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EDITORIAL

Report on the state and changes of the SoSyM journal (2025 summary)

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Dear SoSyM readers,

it is our pleasure to introduce the first SoSyM issue of 2026. As is customary, this opening issue includes an editorial offering an annual overview of the journal's current status and the changes in the editorial board and technology. The past year has been productive, with the publication of numerous new SoSyM articles, special sections, and ongoing initiatives within our editorial team.

The launch of our new 2024 publication format dedicated to modeling tools has led to the first three tool-focused publications, which are already available online. The first one, namely, "The MDENet education platform: zero-install directed activities for learning MDE" by Steffen Zschaler, Will Barnett, Artur Boronat, Antonio Garcia-Dominguez, and Dimitris Kolovos is already included in this issue. Two more will follow in the next issues. We would like to thank Jordi Cabot and Abel Gómez for organizing this tool paper format. As may be expected when introducing a new format, the number of incoming papers is slowly but steadily increasing. Therefore, this is also a call for you, our readers, to consider submitting papers that introduce your tools. A website with more technical details can be found here: https://www.sosym.org/tool_paper/

In 2025, we also initiated close collaboration with the International Conference on Engineering Digital Twins (EDTconf) following the 2024 instance in Linz. The EDTconf aims to unite researchers and practitioners from academia and industry to collaboratively shape the future of systematic digital twin development. We discussed in earlier editorials that a digital twin, to a large extent, shares the characteristics of a model of its physical twin. Thus, SoSyM will closely collaborate with this new conference series, publishing all substantial conference papers in the rolling theme section on the engineering of digital twins at SoSyM. More details: https://www.sosym.org/edtconf_journal_first/

Due to factors beyond the scientific community's control, the normally central highlight of the modeling community, namely, the MODELS 2025 conference, was affected and had to be partially held remotely. Let us hope that the forthcoming 28th edition of the conference in Europe will foster an open-minded, constructive culture of welcome, effective networking, and many positive insights. This year, SoSyM will also celebrate its 25th anniversary. We hope that we can all celebrate this milestone in Malaga at MODELS 2026.

1 Changes at SoSyM

To ensure that SoSyM remains a dynamic and active journal, we continuously renew and strengthen our Editorial Board. In 2025, we were pleased to welcome Shaukat Ali, Ludovico Iovino, Leen Lambers, and Matthias Tichy as new members of the Editorial Board. Their expertise and engagement will help sustain the journal's high standards and support its continued evolution. At the same time, several long-standing members completed their service on the Board in 2025. We extend our deepest gratitude to Didier Buchs, Jörg Kienzle, Alexander Pretschner, and Ina Schäfer for their continuous and outstanding support over the years. Their contributions

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have been pivotal to SoSyM's growth and success, and we warmly thank them for their dedication and service.

Shaukat Ali

Ludovico Iovino

Leen Lambers

Matthias Tichy

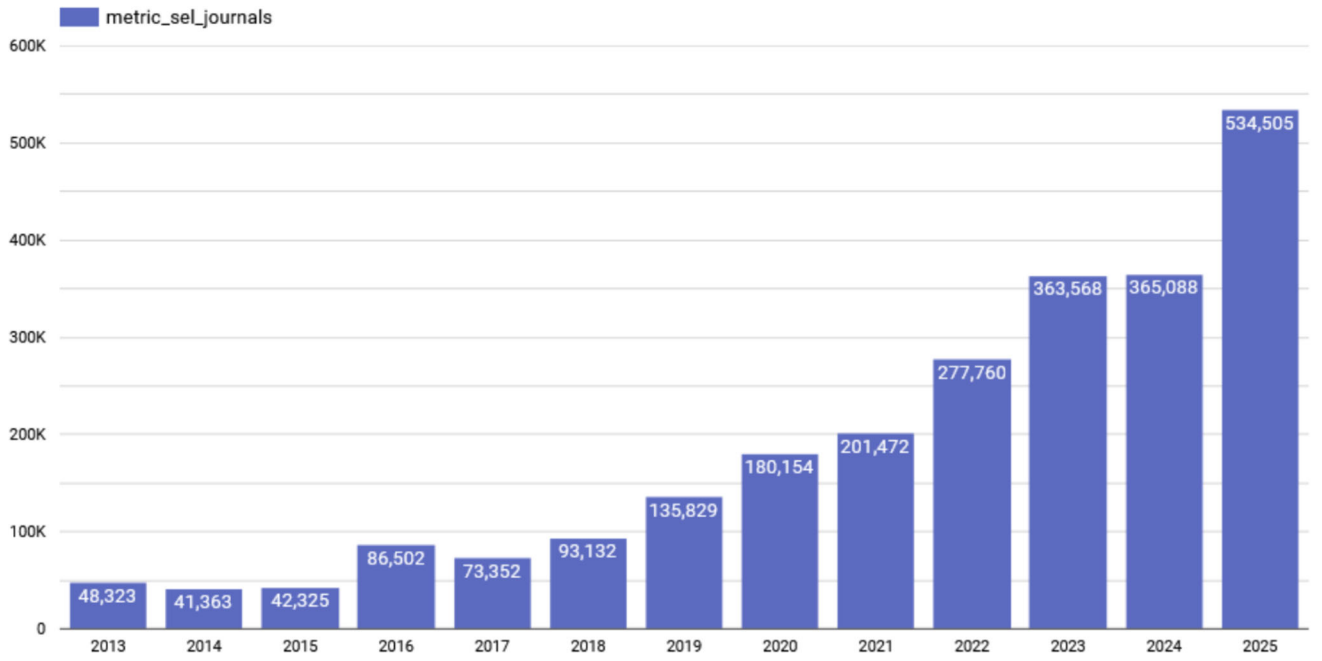
2 2025 summary statistics

In recent years, we have published more than the planned 256 pages per issue to reduce the backlog. This reduction ended in 2024, when we published exactly the number of pages Springer planned (1,594). The six SoSyM issues published in 2024 contained 17 Regular papers, 44 Special Section papers, 11 Theme Section papers, 3 Expert Voices, 7 Guest Editorials, and 3 Errata. This represents a collection of 91 papers (1,954 pages) published in volume 24. This means we could again publish more than the planned pages, which reflects the sustained interest in our journal's topics.

This success is also reflected in an increased Impact Factor (IF) for SoSyM. The two-year IF increased from 2.0 in 2023 and 2024 to 3.2 in 2025. The five-year IF increased from 2.1 in the last two years to 2.7 in 2025. These numbers are encouraging because the backlog flush presented a risk of a lower IF. Fortunately, this fear has not materialized. Furthermore, the overall trend of the IF has continued upward since the first IF in 2009. The h-5 Google Scholar ranking places SoSyM at #16 among all conferences and journals in the *Software Systems* category (#15 in 2024). Additional rankings are available at https://www.sosym.org/.

Throughout 2025, SoSyM received 466 submissions—a slight decrease compared to 514 submissions in 2024, but

still a very high increase when compared to 323 submissions in 2023. The number of downloads continued to increase over the last 8 years. At the end of 2025, there were 534,505 downloaded SoSyM articles during the calendar year, which is a very high increase compared to past years:



Download statistics from Springer

The acceptance rate for 2025 was 23.96%, a slight decrease from 26.45% in 2024. The average time from submission to the final decision (accept or reject) was reduced to 114 days (162 days in 2022, 126 days in 2023, and 122 days in 2024). While SoSyM and all its editors and reviewers are very dedicated to quality-first, we also aim to reduce the number of days in review.

3 SoSyM's ten-year most influential paper awards

Each year, we review the 10-year history of SoSyM to identify which contributions had the greatest impact and which topics emerged as most prominent over the decade. We identified the two papers (from the Regular and Theme Section areas) that had the most impact over the past decade since their publication. The selection is based on the ISI citation index among papers published in SoSyM, and a thorough review by the EiCs. The following two papers were identified, and the corresponding authors had the opportunity to present reflections on their papers at MODELS 2025. We congratulate the authors for these "Most Influential" papers of SoSyM over the past decade! We are glad they remain very active in the community. More information about the awards can be found at: https://www.sosym.org/awards/.

The **SoSyM 2025 "Ten-year most influential Regular paper award"** was presented to:

> Lukman Ab. Rahim and Jon Whittle, "A survey of approaches for verifying model transformations", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 14, Issue 2, pp. 1003–1028, Springer, May 2015. https://doi.org/10.1007/s10270-013-0358-0

The **SoSyM 2025 "Ten-year most influential Theme Section paper award"** was presented to:

> Angelika Kusel, Johannes Schönböck, Manuel Wimmer, Gerti Kappel, Werner Retschitzegger, and Wieland Schwinger, "Reuse in model-to-model transformation languages: are we there yet?", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 14, Issue 2, pp. 537–572, Springer, May 2015. https://doi.org/10.1007/s10270-013-0343-7

4 SoSyM's "Journal-First" Papers at MODELS 2025.

In 2025, the well-established collaboration between SoSyM and the MODELS conference, with the organization of the SoSyM "Journal-First" option, successfully continued. This collaboration enables authors of recent SoSyM Regular and Theme Section papers to present their work at MODELS (assuming the paper content has not been presented previously at any other conference). Through this collaboration, SoSyM authors can expand their audience and strengthen connections with the community of interested researchers. The 2025 collaboration led to 14 "SoSyM First" papers presented at MODELS. We are very thankful to the MODELS 2025 "Journal-First" Chair (Davide Di Ruscio), General Chairs (Marouane Kessentini), and the PC Chairs (Houari Sahraoui and Shaukat Ali) for their help in the integration of the SoSyM "Journal-First" papers into the general MODELS 2025 schedule. The SoSyM papers presented at MODELS 2025 included the following:

- Iván Alfonso, Jean-Sébastien Sottet, Pierre Brimont, and Jordi Cabot, "Modeling the obsolescence of models", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 3, pp. 705–719, Springer, June 2025. https://doi.org/10.1007/s10270-024-01236-3
- Juha-Pekka Tolvanen, Steven Kelly, Juri Di Rocco, Alfonso Pierantonio, and Giordano Tinella, "A framework for evaluating tool support for co-evolution of modeling languages, tools and models", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 2, pp. 311–338, Springer, April 2025. https://doi.org/10.1007/s10270-024-01218-5
- Nenad Todorović, Aleksandar Lukić, Nikola Todorović, Bojana Dragaš, and Gordana Milosavljević, "Automating the development of API-based generators using code idioms mining", In: *Journal on Software and Systems Modeling (SoSyM)*, published online-first June 2025, printed in this issue. https://doi.org/10.1007/s10270-025-01296-z
- Eban Escott, "Jidoka: automation with a human touch", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 2, pp. 339–358, Springer, April 2025. https://doi.org/10.1007/s10270-024-01256-z
- Jingxi Zhang, Carsten Ellwein, Malte Heithoff, Judith Michael, and Andreas Wortmann, "Digital twin and the asset administration shell—An Analysis of the Three Types of AASs and their Feasibility for Digital Twin Engineering", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 3, pp. 771–793, Springer, June 2025. https://doi.org/10.1007/s10270-024-01255-0
- Stef Verreydt, Dimitri Van Landuyt, and Wouter Joosen, "Run-time threat models for systematic and continuous risk assessment", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 5, pp. 1451–1473, Springer, October 2025. https://doi.org/10.1007/s10270-024-01242-5
- Santiago Gil, Eduard Kamburjan, Prasad Talasila, and Peter Gorm Larsen, "An architecture for coupled digital twins with semantic lifting", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 5, pp. 1379–1404, Springer, October 2025. https://doi.org/10.1007/s10270-024-01221-w
- Joost Mertens, Stefan Klikovits, Francis Bordeleau, Joachim Denil, and Øystein Haugen, "Continuous Evolution of Digital Twins using the DarTwin Notation", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 5, pp. 1405–1426, Springer, October 2025. https://doi.org/10.1007/s10270-024-01216-7
- Riku Ala-Laurinaho, Juuso Autiosalo, Sampo Laine, Urho Hakonen, and Raine Viitala, "Paradigm shift in mechanical system design: toward automated and collaborative design with digital twin web", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 5, pp. 1475–1494, Springer, October 2025. https://doi.org/10.1007/s10270-024-01215-8
- Mattia Fumagalli, Tiago Prince Sales, Pedro Paulo F. Barcelos, Giovanni Micale, Philipp-Lorenz Glaser, Dominik Bork, Vadim Zaytsev, Diego Calvanese, and Giancarlo Guizzardi, "Mining Frequent Structures in Conceptual Models", In: *Journal on Software and Systems Modeling (SoSyM)*, published online-first June 2025. https://doi.org/10.1007/s10270-025-01295-0
- Zoe Vasileiou, Indika Kumara, Georgios Meditskos, Kamil Tokmakov, Dragan Radolović, Jesús Gorroñogoitia Cruz, Elisabetta Di Nitto, Damian Andrew Tamburri, Willem-Jan Van Den Heuvel, and Stefanos Vrochidis, "A knowledge-based approach for guided development of Infrastructure as Code", In: *Journal on Software and Systems Modeling (SoSyM)*, published online-first June 2025. https://doi.org/10.1007/s10270-025-01294-1
- Giordano d'Aloisio, Claudio Di Sipio, Antinisca Di Marco, and Davide Di Ruscio, "How fair are we? From conceptualization to automated assessment of fairness definitions", In: *Journal on Software and Systems Modeling (SoSyM)*, published online-first February 2025, printed in this issue. https://doi.org/10.1007/s10270-025-01277-2
- Alvaro Miyazawa, Sharar Ahmadi, Ana Cavalcanti, James Baxter, Mark Post, Pedro Ribeiro, Jon Timmis, and Thomas Wright, "Diagrammatic physical robot models", In: *Journal on Software and Systems Modeling (SoSyM)*, Volume 24, Issue 5, pp. 1549-1593, Springer, October 2025. https://doi.org/10.1007/s10270-025-01270-9
- Louis-Edouard Lafontant and Eugene Syriani, "Modeling with Gentleman: a web-based projectional editor", In:

Journal on Software and Systems Modeling (SoSyM), Volume 24, Issue 2, pp. 523–551, Springer, April 2025. https://doi.org/10.1007/s10270-024-01219-4

More information about SoSyM's Journal-First publication process can be found at: https://www.sosym.org/journal_first/.

5 With appreciation to our 2025 reviewers

The strength of any research community lies in the selfless dedication of its volunteer reviewers. Our software and systems modeling community has consistently supported SoSyM with remarkable enthusiasm, and we are deeply grateful for their collective efforts in advancing the field. We are especially pleased to announce the SoSyM Best Reviewers of 2025. This distinction recognizes individuals who provided exceptional technical insight and thorough, constructive feedback over the past year. We congratulate each recipient for their outstanding commitment to excellence, marked by a certificate of recognition:

Paolo Bocciarelli, Francis Bordeleau, Artur Boronat, Istvan David, Sybren de Kinderen, Emmanuel Grolleau, Robbert Jongeling, Alexander Kraus, Leen Lambers, Sander Leemans, Judith Michael, Elena Navarro, Bentley Oakes, Luise Pufahl, Hassan Sartaj, Allan Shtofenmakher, and Andreas Wortmann.

The list below represents the names of all reviewers who contributed their expertise by reviewing one or more papers for the journal in 2025. We extend our heartfelt gratitude for their reviews and commend their dedication to the SoSyM community. Their invaluable service is crucial to maintaining the quality and integrity of our publications! For a comprehensive directory of all reviewers, please visit our website at https://www.sosym.org/reviewers/.

Sara Abbaspour, Mehdi Adda, Bernhard Aichernig, Iván Alfonso, Chaithra Allala, Joao Paulo Almeida, Hakam Alomari, Abdurrahman Alshareef, Nuno Amalio, Vasco Amaral, Moussa Amrani, Amal Anda, Nicholas Annable, Fazel Ansari, Toshiaki Aoki, Pascal Archambault, Alessio Arleo, Koorosh Aslansefat, Joanne Atlee, Ronan Baduel, Kyungmin Bae, Abdelhakim Baouya, Souvik Barat, Luciano Baresi, Balbir Barn, Ion Barosan, Judith Barrios Albornoz, Anton Basson, Bernhard Bauer, Steffen Becker, Iris Beerepoot, Nelly Bencomo, Phillipa Bennett, Annette Bieniusa, Stefan Biffl, Lukas Birkemeyer, Maria Blas, Simon Bliudze, Dominique Blouin, Paolo Bocciarelli, Silvia Bonfanti, Francis Bordeleau, Dominik Bork, Artur Boronat, Sylvain Boulmé, Erwan Bousse, Davide Bresolin, Jean-Michel Bruel, Hugo Bruneliere, Antonio Bucchiarone, Robert Buchmann, Andrea Burattin, Cristina Cabanillas, Jordi Cabot, Javier Luis Canovas Izquierdo, Alfredo Capozucca, Walter Cazzola, Carlos Cetina, Anouck Chan, Marsha Chechik, Boqi Chen, Antonio Cicchetti, Robert Clarisó, Peter Clarke, Emanuel Coutinho, Javier Criado, Silvano Dal Zilio, Istvan David, Nancy Day, Sybren de Kinderen, Juan de Lara, Antonio de Nicola, Rocco De Nicola, Johannes De Smedt, Marne de Vries, Victoria Degeler, Andrea Delgado, Chiara Di Francescomarino, Daniele Di Pompeo, Juri Di Rocco, Davide Di Ruscio, Amleto Di Salle, Claudio Di Sipio, Vasiliki Diamantopoulou, Marcos Didonet Del Fabro, Guillaume Dupont, Umut Durak, Sophie Ebersold, Mathias Ekstedt, Andrea Esposito, Michalis Famelis, Kleinner Farias, Alexander Fay, Arianna Fedeli, Enxhi Ferko, Hans-Georg Fill, Cody Fleming, Fabrizio Fornari, Sophie Fortz, Breno França, Xavier Franch, Ulrich Frank, Mirgita Frasheri, Mattia Fumagalli, Kelly Garces, Antonio García-Domínguez, Luca Geatti, Eduardo Geraldo, Sebastien Gerard, Simos Gerasimou, Philippe J. Giabbanelli, Federica Gini, Mario Gleirscher, Sebastian Goetz, Arda Goknil, Cláudio Gomes, Pablo Gómez-Abajo, Pascual González López, Miguel Goulão, Jānis Grabis, Mark Grechanik, Joe Gregory, Iwona Grobelna, Emmanuel Grolleau, Georg Grossmann, Matthias Güdemann, Renata Guizzardi, Jens Gulden, Anne Gutschmidt, Ahmed Hammad, Felix Härer, Oystein Haugen, Xiao He, Regina Hebig, Malte Heithoff, Philipp Helle, Tiphaine Henry, Anne Hess, Georg Hinkel, Son Hoang, Stijn Hoppenbrouwers, Jennifer Horkoff, Akos Horvath, Amjad Ibrahim, Marta Indulska, Ludovico Iovino, Amin Jalali, Manfred A. Jeusfeld, Christian Johansen, Einar Broch Johnsen, Robbert Jongeling, Jürgen Jung, Christos Kalloniatis, Eduard Kamburjan, Timotheus Kampik, Rahul Karmakar, Gabor Karsai, Andreas Katis, Timo Kehrer, Wael Kessentini, Djamel Eddine Khelladi, Sybren Kinderen, Stefan Klikovits, Jil Ann-Christin Klünder, Alexander Knapp, Simon Koch, Shekoufeh Kolahdouz Rahimi, Dimitris Kolovos, Jens Kosiol, Konstantinos Kotis, Samuel Kounev, Anne Koziolek, Alexander Kraus, John Krogstie, Srdjan Krstic, Géza Kulcsár, Vinay Kulkarni, Leen Lambers, Kevin Lano, Ruggero Lanotte, Jannik Laval, Théo Le Calvar, Sander Leemans, Daniel Lehner, Henrik Leopold, Lucas Lima, Igor Linkov, Ye Liu, Denis S. Loubach, Jinzhi Lu, Eric Lubat, Qin Ma, Ole Lehrman Madsen, Amel Mammar, David Manrique Negrin, Ana Cristina Marcén, Beatriz Marín, Francisco Martin-Rico, Salvador Martinez, Kristóf Marussy, Raimundas Matulevičius, Jenn McArthur, Sofia Meacham, Kristof Meixner, Eric Mercer, Joost

Mertens, Judith Michael, Zoltán Micskei, Raffaela Mirandola, Rakshit Mittal, Saurabh Mittal, Parastoo Mohagheghi, Ahmad Mohsin, Armin Moin, Sergio Morales, Alexandre Mota, Henry Muccini, Sadaf Mustafiz, Vittoriano Muttillo, Muhammad Naeem, Elisa Yumi Nakagawa, Benjamin Nast, Elena Navarro, Shiva Nejati, Lukas Netz, Phu Nguyen, Phuong Nguyen, Gabriela Nicolescu, Mara Nikolaidou, Atefeh Nirumand Jazi, Nan Niu, Jarkko Nurmi, Bentley Oakes, Ileana Ober, Manuel Ohrndorf, Toacy Oliveira, Olaf Op den Camp, Mert Ozkaya, Jose Ignacio Panach Navarrete, Vera Pantelic, Jovanka Pantovic, Aditya Paranjape, Jose Parejo, Oscar Pastor, Michalis Pavlidis, Antonino Pedro, Patrizio Pelliccione, Mário Pereira, Jérôme Pfeiffer, Jolan Philippe, Marco Piangerelli, Marco Picone, Rūta Pirta-Dreimane, Moritz Platt, Geert Poels, Cristiano Politowski, Christophe Ponsard, Wishnu Prasetya, Virgile Prevosto, Henderik Proper, Luise Pufahl, Sasa Radomirovic, Jolita Ralyté, Vijayalakshmi Ramasamy, Istvan Rath, Kristo Raun, Adrian Rebmann, Iris Reinhartz-Berger, Arend Rensink, José Ignacio Requeno Jarabo, Stefanie Rinderle-Ma, Ricardo J. Rodríguez, Maximilian Roeglinger, Ben Roelens, Markus Roggenbach, Kristina Rosenthal, Marco Roveri, Suman Roychoudhury, Iván Ruiz-Rube, Ragnhild Runde, Philippa Ryan, Mehrdad Saadatmand, Mehrdad Sabetzadeh, Tiago Sales, David Sanan, Jesús Sánchez Cuadrado, Pablo Sánchez, Dionny Santiago, Hassan Sartaj, Maximilian Schiedermeier, Martin Schneider, Steve Schneider, Peter Schrammel, Felix Schwägerl, João Seco, Ed Seidewitz, Emil Sekerinski, Allan Shtofenmakher, Joanthan Silva, Mikael Sjödin, Kari Smolander, Monique Snoeck, Pnina Soffer, Ana Sokolova, Rongjia Song, Juan Sotomayor, Jean-Sebastien Sottet, Jan-Philipp Steghöfer, Vinicius Stein Dani, Janis Stirna, Volker Stolz, Harald Störrle, Sebastian Stüber, Arnon Sturm, Allison Sullivan, Bastien Sultan, Chico Sundermann, Gerson Sunye, Angelo Susi, Gabriele Taentzer, Silvia Lizeth Tapia Tarifa, Bedir Tekinerdogan, Paul Temple, Maurice ter Beek, Matthias Tichy, Shukun Tokas, Juha-Pekka Tolvanen, Bernardo Toninho, Victoria Torres, Mamadou Kaba Traoré, Javier Troya, Rolando Trujillo Rasua, Mark Utting, Michail Vaitis, Pedro Valderas, Antonio Vallecillo, L. Thomas van Binsbergen, Mark van den Brand, Tijs van der Storm, Hans Vangheluwe, Yon Vanommeslaeghe, Juan Manuel Vara, Daniel Varro, Eric Verbeek, Charlotte Verbruggen, Michael Vierhauser, Thomas Vogel, Ding Wang, Andrzej Wasowski, Bryan C Watson, Thomas Weber, Marco Wehrmeister, Hans Weigand, Mathias Weske, Bianca Wiesmayr, Tim Willemse, Manuel Wimmer, Robert Woitsch, Andreas Wortmann, Sinem Getir Yaman, Sobhan Yassipour Tehrani, Xinlei Yi, Enes Yigitbas, Tao Yue, Jelena Zdravkovic, Philipp Zech, Xing Zhang, and Steffen Zschaler.

Our best wishes also to the SoSyM community for a happy and successful New Year, rich with inspiring scientific discoveries and compelling new contributions. We hope you find the articles in the forthcoming issues both engaging and valuable, and we look forward to the many new publications planned for 2025 and beyond. We also encourage readers to explore the extensive SoSyM article archive—spanning more than two decades of influential research and scientific innovation. This archive stands as a testament to the lasting impact and excellence of our community and is available at https://link.springer.com/journal/10270.

We wish you a constructive and innovative new year 2026, the SoSyM editor team Stéphanie Challita, Marsha Chechik, Benoit Combemale, Huseyin Ergin, Jeff Gray, Bernhard Rumpe, and Martin Schindler.

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