EDITORIAL

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SoSyM reflections of 2017: a journal status report

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2017 has been an exciting year for SoSyM, which has now passed its 16th year of publication! We have continued to intensify our collaboration with the MODELS conference by presenting the annual SoSyM Awards at MODELS and strengthening the SoSyM "Journal-First" arrangement with MODELS. The first issue of this new year's volume summarizes the status of SoSyM in terms of recent statistics and milestone events over the past year. As an additional testament to the interest and growth in our field, recent full professorship positions have been offered in the area of software and systems modeling, which means the area has now advanced from a subdomain of software engineering, data modeling, formal methods, and related areas to its own sustainable research domain.

Unfortunately, in 2017 we also lost one of our best friends who was one of the early members of our community. Bernhard Schätz passed away from cancer in July, 2017. As a memorial to Bernhard, this editorial is also accompanied with a scientific appreciation of his life.

2017 Summary statistics

The submission and publication statistics for 2017 demonstrates increasing interest in SoSyM and the topics covered by SoSyM as a venue for authors in the modeling community.

Submission Summary: Over the four volumes published in 2017, SoSyM received submissions comprised of 178 Regu-

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lar Papers, 21 Special Section Papers, 1 Industry Voice, and 3 Overview papers. There has been an increase in the number of desk rejections (i.e., papers that never make it to reviewers), at almost 50% in 2017. Desk rejections are often due to a submission being out of scope, lacking depth, or missing an evaluation of the described work (suggestions for preparing a successful SoSyM submission are available in the Volume 15.4 Editorial, http://dx.doi.org/10.1007/s10270-016-0558-5, archived at http://www.sosym.org/editorials/). The acceptance rate for 2017 was 28.5% (23.9% in 2016), with an average time to final decision at 173 days (127 days in 2016).

Impact and Publication Summary: The newest 2-year Impact Factor is 1.654—the highest ever for SoSyM! The Impact Factor has fluctuated recently, at 0.990 last year, and 1.408 two years prior. Also exciting is the 5-year impact factor, which rose to 1.869 (1.497 last year), and is another record for SoSyM. However, it is possible that the Impact Factor may continue to fluctuate (e.g., the four top papers that contributed to the most recent impact factor will not be counted next year). The importance of SoSyM as a top publication venue for the modeling community continued over the past year.

An interesting observation can be made regarding the success of Open Access (OA) papers (i.e., when authors pay a fee for their papers to be accessible for free as open downloads). Over the last year, 16 of the accepted papers were OA, but only one of those papers appeared in the 12 most-cited papers of the year.

The number of paper downloads provided from the Springer SoSyM website represent the activity from the previous year (e.g., the 2017 year-end numbers are complete through 2016). The number of paper downloads reported for 2016 were significantly higher than past years, almost double the previous year's count (86,502 in the most recent year, compared to 42,346 downloads the previous year). Readership interest, as evidenced by the number of downloads, increased dramatically over the past year, a healthy sign that SoSyM remains a vibrant option for future authors who would like visibility of their scientific contributions.

Because of the increased impact factor and readership interest, we anticipate a possible upward spike in the num-

ber of future submissions. This may create additional review requests among editors and reviewers, with the need for an even deeper consideration of desk rejections for papers that are out of scope or have low likelihood for eventual acceptance. The Editors-in-Chief will be conducting a survey of Editors to refresh the expertise data and solicit comments on the overall editorial review process.

Across the four issues of 2017, SoSyM published 47 total papers, not including editorials. Springer has again increased the number of pages per year and published more than officially announced. A summary of the publication statistics from 2017 and the past 15 years is provided in the following table.

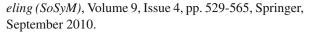|	2017	Since Inception (2002–2016)
Regular Papers	27	175
Special Section Papers	8	162
Theme Section Papers	12	87
Editorials	4	49
Guest Editorials	4	48
Expert Voice Articles	0	35
Industry Voices Articles	0	3
Discussion/Overview Papers	0	4
Errata	1	2
TOTAL	56 (1,251 pages)	565 (10,313 pages)

SoSyM's most influential paper awards

MODELS 2017, held in Austin, Texas (USA) in September 2017, provided another opportunity to recognize the most influential SoSyM papers over the past 8 years during the banquet dinner. The selection was based on the ISI citation index among papers published in SoSyM from 2008 to 2016. More information about the awards can be found at: http://www.sosym.org/awards/.

The 8-year Most Influential Regular Paper award was given to the following authors:

- David Harel and Shahar Maoz, "Assert and negate revisited: Modal semantics for UML sequence diagrams", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 7, Issue 2, pp. 237–252, Springer, May 2008.
  http://dx.doi.org/10.1007/s10270-007-0054-z

The 8-year Most Influential Theme Section paper award was given to the following authors:

- Stefan Winkler and Jens von Pilgrim, "A survey of traceability in requirements engineering and model-driven development", In: *Journal on Software and Systems Mod-*

eling (SoSyM), Volume 9, Issue 4, pp. 529-565, Springer, September 2010.
http://dx.doi.org/10.1007/s10270-009-0145-0

SoSyM's journal-first papers presented at MODELS 2017

For a third year, SoSyM collaborated with the MODELS conference organization in sponsoring the SoSyM "Journal-First" opportunity, which enables authors of recent SoSyM papers to present their work across the core conference sessions at MODELS. Through this collaboration, SoSyM authors have the opportunity to reach a broader audience to present their work, and the MODELS program is complemented by research talks that in their papers explore more depth and analytical and empirical evidence than can be presented in a traditional conference submission. The MODELS 2017 program featured six articles published during the previous year (from July 2016 through June 2017). The SoSyM Journal-First papers presented at MODELS 2017 were the following:

- Markus Völter, Bernd Kolb, Tamás Szabó, Daniel Ratiu, and Arie van Deursen, "Lessons learned from developing mbeddr: a case study in language engineering with MPS," In *Journal on Software and Systems Modeling (SoSyM)*, Springer, 2017.
  http://dx.doi.org/10.1007/s10270-016-0575-4
- Ulyana Tikhonova, "Reusable specification templates for defining dynamic semantics of DSLs," In *Journal on Software and Systems Modeling (SoSyM)*, Springer, 2017.
  http://dx.doi.org/10.1007/s10270-017-0590-0
- Jordan A. Ross, Alexandr Murashkin, Jia Hui Liang, Michal Antkiewicz, and Krzysztof Czarnecki, "Synthesis and exploration of multi-level, multi-perspective architectures of automotive embedded systems," In *Journal on Software and Systems Modeling (SoSyM)*, Springer, 2017.
  http://dx.doi.org/10.1007/s10270-017-0592-y
- Michalis Famelis and Marsha Chechik, "Managing design-time uncertainty," In *Journal on Software and Systems Modeling (SoSyM)*, Springer, 2017.
  http://dx.doi.org/10.1007/s10270-017-0594-9
- Marina Egea and Carolina Dania, "SQL-PL4OCL: An automatic code generator from OCL to SQL procedural language," In *Journal on Software and Systems Modeling (SoSyM)*, Springer, 2017.
  http://dx.doi.org/10.1007/s10270-017-0597-6
- Thomas Hartmann, Assaad Moawad, Francois Fouquet, and Yves Le Traon, "The next evolution of MDE: A seamless integration of machine learning into domain

modeling," In *Journal on Software and Systems Modeling (SoSyM)*, Springer, 2017.
http://dx.doi.org/10.1007/s10270-017-0600-2

Thanks to the authors for considering submitting their journal articles directly to SoSyM!

Changes to the editorial board

Each year the Editorial Board undergoes changes. Most recently, Jim Bieman and Ingolf Krüger retired from their service as board members. Both Jim and Ingolf were long-serving members of the board, and we thank them for all of their help and dependability. They have done a tremendous job over the years serving SoSyM!

Reviewers in 2017

Reviewers and editors are at the core of journal publishing. The quality of all SoSyM articles depends on the hard work of its reviewers. We very much appreciate the help from all of those who contributed a review in 2017! Below is a list of those who reviewed at least one paper for SoSyM in the last year. The complete list of all reviewers can also be found on our website http://www.sosym.org/people/.

Lukman Ab. Rahim, Mathieu Acher, Wasif Afzal, Emil Alegroth, Aldeida Aleti, Shaukat Ali, Vander Alves, Vasco Amaral, Daniel Amyot, Eric Andonoff, Anthony Anjorin, Myla Archer, Andrea Arcuri, Ritu Arora, Uwe Assmann, Jean-Philippe Babau, Mira Balaban, Srividya Bansal, Jose Barateiro, Luciano Baresi, Bernhard Bauer, Jürgen Becker, David Benavides, Nelly Bencomo, Luca Berardinelli, Christian Berger, Simona Bernardi, Richard Berntsson Svensson, Lorenzo Bettini, Ghassan Beydoun, Ajinkya Bhave, Robert Bill, Kirill Bogdanov, Etienne Borde, Goetz Botterweck, Frederic Boulanger, Fabrice Bouquet, Johann Bourcier, Erwan Bousse, Lars Brehm, Ruth Breu, Manfred Broy, Achim Brucker, Achim Brucker, Hugo Bruneliere, Giorgio Bruno, Francois Bry, Erik Burger, Javier Luis Canovas Izquierdo, Paulo Carreira, Walter Cazzola, Deniz Cetinkaya, Michel R. V. Chaudron, Xiaohong Chen, Indu Shobha Chengalur-Smith, Yunja Choi, Antonio Cicchetti, Federico Ciccozzi, Robert Clarisó, Tony Clark, Manuel Clavel, Bernard Coulette, Ivica Crnkovic, Alcino Cunha, Istvan Czibula, Andrea D'Ambrogio, Frederic Dadeau, Heinrich Daembkes, Zhen Ru Dai, Maya Daneva, Nancy Day, Juan de Lara, Pasquale De Meo, Mickaël Delahaye, Andrea Delgado, Birgit Demuth, Xavier Devroey, Davide Di Ruscio, Juergen Dingel, Zinovy Diskin, Ivan Do Carmo Machado, Khanh-Hoang Doan, Catherine Dubois, Johann Eder, Andre Takeshi Endo, Gregor Engels, Emelie Engström, Sebastian Erdweg, Huseyin Ergin, Claudia Ermel, Juhan Ernits, Neil Ernst, Huascar Espinoza, Dirk Fahland, Michalis Famelis, Julie Fant, Kathrin Figl, Bernd Fischer, Lars-Åke Fredlund, Marcelo Frias, Lidia Fuentes, Sebastien Furic, Jose Galindo, Jesús García Molina, Luciano García-Bañuelos, Antonio García-Domínguez, Irene Garrigos, Kurt Geihs, Johny Ghattas, Sudipto Ghosh, Holger Giese, Christoph Gladisch, Claude Godart, Arda Goknil, Maria Teresa Gómez-López, Abel Gomez, Javier González-Huerta, John Grundy, Esther Guerra, Sérgio Guerreiro, Giancarlo Guizzardi, Jens Gulden, Jianmei Guo, Pragya Gupta, Vijay Gupta, Stefan Hallerstede, Stefan Hanenberg, Mark Harman, Thomas Hartmann, Regina Hebig, Reiko Heckel, Thomas Heinze, Constance Heitmeyer, Christopher Henard, Soichiro Hidaka, Stijn Hoppenbrouwers, Jennifer Horkoff, Akos Horvath, I-Ching Hsu, Zhenjiang Hu, Rick Hull, Ludovico Iovino, Muhammad Zohaib Iqbal, Stefan Jablonski, Ethan Jackson, Ferosh Jacob, Amin Jalali, Sven Joerges, Paul Johannesson, Haruhiko Kaiya, Anna Kalenkova, Aditya Kanade, Holger Karl, Gabor Karsai, A. S. M. Kayes, Timo Kehrer, Steven Kelly, Uzair Khan, Ferhat Khendek, Joerg Kienzle, Sybren Kinderen, Ekkart Kindler, Cornel Klein, Jacques Klein, Alexander Knapp, William Knottenbelt, Sahar Kokaly, Dimitrios Kolovos, Dimitris Kolovos, Paul Krause, Jan Kretinsky, John Krogstie, Natalia Kushik, Marcello La Rosa, Linas Laibinis, Kevin Lano, Juan A. Lara, Gary Leavens, Edward Lee, Jaejoon Lee, Elizabeth Leonard, Francesca Lonetti, Delphine Longuet, Roberto Lopez-Herrejon, Peri Loucopoulos, Hong Lu, Ivan Lukovic, Xiaoxing Ma, Nuno Macedo, Sajjad Mahmood, Shahar Maoz, Miklos Maroti, Reza Matinnejad, Nicholas Matragkas, Raimundas Matulevicius, Andrea Mauri, Tanja Mayerhofer, Raul Mazo, Tom Mens, Jose Merseguer, Dragan Milicev, Mark Minas, Mehdi Mirakhorli, Naouel Moha, Parastoo Mohagheghi, Michael Möhring, Leonardo Montecchi, Sebastien Mosser, Jean-Marie Mottu, Tejeddine Mouelhi, Haralambos Mouratidis, Chokri Mraidha, Chunyan Mu, Henry Muccini, John Mylopoulos, Clementine Nebut, Shiva Nejati, Bernd Neumayr, Nan Niu, Emmanuel Nowakowski, Manuel Núñez, Ileana Ober, Saahil Ognawala, Andreas Opdahl, Sven Overhage, Richard Freeman Paige, Marc Pantel, David Parker, Óscar Pastor López, Oscar Pastor, Jan Peleska, Patrizio Pelliccione, Birgit Penzenstadler, Erik Perjons, Barbara Pernici, Gilles Perrouin, Alexander Petrenko, Alexandre Petrenko, Dorina Petriu, Rolf-Helge Pfeiffer, Raquel Pillat, Monica Pinto, Geert Poels, Fiona Polack, Artem Polyvyanyy, Barry Porter, Erik Proper, Rick Rabiser, Jolyta Ralyté, Bendraou Reda, Atle Refsdal, Gil Regev, Gianna Reggio, Iris Reinhartz-Berger, Arend Rensink, Andrew Reynolds, Stefani Rinderle-Ma, Jan Ringert, José Matías Rivero, Charles Rivet, Genaína Rodrigues, Andreas Rogge-Solti, Philippe Roose, Nicolas Rouquette, Ragnhild Runde, Mehrdad Saadatmand, Gunter Saake, Mehrdad Sabetzadeh, Deise de Brum Saccol, Rick Salay, Jesús Sánchez Cuadrado, Jesus Sánchez-Cuadrado,

Nicolas Sannier, Flávia Santoro, Holger Schlingloff, Rainer Schmidt, Kurt Schneider, Andy Schürr, Ed Seidewitz, Bran Selic, Sofia Sherman, Michael Shin, Junaid Haroon Siddiqui, Peer-Olaf Siebers, Pnina Soffer, Oleg Sokolsky, Friedrich Steimann, Matthew Stephan, Janis Stirna, Daniel Strüber, Arnon Sturm, Gerson Sunye, Angelo Susi, Eugene Syriani, Janos Sztipanovits, Gabriele Taentzer, Thomas Thüm, Massimo Tisi, Victoria Torres, Stavros Tripakis, Dragos Truscan, T.H. Tse, Zoltán Ujhelyi, Antonio Vallecillo, Pieter Van Gorp, Daniel Varro, Gergely Varró, Anthony Ventresque, Shuai Wang, Barbara Weber, Thomas Weigert, Mathias Weske, Bernhard Westfechtel, Robert Wille, Manuel Wimmer, Marilyn Wolf, Ji Wu, Guowei Yang, W. L. Yeung, Shin Yoo, Tingting Yu, Tao Yue, Anna Zamansky, Jelena Zdravkovic, Xavier Zeitoun, Tian Zhang, Zhenkai Zhang, Haiyan Zhao, Alfred Zimmermann, Armin Zimmermann, Steffen Zschaler, and Albert Zündorf.

Content of this issue

In addition to three Regular papers, this volume contains the Special Section of the "17th International Conference on Model Driven Engineering Languages and Systems (MODELS)" with Jürgen Dingel and Wolfram Schulte as guest editors. This volume also contains the papers for the Theme Section on "Multi-Level Modeling" with Colin Atkinson, Thomas Kühne, and Juan de Lara as guest editors.

The Regular papers are:

- "Scenario-based system design with colored Petri nets: An application to train control systems" by Daohua Wu and Eckehard Schnieder.
- "On the use of models for high-performance scientific computing applications: An experience report" by Ileana Ober, Marc Palyart, Jean-Michel Bruel, and David Lugato.
- "Model-based requirements specification of real-time systems with UML, SysML and MARTE" by Fabíola Ribeiro, Carlos Pereira, Achim Rettberg, and Michel Soares.