

# The Quality, Impact and Value of MODELS publications

September 5, 2017

Together with the requested information submitted to the CORE webpages, this document provides arguments in support of the high value and high impact of MODELS publications. By comparison to other conferences, we show that the MODELS conference is “*CORE A-like*”, which is an “excellent conference, and highly respected in a discipline area” [1].

As requested by the submission guidelines, we have identified ‘comparator conferences’. These are

- European Conference on Software Architecture (ECSA),
- International Conference on Software Reuse (ICSR),
- International Conference on Formal Techniques for Distributed Objects, Components, and Systems (FORTE); was International Conference on Formal Techniques for Distributed Systems (FORTE/FMOODS) till 2013<sup>1</sup>, and
- International Conference on Coordination Models and Languages (COORDINATION).

The acceptance rate table on page 2 also contains an entry for the International Conference on Requirements Engineering (RE).

All these conferences are currently ranked A, while MODELS is ranked B. Based on the information collected in this submission, the MODELS steering committee requests a re-ranking of the conference at the earliest possible moment.

-- The MODELS Steering Committee

[1] Computing Research & Education. Conference Rankings Portal. <http://www.core.edu.au/conference-portal>

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[https://en.wikipedia.org/wiki/International\\_Conference\\_on\\_Formal\\_Techniques\\_for\\_Networked\\_and\\_Distributed\\_Systems](https://en.wikipedia.org/wiki/International_Conference_on_Formal_Techniques_for_Networked_and_Distributed_Systems)

## Arguments that show that MODELS is “CORE A-like”

Arguments involving criteria mentioned by CORE on ‘Description of Ranks’ page [1]

**Criterion 1: “They possibly have somewhat higher acceptance rates than A\* Conferences, and the pools of submitted papers may include some that are only of moderate quality”**

Between 2010 and 2017, the acceptance rate of MODELS full papers has consistently been between 21% and 28% with an average of 25% (for 2010 – 2017, total of 1406 submissions and 357 accepts). **These numbers are comparable or better than those of many CORE A conferences, including RE, FORTE, COORDINATION, ICSR, and ECSA.** Please see table below for details. Data based on front matter of conference proceedings<sup>2</sup>:

Year	MODELS	RE	ECSA	FORTE	COORDINATION	ICSR
2017	27%	31%		57%	42%	32%
2016	26%	25%	30%	41%	36%	49%
2015	27%	29%	25%	28%	42%	40%
2014	26%	26%	37%	36%	39%	not held <sup>3</sup>
2013	26%	26%	30%	51%	40%	?
2012	27%	26%	20% <sup>4</sup>	38%	33%	not held
2011	24%	19%	37%	32%	40%	37%
2010	21%	24%	?	50%	not held?	not held

Other CORE A-ranked conferences in software engineering with higher or comparable acceptance rates can easily be found, including<sup>5</sup>

- Intern. Conf. on Software and System Process (ICSSP): 38% (2017), 22% (2016), 44% (2015)
- Intern. Symp. on Software Reliability Engineering (ISSRE): 35% (2016), ? (2015), 25% (2014)
- Intern. Symp. on Software Testing and Analysis (ISSTA): 26% (2017), 25% (2016), 26% (2017)

For MODELS, a more detailed breakdown of submission numbers and acceptance rates for each of the two tracks is shown below:

Year	Foundations Papers	Application / Practice & Innovation Papers	Total Submissions
2017	24/85 (27%)	9/36 (25%)	33/121 (27%)
2016	28/118 (24%)	10/27 (37%)	38/145 (26%)
2015	35/132 (26%)	11/40 (28%)	46/172 (27%)
2014	30/126 (23%)	8/35 (23%)	38/161 (24%)
2013	34/130 (26%)	13/50 (26%)	47/180 (26%)
2012	35/151 (23%)	15/30 (50%)	50/181 (28%)
2011	34/167(15%)	13/27 (48%)	47/194 (24%)
2010	43/207 (21%)	11/45 (24%)	54/252 (21%)

<sup>2</sup> Accessible at DBLP via, e.g., <http://dblp.uni-trier.de/db/conf/forte/>

<sup>3</sup> [https://en.wikipedia.org/wiki/International\\_Conference\\_on\\_Software\\_Reuse](https://en.wikipedia.org/wiki/International_Conference_on_Software_Reuse)

<sup>4</sup> Held together with WICSA

<sup>5</sup> Data obtained on Sept 4, 2017 from front matter of proceedings

**Criterion 2: “Research leaders routinely submit papers to A Conferences, but might not attend that year if their work is not accepted”**

The table below shows the position of MODELS and the four comparator conferences in each of their respective General Report and Specialized Report<sup>6</sup>.

	MODELS	ECSA	ICSR	FORTE	COORDINATION
Position in General Report	2	64	92	54	204
Keyword used	Software Engineering	Software Engineering	Software Engineering	Formal Methods	Formal Methods
Position in Specialized Report	2	14	42	30	26

The reports show that

- **MODELS is the premier venue for researchers in the ‘software modeling’ and ‘model-driven engineering’ field, second only to ICSE**; out of the 32 experts identified in the specialized report, 29 had published a total of 192 times at MODELS within the last 10 years , and
- even amongst software engineering researchers in general, MODELS is very highly regarded and one of the most popular venues: **MODELS was the second most popular venue in our list of researchers who list ‘software engineering’ in their Google Scholar profile and have an h-index of over 45**. Out of the 23 experts identified in the general report, 16 had published a total of 122 times at MODELS within the last 10 years.

**None of the four comparator conferences chosen comes close to enjoying this kind of statue.**

**Criterion 3: “Reviews of papers are generally undertaken by people who have published in the area of the submitted work, and provide detailed and extended feedback”**

Reviews are of high quality; in 2013, MODELS was one of the first conferences to introduce the ‘Program Board’ model (since adopted also by, e.g., ICSE).

**Criterion 4: “An A Conference may be the center of an ecosystem, including workshops and tutorials”**

- The MODELS conference indeed provides an ecosystem of events. **Between 2008 and 2016, MODELS has offered, on average, 13 workshops and 8 tutorials and has attracted 295 attendees every single year! The numbers of attendee, workshops and tutorials at MODELS (2017-2008) are given in the table below<sup>7</sup>:**

<sup>6</sup> As defined by the CORE submission guidelines

<sup>7</sup> [modelsconference.org](http://modelsconference.org)

Year	Number of Attendees	Workshops	Tutorials
2017	3 <sup>8</sup>	12	9
2016	322	14	9
2015	272	19	9
2014	334	14	8
2013	258	13	5
2012	270	15	12
2011	157	8	6
2010	341	12	12
2009	333	10	2
2008	372	12	9
	<b>Average: 295</b>	<b>Average: 13</b>	<b>Average: 8</b>

- Moreover, MODELS started hosting an annual ‘Educators’ Symposium’ and ‘Doctoral Symposium’ more than 10 years ago. The ACM Student Research Competition has been offered every year since 2013.
- MODELS often has co-located events such as
  - the System Analysis and Modeling Conference (SAM) in 2016, 2014, 2012, and 2010;
  - the IEEE Symp. on Visual Languages and Human Centric Computing (VL/HCC) in 2013; and
  - the International Conference on Software Language Engineering (SLE) in 2008.

**Criterion 5: “Being a PC Chair or invited keynote speaker for an A Conference is regarded as being significant career milestone”**

MODELS has been honored to be able to attract outstanding keynote speakers including

- 2017: Jeannie Falcon (National Instruments), Ira Baxter (Semantic Designs), Adam Porter (U. of Maryland & Fraunhofer)
- 2016: Gordon Blair (Lancaster U.), Jim Coplien (Gertrud & Cope), and Ed A. Lee (U. of Berkeley)
- 2015: S. Easterbrook (U. of Toronto), G. Murphy (U. of British Columbia), and Ramesh S. (General Motors)
- 2014: Nuria Oliver (Telefonica), Francis Bordeleau (Ericsson), Jose Meseguer (U. of Illinois at Urbana-Champaign)
- 2013: C. Simonyi (Intentional Software), Constance Heitmeyer (Naval Research Lab), and Bernd Bruegge (Munich U. of Technology)
- 2012: Janos Sztipanovits (Vanderbilt U.), Thomas Henzinger (Institute of Science and Technology Austria), Stephan Thesing (EUROCOPTER Group)

**Criterion 6: “Researchers will favor A-conference papers when preparing their career highlights for grant applications and etc.”**

A high number of leading researchers in software engineering and software modeling submit to MODELS every year, as shown by the ‘Where people publish’ reports submitted to the CORE web site.

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<sup>8</sup> MODELS’17 will take place Sept 17-22, 2017

## Additional arguments that show that MODELS is 'CORE A-like'

- The Google Scholar h5 index for the MODELS conference is 26 (h5-median: 35) and above many other CORE A conferences. See table below for details<sup>9</sup>.

	Conference	CORE	h5-index	h5-median
ICSE	International Conference on Software Engineering (ICSE)	A++	68	91
ISSTA	International Symposium on Software Testing and Analysis (ISSTA)	A	31	50
ASE	International Conference on Automated Software Engineering (ASE)	A	31	44
ICSM	International Conference on Software Maintenance (ICSM)	A	29	41
<b>MODELS</b>	<b>International Conference on Model-Driven Engineering and Languages</b>	<b>B</b>	<b>26</b>	<b>35</b>
RE	International Requirements Engineering Conference	A	23	27
ISSRE	International Symposium on Software Reliability Engineering	A	22	26
ESEM	Intl. Symposium on Empirical Software Engineering and Measurement	A	20	37
MASCOTS	Intl. Symp. Modeling, Analysis & Simulation of Computer & Telecomm. Syst. (MASCOTS)	A	19	27
WICSA	Joint Working IEEE/IFIP Conference on Software Architecture	A	16	26
ICSSP	International Conference of Software and Systems Process (was ICSP)	A	14	19
ECSA	European Conference on Software Architecture	A	13	17

- Other conference ranking services rank MODELS at A- or A<sup>10</sup>:
  - GII-GRIN-2015: A-
  - LiveSHINE: A
  - Microsoft Academic Search (MAS) A-

Other indicators collected by LiveSHINE and MAS also compare favorably with other conferences ranked A by CORE.

- MODELS is an established conference, with senior organizers<sup>11</sup>:
  - The PC foundations Co-Chairs have a Google Scholar h-index ranging from 24 to 43.

Year	General Chair(s)	PC co-chairs (Foundations, Applications/Practice&Innovation)
2017	Don Batory	Jeff Gray, Vinay Kulkarny
2016	Benoit Baudry, Benoit Combemale	Joerg Kienzle, Alexander Pretschner
2015	Tim Lethbridge	Jordi Cabot, Alexander Egyed
2014	Isidro Ramos, Silvia Abrahão	Juergen Dingel, Wolfram Schulte
2013	Jeff Gray, Antonio Vallecillo	Ana Moreira, Bernhard Schätz
2012	Ruth Breu, Colin Atkinson	Robert France, Jürgen Kazmeier
2011	Thomas Kühne	Jon Whittle, Tony Clark
2010	Øystein Haugen	Dorina Petriu, Nicolas Rouquette

- The average h-index of current members of the Steering Committee<sup>12</sup> is 33.

<sup>9</sup> Data obtained on Aug 19, 2017 using the CORE DB and Google Scholar with 'view\_op=search\_venues', e.g., [https://scholar.google.com/citations?hl=en&view\\_op=search\\_venues&vq='model'](https://scholar.google.com/citations?hl=en&view_op=search_venues&vq='model') and [https://scholar.google.com/citations?hl=en&view\\_op=search\\_venues&vq='software architecture'](https://scholar.google.com/citations?hl=en&view_op=search_venues&vq='software architecture')

<sup>10</sup> Data obtained on Aug 19, 2017 from <http://gii-grin-scie-rating.scie.es/>

<sup>11</sup> Data obtained on Aug 19, 2017

- The mission and objectives of MODELS are articulated and constantly updated in the MODELS Charter, an 18-page document.
  - The organizational details and ‘institutional knowledge’ about how to run the MODELS conference are collected and constantly updated in a MODELS Handbook, a 12-page document that is made available to all SC members, including GCs of future conferences.
  - MODELS is sponsored by both IEEE TCSE and ACM SIGSOFT and has been allowed for years to give out ACM SIGSOFT Distinguished Paper Awards.
  - MODELS has an excellent relationship with the Software and System Modeling (SoSyM) journal (Springer). SoSyM
    - is one of the top 20 publications in Software Engineering according to Google Scholar, with an h5-index of 31 and an h5-median of 43<sup>13</sup>,
    - ranks 7<sup>th</sup> among Software Engineering journals in terms of Yearly Cites, ahead of, e.g., the Software Quality Journal (Springer), the Journal of Systems and Software (Elsevier), Journal of Software: Evolution and Process (Wiley), and Software Testing, Verification & Reliability (Wiley)<sup>14</sup>,
    - currently has an ISI Impact Factor of 1.654, the highest in its history, suggesting an increasing interest in software modeling<sup>15</sup>.
- MODELS benefits from its relationship with SoSyM in many ways, including:
- The authors of best papers of each MODELS conference are invited to submit revised and extended versions to a special issue of SoSyM.
  - Similar to ICSE, MODELS has a ‘journal-first’ track in which high-quality SoSyM submissions which have not been presented at a conference or workshop are invited for presentation.

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<sup>12</sup> <https://www.cs.utexas.edu/models2017/committees/steering-committee>

<sup>13</sup> Data obtained on Aug 19, 2017 using

[https://scholar.google.com/citations?hl=en&view\\_op=search\\_venues&vq='software'](https://scholar.google.com/citations?hl=en&view_op=search_venues&vq='software')

<sup>14</sup> Data obtained Sept 4, 2017 from [http://www.robertfeldt.net/advice/se\\_venues/](http://www.robertfeldt.net/advice/se_venues/)

<sup>15</sup> Data obtained Sept 4, 2017 from <https://link.springer.com/journal/10270>