
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In the checkbox specifying the month where the conference is usually held, we checked September. However, the month varies over the years. The last five instances of IFM took place in September (2x), December, November, and June (in 2022, after the pandemic break).
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Invited speakers of the 3 most recent IFMs:
IFM 2019, Bergen, Norway:
- Jean-Christophe Filliâtre (Univ. Paris-Sud, CNRS, France), h-index: 34
- Tiziana Margaria ((University of Limerick and Confirm, Ireland), h-index: 47
- Corina Pasareanu (NASA Ames and Carnegie Mellon University, US), h-index: 55
FM 2020, Lugano, Switzerland (online conference in pandemic):
- Edward A. Lee (University of California at Berkeley, US), h-index: 91
- David Parker (University of Oxford, UK), , h-index: 57
- Hongseok Yang (School of Computing, KAIST, Korea), h-index: 47
IFM 2022, Lugano, Switzerland:
- Yamine Aït-Ameur (INPT-ENSEEIHT, France), h-index: 25
- Roderick Bloem (Graz University of Technology, Austria), h-index: 45
- Louise Dennis (University of Manchester, UK), h-index: 28

Attachments

N/A

Proposers

First name: Wolfgang
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Email: ahrendt@chalmers.se

First name: Einar Broch
Last name: Johnsen
Affiliation: University of Oslo
Email: einarj@ifi.uio.no

Submitted By

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Email: ahrendt@chalmers.se