

Submission Data for 2020-2021 CORE conference Ranking process International Conference on Automated Deduction

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Conference Details

Conference

Title: International Conference on Automated Deduction

Acronym: CADE

Rank: A

Requested Rank

Rank: A*

Recent Years

Proceedings Publishing Style

Proceedings Publishing: series

Link to most recent proceedings: https://link.springer.com/book/10.1007/978-3-030-29436-6

Further details: The CADE proceedings have for many years appeared in the LNCS series of Springer. Proceedings include peer-reviewed research papers and peer-reviewed system descriptions, as well as a small number of abstracts of invited talks.

Most Recent Years

Most Recent Year

Year: 2019

URL: http://www.cade-27.info/

Location: Natal, Brazil Papers submitted: 65 Papers published: 34 Acceptance rate: 52

Source for numbers: http://www.cadeinc.org/conferences

General Chairs

Name: Elaine Pimentel

Affiliation: Universidade Federal do Rio Grande do Norte, Brazil

Gender: F H Index: 13

 $GS cholar\ url:\ https://scholar.google.com.co/citations?user=-a8uTt8AAAAJ\&hl=en$

DBLP url: https://dblp.org/pid/53/5809.html

Program Chairs

Name: Pascal Fontaine

Affiliation: UniversitÃl' de LiÃÍge, Belgium

Gender: M H Index: 18

GScholar url: https://scholar.google.com/citations?user=gHe6EF8AAAAJ&hl=en

DBLP url: https://dblp.org/pid/67/3053.html

Second Most Recent Year

Year: 2017

URL: http://www.cse.chalmers.se/~myreen/cade-26/

Location: Gothenburg, Sweden

Papers submitted: 69 Papers published: 31 Acceptance rate: 45

Source for numbers: http://www.cadeinc.org/conferences

General Chairs

Name: Moa Johansson Affiliation: Chalmers, Sweden

Gender: F H Index: 12

 $GS cholar\ url:\ https://scholar.google.com/citations?user=qJ908GIAAAAJ\&hl=en$

DBLP url: https://dblp.org/pid/02/452.html

Name: Wolfgang Ahrendt Affiliation: Chalmers, Sweden

Gender: M H Index: 18

GScholar url: https://scholar.google.se/citations?user=rFuqP-8AAAAJ&hl=en

DBLP url: https://dblp.org/pid/91/1275.html

Program Chairs

Name: Leonardo de Moura Affiliation: Microsoft, USA

Gender: M H Index: 43

GScholar url: https://scholar.google.com/citations?user=CwazDKgAAAAJ&hl=en

DBLP url: https://dblp.org/pid/d/LeonardoMdeMoura.html

Third Most Recent Year

Year: 2015

URL: https://conference.imp.fu-berlin.de/cade-25/home

Location: Berlin, Germany Papers submitted: 84 Papers published: 36 Acceptance rate: 43

Source for numbers: http://www.cadeinc.org/conferences

General Chairs

Name: Christoph BenzmÃijller

Affiliation: Freie UniversitÃdt Berlin, Germany

Gender: M H Index: 33

GScholar url: https://scholar.google.com/citations?user=zDOvtfwAAAAJ&hl=en

DBLP url: https://dblp.org/pid/b/CBenzmueller.html

Program Chairs

Name: Amy Felty

Affiliation: University of Ottawa, Canada

Gender: F H Index: 24

GScholar url: https://scholar.google.com/citations?user=e-U4JcIAAAAJ&hl=en

DBLP url: https://dblp.org/pid/f/AmyPFelty.html

Name: Aart Middeldorp

Affiliation: University of Innsbruck, Austria

Gender: M H Index: 36

GScholar url: https://scholar.google.se/citations?user=R9M0_3AAAAAJ&hl=th

DBLP url: https://dblp.org/pid/m/AMiddeldorp.html

Policies

Chair Selection: General chairs and program chairs of CADE conferences are selected by the CADE board of trustees. The process is formally governed by the CADE Inc. bylaws: http://www.cadeinc.org/bylaws

General chairs: every two years there is an open call to propose the location, dates, general chairs, and organisation committee of the forthcoming CADE conference. This call is published in the AAR newsletter, http://aarinc.org. Submissions are evaluated by the CADE board according to the following criteria:

* National, regional, and local AR community support, including proposed chairs, local arrangements committee, and availability of student volunteers * National, regional, and local government and industry support, both organizational and financial. * Accessibility (i.e., transportation), attractiveness, and desirability of proposed site. * Appropriateness of proposed dates * Conference and exhibit facilities for the anticipated number of registrants * Residence accommodations and food services in a range of price categories and close to the conference facilities * Budget projections for the various budget categories * Balance with regard to the geographical distribution of previous conferences.

Program chairs: the program chairs are chosen by the CADE board of trustees. The chairs are selected among the most recognised people in the automated reasoning community, taking into account scientific merits, the number of CADE conferences attended, number of papers published at CADE, and previous activities in the community. The chairs are also selected so that different sub-communities are represented in a fair way, and with the aim of achieving geographical balance and comparable representation of both genders. Usually 1-3 chairs are chosen.

Policy name: CADE Inc. bylaws

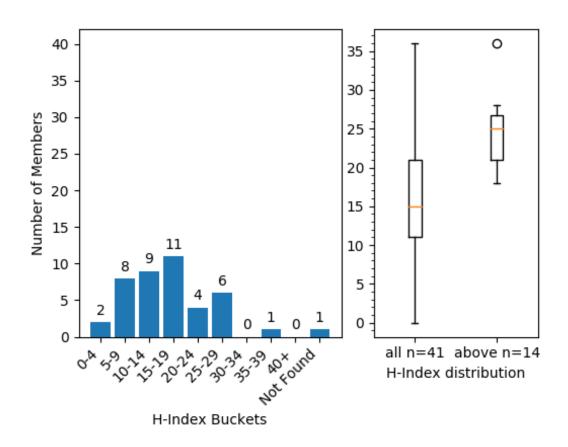
Policy url: http://www.cadeinc.org//bylaws

(Senior) Program Committee

Link to (s)pc: https://www.mat.ufrn.br/cade-27/?page_id=2

File: http://portal.core.edu.au/core/media/conf_submissions_spc_file/CADE2019_w8yeCcz.txt

H-index plot: http://portal.core.edu.au/core/media/conf_submissions_hindex_plots/hindex_buckets_1410.png Information Contained within this graph is derived using the Elsevier Scopus Database 2021.



Data and Metrics

Google Scholar Metrics

Sub-category url: https://scholar.google.com.au/citations?view_op=top_venues&hl=en&vq=eng_theoreticalcomputerscience Position in sub-category: 20+

Image of top 20: http://portal.core.edu.au/core/media/changes_h5/higherrank1410_gscholar_minh5.png

Top publications

Categories > Engineering & Computer Science > Theoretical Computer Science >

| | Publication | <u>h5-index</u> | <u>h5-</u> median |
|-----|-------------------------------------------------------------------------|-----------------|----------------------|
| 1. | ACM Symposium on Theory of Computing | 63 | 85 |
| 2. | IEEE Symposium on Foundations of Computer Science (FOCS) | <u>54</u> | 78 |
| 3. | ACM SIAM Symposium on Discrete Algorithms | <u>49</u> | 65 |
| 4. | SIAM Journal on Computing | <u>45</u> | 69 |
| 5. | Journal of the ACM (JACM) | 38 | 57 |
| 6. | Theoretical Computer Science | <u>37</u> | 52 |
| 7. | International Colloquium on Automata, Languages and Programming (ICALP) | <u>32</u> | 42 |
| 8. | Conference on Innovations in Theoretical Computer Science | <u>31</u> | 45 |
| 9. | Journal of Computer and System Sciences | <u>31</u> | 44 |
| 10. | IEEE Symposium on Logic in Computer Science | <u>31</u> | 40 |
| 11. | ACM Transactions on Algorithms (TALG) | 28 | 37 |
| 12. | Algorithmica | 28 | 35 |
| 13. | Fundamenta Informaticae | <u>27</u> | 41 |
| 14. | Logical Methods in Computer Science | <u>27</u> | 36 |
| 15. | Journal of Automated Reasoning | <u>26</u> | 43 |
| 16. | Information Processing Letters | <u>26</u> | 35 |
| 17. | Information and Computation | <u>26</u> | 34 |
| 18. | Random Structures & Algorithms | 26 | 34 |
| 19. | European Symposium on Algorithms | <u>26</u> | 33 |
| 20. | Journal of Logic and Computation | <u>25</u> | 33 |

h5-index for this conference: 19

ACM Metrics

Not Sponsored by ACM

Aminer Rank

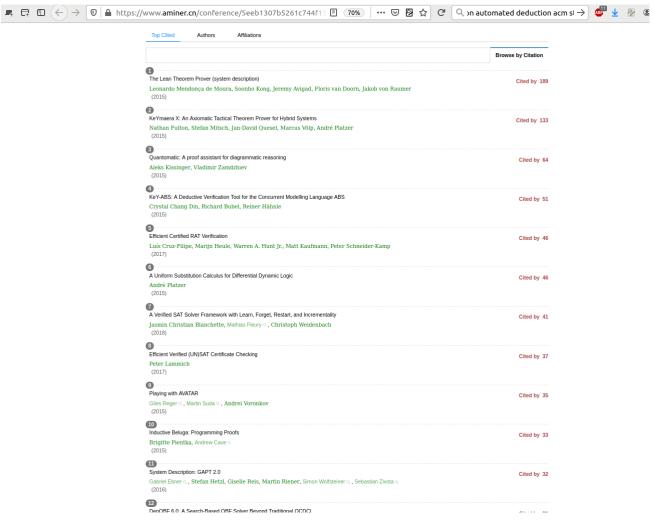
Aminer rank: 28

Aminer name: Conference on Automated Deduction/The International Joint Conference on Automated Reasoning

Acronym / shortname: CADE/IJCAR

h-5 index: 23 CCF level: B THU level: -

 $Top\ Aminer\ Cites:\ http://portal.core.edu.au/core/media/conf_submissions_citations/higherrank1410_aminer_top_cite.png$



Other Rankings

Not aware of any other Rankings

Conferences in area: Together with its sister conference IJCAR, CADE is the most important event in the area of automated deduction and automated reasoning. Roughly in decreasing order of importance, relevant conferences in this area are: CADE IJCAR CAV Tableaux FroCoS CSL SAT CCP ITP FSCD LPAR

Top People Publishing Here

name: Franz Baader

justification: Seminal work on unification, description logics, automated reasoning, rewrite systems, and logic in general. Herbrand Award in 2020. Chair of the steering committee of IJCAR.

h-index 62

http://www.cadeinc.org/Herbrand-Award https://tu-dresden.de/ing/informatik/thi/lat/die-professur/franz-baader Paper counts:

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

Attendance: ALWAYS name: Deepak Kapur

justification: Seminal work in automated reasoning, symbolic computation, computer algebra, etc. Herbrand Award in 2009.

h-index 54

https://www.cs.unm.edu/~kapur/

Paper counts:

| apor oourno. | | | | |
|--------------|---------------------|--------------------|---------------------|--------------------|
| Most Recent: | Second most recent: | Third most recent: | Fourth most recent: | Fifth most recent: |
| 1 | 1 | 0 | 0 | 1 |

Attendance: ALWAYS name: Tobias Nipkow

justification: Seminal work in higher-order theorem proving, decision procedures, and logic in general.

h-index 51

https://www21.in.tum.de/~nipkow/

Paper counts:

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

Attendance: OFTEN name: Lawrence Paulson

justification: Seminal work in higher-order theorem proving, reasoning in arithmetic, and logic in general. Herbrand Award in 2017.

h-index 53

https://www.cl.cam.ac.uk/~lp15/http://www.cadeinc.org/Herbrand-Award

Paper counts:

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

Attendance: OFTEN name: Armin Biere

justification: One of the most recognised scientists in the SAT field, and inventor of Bounded Model Checking. TACAS most influential paper in the first 20 years of TACAS in 2014. HVC'15 award on the most influential work in the last five years in formal verification, simulation, and testing. ETAPS 2017 Test of Time Award. The CAV Award in 2018. The IJCAI-JAIR 2019 Award.

h-index 55

http://fmv.jku.at/biere/

Paper counts:

| • | | | | |
|--------------|---------------------|--------------------|---------------------|--------------------|
| Most Recent: | Second most recent: | Third most recent: | Fourth most recent: | Fifth most recent: |
| 1 | 0 | 1 | 1 | 1 |

Attendance: ALWAYS name: Leonardo de Moura

justification: One of the main people behind the SMT solver Z3, developed at Microsoft Research, a tool that has had tremendous impact both in Academia and Industry. Also started the development of the Lean proof assistant. Received the Herbrand Award in 2019, together with Nikolaj Bjorner. Received the ETAPS Test of time Award in 2018, again together with Nikolaj Bjorner.

h-index 43

http://www.cadeinc.org/Herbrand-Award https://conf.researchr.org/attending/etaps-2019/etaps-test-of-time-award https://leodemoura.github.io/

Paper counts:

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

Attendance: ALWAYS name: Nikolaj Bjorner

justification: Central person in SMT, automated reasoning, program verification, theoretical computer science in general. One of the main people behind the SMT solver Z3, developed at Microsoft Research, a tool that has had tremendous impact both in Academia and Industry. Together with Leo de Moura, received the Herbrand Award in 2019, and the ETAPS Test of time Award in 2018. h-index 47

http://www.cadeinc.org/Herbrand-Award https://conf.researchr.org/attending/etaps-2019/etaps-test-of-time-award https://www.microsoft.com/en-us/research/people/nbjorner/

Paper counts:

| Most Recent: | Second most recent: | Third most recent: | Fourth most recent: | Fifth most recent: |
|--------------|---------------------|--------------------|---------------------|--------------------|
| 0 | 0 | 0 | 0 | 0 |

Attendance: ALWAYS name: Roberto Sebastiani

justification: Central person in SAT, SMT, model checking, formal verification. Started the development of the MathSAT SMT solver, and the related OptiMathSAT optimisation tool.

h-index 45

http://disi.unitn.it/rseba/

Paper counts:

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

Attendance: ALWAYS name: Clark Barrett

justification: One of the people behind the widely successful SMT-LIB initiative; one of the main persons behind the CVC4 SMT solver; groundbreaking work that connects automated reasoning with machine learning.

h-index 41

https://theory.stanford.edu/~barrett/

Paper counts:

| Most Recent: | Second most recent: | Third most recent: | Fourth most recent: | Fifth most recent: |
|--------------|---------------------|--------------------|---------------------|--------------------|
| 2 | 2 | 1 | 1 | 1 |

Attendance: ALWAYS name: Cesare Tinelli

justification: He is a founder and coordinator of the SMT-LIB initiative, an international effort aimed at standardizing benchmarks and I/O formats for SMT solvers. He has led the development of the award-winning Darwin theorem prover and the Kind 1 and Kind 2 model

checkers. He has co-led the development of the widely used and award-winning CVC3 and CVC4 SMT solvers. He also co-leads the development of StarExec, a cross community web-based service for the comparative evaluation of logic solvers. h-index 42

https://homepage.cs.uiowa.edu/~tinelli/html/bio.html

Paper counts:

| Most Recent: | Second most recent: | Third most recent: | Fourth most recent: | Fifth most recent: |
|--------------|---------------------|--------------------|---------------------|--------------------|
| 1 | 2 | 1 | 1 | 2 |

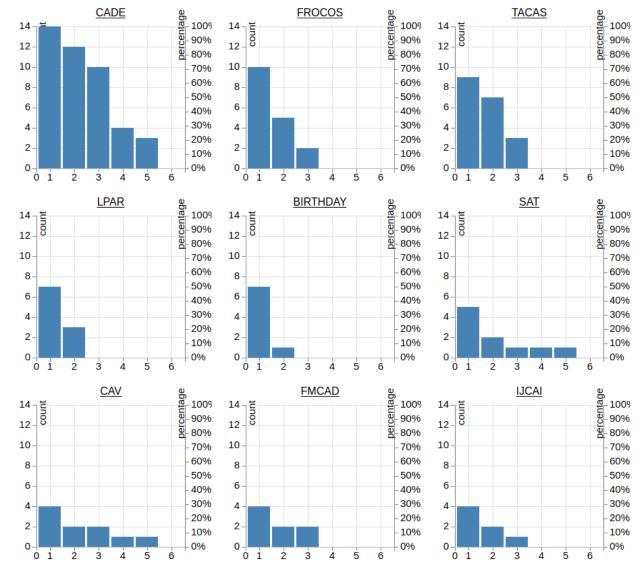
Attendance: ALWAYS

Where People Publish

Top (Senior) Program Committee Members

Generated Report Name: conf_submissions_top_spc/higherrank1410_top_spc.csv WPP Report: http://portal.core.edu.au/core/media/conf_rank_report/higherrank1410_spc_report.txt Graphs: http://portal.core.edu.au/core/media/conf_rank_graphs/higherrank1410_spc_graph.png These graphs show numbers of people publishing in multiple years. Each column shows number of people in

that many or more years. The number publishing in a specific number of years can be seen by the difference with respect to the previous column.



Additional 75 graphs

Reference item: \\ 1. Conference on Automated Deduction (CADE)

This conference was published at 53 times by 14 of 14 experts in the last 5 years.

The experts that publish at this conference are: Deepak Kapur(3), Renate A. Schmidt(2), Silvio Ghilardi(3), Pascal Fontaine(5), Andr Platzer(8), Roberto Sebastiani(4), Franz Baader(2), Philipp Rmmer(3), Clark W. Barrett(7), Natarajan Shankar(1), Marijn Heule(7), Ren Thiemann(2), Geoff Sutcliffe(6), Jrgen Giesl(3)

In 2015, there were 7 publications by 7 experts: Geoff Sutcliffe, Pascal Fontaine, Marijn Heule, Andr Platzer, Philipp Rmmer, Ren Thiemann, Jrgen Giesl

In 2016, there were 8 publications by 7 experts: Geoff Sutcliffe, Jrgen Giesl, Deepak Kapur, Roberto Sebastiani, Andr Platzer, Silvio Ghilardi, Clark W. Barrett

In 2017, there were 12 publications by 7 experts: Natarajan Shankar, Pascal Fontaine, Marijn Heule, Ren Thiemann, Roberto Sebastiani, Geoff Sutcliffe, Clark W. Barrett

In 2018, there were 6 publications by 6 experts: Renate A. Schmidt, Geoff Sutcliffe, Marijn Heule, Andr Platzer, Philipp Rmmer, Clark W. Barrett

In 2019, there were 12 publications by 8 experts: Deepak Kapur, Silvio Ghilardi, Jrgen Giesl, Renate A. Schmidt, Roberto Sebastiani, Andr Platzer, Geoff Sutcliffe, Clark W. Barrett

In 2020, there were 8 publications by 8 experts: Silvio Ghilardi, Pascal Fontaine, Marijn Heule, Deepak Kapur, Andr Platzer, Franz Baader, Philipp Rmmer, Clark W. Barrett

14 out of the 14 experts published at this conference in 1 or more years

12 out of the 14 experts published at this conference in 2 or more years

10 out of the 14 experts published at this conference in 3 or more years

4 out of the 14 experts published at this conference in 4 or more years

3 out of the 14 experts published at this conference in 5 or more years

Top People Report

Method of selection: We selected 20 top researchers (h-index ¿= 45) in the fields of automated reasoning, deduction, satisfiability, SMT, description logics, and automated verification for this comparison. The Google scholar search string was:

 $label: automated_deduction -- label: automated_reasoning -- label: deduction -- label: theorem_proving -- label: sat -- label: smt -- label: satisfiability -- label: description_logics -- label: automated_verification$

Keyword: label:automated_deduction — label:automated_reasoning — label:deduction — label:theorem_proving — label:sat — label:smt — label:satisfiability — label:description_logics — label:automated_verification

| name | h-index | gscholar url |
|--------------------|---------|--------------------------------------------------------------|
| Diego Calvanese | 72 | https://scholar.google.com/citations?user=WeOkRfEAAAAJ&hl=en |
| Franz Baader | 62 | https://scholar.google.com/citations?user=dIVc_FYAAAAJ&hl=en |
| Holger Hoos | 71 | https://scholar.google.com/citations?hl=en&user=16c85tMAAAAJ |
| Maurizio Lenzerini | 82 | https://scholar.google.com/citations?hl=en&user=EYxaICEAAAAJ |
| Daniel Kroening | 52 | https://scholar.google.com/citations?hl=en&user=DHddutUAAAAJ |
| Alessandro Cimatti | 61 | https://scholar.google.com/citations?hl=en&user=lbZ6n5IAAAAJ |
| Marta Kwiatkowska | 66 | https://scholar.google.com/citations?hl=en&user=ArcH6PkAAAAJ |
| Ulrike Sattler | 63 | https://scholar.google.com/citations?user=uMI-tgsAAAAJ&hl=en |
| Armin Biere | 55 | https://scholar.google.com/citations?user=V6ES1nIAAAAJ&hl=en |
| Frank Pfenning | 64 | https://scholar.google.com/citations?hl=en&user=ghWKWBUAAAAJ |
| Nikolaj BjÃÿrner | 47 | https://scholar.google.com/citations?user=kja6dIzH9GwJ&hl=en |
| J Strother Moore | 46 | https://scholar.google.com/citations?hl=en&user=91fyr68AAAAJ |
| Riccardo Rosati | 56 | https://scholar.google.com/citations?hl=en&user=4HPbOwwAAAAJ |
| Natarajan Shankar | 53 | https://scholar.google.com/citations?hl=en&user=qVzY4XYAAAAJ |
| David Parker | 51 | https://scholar.google.com/citations?hl=en&user=nEKbXSMAAAAJ |
| Joao Marques-Silva | 53 | https://scholar.google.com/citations?hl=en&user=1b9hppwAAAAJ |
| Fahiem Bacchus | 51 | https://scholar.google.com/citations?hl=en&user=Yy4QD_AAAAAJ |
| Dale Miller | 54 | https://scholar.google.com/citations?hl=en&user=d9WopvMAAAAJ |
| Roberto Sebastiani | 45 | https://scholar.google.com/citations?hl=en&user=qmnmdYsAAAAJ |
| Deepak Kapur | 54 | https://scholar.google.com/citations?hl=en&user=U6XKBVIAAAAJ |

Reference item: \\ 2. Conference on Automated Deduction (CADE)

This conference was published at 19 times by 12 of 20 experts in the last 5 years.

The experts that publish at this conference are: Deepak Kapur(3), Roberto Sebastiani(4), Joo Marques-Silva 0001(1), Franz Baader(2), Armin Biere(4), Dale Miller 0001(1), Alessandro Cimatti(2), Natarajan Shankar(1), Daniel Kroening(1), J Strother Moore(1), Diego Calvanese(2), Fahiem Bacchus(1)

In 2016, there were 4 publications by 3 experts: Roberto Sebastiani, Armin Biere, Deepak Kapur In 2017, there were 6 publications by 7 experts: Dale Miller 0001, Alessandro Cimatti, Natarajan Shankar, Daniel Kroening, J Strother Moore, Roberto Sebastiani, Armin Biere

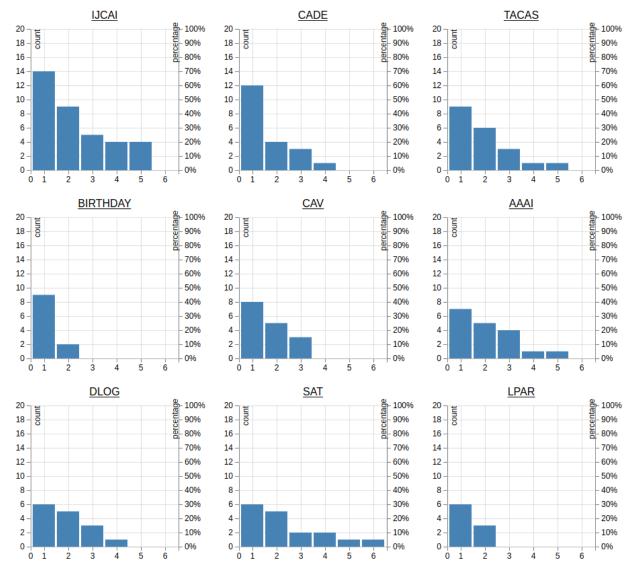
```
In 2018, there were 2 publications by 3 experts: Joo Marques-Silva 0001, Armin Biere, Fahiem Bacchus In 2019, there were 3 publications by 3 experts: Roberto Sebastiani, Diego Calvanese, Deepak Kapur In 2020, there were 4 publications by 4 experts: Diego Calvanese, Franz Baader, Armin Biere, Deepak Kapur
```

12 out of the 20 experts published at this conference in 1 or more years 4 out of the 20 experts published at this conference in 2 or more years 3 out of the 20 experts published at this conference in 3 or more years

1 out of the 20 experts published at this conference in 4 or more years

WPP Report: http://portal.core.edu.au/core/media/conf_rank_report/higherrank1410_top_people_report.txt

Graphs: http://portal.core.edu.au/core/media/conf_rank_graphs/higherrank1410_top_people_graph.png
that many or more years. The number publishing in a specific number of years can be seen by the unference
with respect to the previous column.



Additional 150 graphs

Other Information

Comparator Comparison

Comparator

International Joint Conference on Automated Reasoning

Explanation as to why conference is superior to comparator:

IJCAR and CADE have a very similar profile, though IJCAR is broader in scope, given that it is a merger of multiple conferences (including CADE as the biggest constituent). Acceptance rates of IJCAR and CADE are similar, as are the profiles of chairs and the PC. Note that the DBLP page is a merge of CADE and IJCAR: https://dblp.org/db/conf/cade/index.html
Also see the comparison with IJCAR under point F.2.

Link to comparator report:

 $\verb|http://portal.core.edu.au/core/media/conference_submission_2020/Data_Comparator_for_1410_989.pdf|$

Comparator

Computer Aided Verification

Explanation as to why conference is superior to comparator:

CAV focusses on program verification and hardware verification, software engineering, but also covers automated reasoning and deduction from a more practical angle. The scope of CAV is therefore not quite comparable to CADE, but there is a significant overlap, in terms of topics and of the community.

Also see the comparison with CAV under point F.2.

Link to comparator report:

http://portal.core.edu.au/core/media/conference_submission_2020/Data_Comparator_for_1410_991.pdf

Other Relvant Info

Other relevant information: The comparator conferences are CAV and IJCAR. They are not inferior but equivalent: CADE is the most substantial part of IJCAR and CAV is a more applied conference: automated reasoning applied in the area of verification.

CADE is the mother of important conferences in automated reasoning: it was founded in 1975 and since then it regularly takes place.

CADE's focus topic is basic research in automated reasoning. So the community is smaller compared to more applied automated reasoning conferences, such as CAV, resulting in a different structure of the h-index of people regularly working on basic research topics in automated reasoning. There have been a number of spin-off conferences from CADE due to specific applications, such as CAV (co-founder is Turing award winner Ed Clark, a regular and early CADE contributor) and SAT due to the practical impact of SAT solving. IJCAR is a more recent biannual joiner of CADE, FROCOS and TABLEAU, where CADE is the oldest, by far largest and topic wise broadest conference out of the three.

Attachments

N/A

Proposers

First name: Philipp Last name: Ruemmer

Affiliation: Uppsala University, Sweden Email: philipp.ruemmer@it.uu.se

First name: Christoph Last name: Weidenbach

Affiliation: Max-Planck-Institute for Informatics, Germany

Email: weidenbach@mpi-inf.mpg.de

Submitted By

Name: RÃijmmer Philipp Email: ph_r@gmx.net