

BTSym'26

Brazilian Technology Symposium

Conference Program

October 14th, 15th and 16th -2026
UNICAMP University, Campinas – SP - Brazil

Welcome to the BTSym'2026 as a Virtual Event

The Brazilian Technology Symposium (BTSym), **ISSN 2447-8326**, is an event created by the Laboratory of Visual Communications of the Faculty of Electrical and Computer Engineering at the State University of Campinas. This is an excellent forum for presentations and discussions of the latest results of projects and development research in several areas of knowledge, in scientific and technological scope.

This event seeks to bring together researchers, students, and professionals from the industrial and academic sectors, seeking to create and/or strengthen the linkages between issues of joint interest. Participants are invited to submit research papers, case studies, articles of opinion, or posters, showing studies, methodologies, and results achieved in scientific level research projects, completion of course work for graduation, dissertations, and theses.

The BTSym'26 organizing committee invites researchers to attend and submit papers addressing the current research topics of interest. In 2026, the event will be held on **October 14th, 15th, and 16th at the CTI Renato Archer, SP**. Proceedings of the event will be published by **Springer** publisher through the book **Proceedings of the 11th Brazilian Technology Symposium - Emerging Trends and Challenges in Technology**, and will be submitted for indexing by **Scopus, WoS, and EI Compendex database**.

In 2026, we received 69 research works, divided into: 63 articles submitted for option A and 6 articles submitted for option B.



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General information

Conference Location:

Virtual via Webex

Contact Info:



Phone LCV committee:
Gabriel Gomes:
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Useful Telephone Numbers:

Ambulance: 192

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Fire Brigade: 193

These numbers may be dialed from public or mobile phones, even without a card.

Contact BTSym Support:

If you have any need for additional information, questions, concerns, and/or system issues, please feel free to contact the Editorial Office via email.

Email Address:

contact.btsym@gmail.com

Virtual Oral and Poster Presentations:

The authors are obliged to be present during the panels designated for the presentation, using the time given by

the person in charge of the panel discussion or posters session. Such presentations utilize technological solutions to allow you present live.

Official Event Room:

<https://conferenciaweb.rnp.br/sala/gabriel-gomes-de-oliveira-3>



Plenary Talks - PANEL 1

October 14th, 2026 (14:00 – 15:00)

Panel discussion 1: Technology and industrial processes.

Topic covered: Industrial technological processes, Technology applied to production processes, Innovation models, Digital factory, Quality 4.0, Logistics 4.0, Innovation 4.0, Clean technologies, Industrial automation, Engineering Process Simulations.

Moderator:

Wandercleiton Cardoso, PhD



14:00 - 14:10	018 - Bearing Fault Diagnosis Through Physics-Informed Wavelet Filtering: Authors: Silva, J., De Medeiros, R.
14:10 - 14:20	038 - Predicting Machine Failure in Industrial Equipment Using the AI4I 2020 Dataset: A Comparative Machine Learning Study Authors: Nilay Vaidya, Kanubhai K. Patel, Kamini Solanki
14:20 - 14:30	049 - AnomalyQ: A Reproducible Classical–Quantum Benchmark for DDoS Detection in NISQ Environments Authors: Leonardo Bruscagini de Lima , Luca Misi Rocha , Javier Martinez Silva , Leonardo Foschine, and Yuzo Iano

Plenary Talks - PANEL 2

October 14th, 2026 (19:00 – 20:00)

Panel discussion 2: Microelectronics, Sensors, Robotics, Artificial Intelligence, and Real-Time Systems.

Topic covered: Microelectronics, MEMS, Reconfigurable Devices and Systems, Sensors, Robotics, Satellites, Aerospace and Defence, Artificial Intelligence, Radar System and Algorithms, Resilient and Robust Systems, Real-Time Systems.

Moderator:

Osamu Saotome, PhD



19:00 - 19:10	015 - Paper: A symbolic Taylor-based framework for sensitivity-driven precision allocation in embedded numerical systems Authors: Vítor Ferreira Gonçalves, P., Saotome, O.
19:10 - 19:20	042 - Paper: Modeling and simulation of a single-mode extrinsic fiber Fabry-Perot interferometric sensor (SMF-EFPI) Authors: Marcelle Eduarda Franco de Lima
19:20 - 19:30	045 - Paper: Conceptual design of an exoskeleton for biomechanical rehabilitation Authors: Victor Raul Huaman Condori

Plenary Talks - PANEL 3

October 15th, 2026 (10:00 – 11:00)

Panel discussion 3: Technology applied to buildings.

Topic covered: Construction 4.0, Automation and Robotics in buildings, Environmental comfort, Energy efficiency in buildings, Constructions, Technologies in Design, BIM, Construction Information Model, Provisional and adapted constructions, Sensors applied to civil construction, Sustainable buildings, Smart buildings.

Moderator:

Gabriel Gomes de Oliveira, PhD



10:00 - 10:10

008 - Paper: A Mechanism Informed Hybrid Digital Twin Reference Architecture for High Voltage Circuit Breaker Opening Mechanisms: A Trip-Coil Current Demonstration

Authors: Pontes da Silva, W., Simas Da Silva, Y., Gondres Torné, I.

10:10 - 10:20

026 - Paper: Photovoltaic Energy Generation Forecasting Using Long Short-Term Memory Networks

Authors: Pontes da Silva, W., Simas Da Silva, Y., Gondres Torné, I.

10:20 - 10:30

044 - Paper: Effect of Additive Manufacturing Conditions on the Surface Roughness of NACA Airfoils Produced by FDM and SLA

Authors: Victor Raul Huaman Condori

Plenary Talks - PANEL 4

October 15th, 2026 (14:00 – 15:00)

Panel discussion 4: Product Development and Innovation.

Topic covered: Engineering design, Design methods, Design thinking, Sustainable product development, Circular economy, Cradle to Cradle (C2C), Innovation strategies applied to product development, Business model innovation, Digital innovation and transformation, Open innovation.

Moderator:

Marcos Almeida do Amaral, MSc.



14:00 - 14:10

012 - Paper: Collaborative Innovation Process for Brazilian Startups: A Multiple Case Study

Authors: Lins de Oliveira, M.

14:10 - 14:20

027 - Paper: From Co-production to Capturable Value

Authors: Pereira, A., Martins, W., Pereira, J.

14:20 - 14:30

036 - Paper: Exploring Large Language Models and Retrieval-Augmented Generation for Assisting Technical Proposal Development in Research and Technology Organizations

Authors: Bruna D. Pupo, Matheus Covre de Queiroz, Victor Rodrigo Leite, Magalhães de Almeida, Helena Gonçalves Silva, Josiele Ferreira and Daniel Trevisan Tatsch

Plenary Talks - PANEL 5

October 15th, 2026 (19:00 – 20:00)

Panel discussion 5: Telecommunications, product development and innovation in mobile systems.

Topic covered: New products and services, Mobile systems for 4G and 5G cell phones, Visual computing, Image and video processing, Machine learning, Human-computer interaction using image processing, Image processing for real-time control, Medical image processing, new generation of digital TV, Digital TV interactivity, Broadband and transmission systems.

Moderator:

Edgard Luciano Oliveira da Silva, PhD



19:00 - 19:10

007 - Paper: Forecasting Bitcoin Price Movements Using Large Language Models and Sentiment Analysis

Authors: Emanuel de Oliveira Carosia, A., Palermo Coelho, G., Muniz, F.

19:10 - 19:20

015 - Paper: Federated Multi-Agent Reinforcement Learning for Slice-Oriented Resource Allocation in 5G mmWave Networks

Authors: Suja A. Alex

19:20 - 19:30

046 - Paper: Análise Sistemática e Estatística de Sobreensões na Energização de Linhas de Transmissão com Para-Raios e Resistência de Pré-Inserção e Chaveamento

Authors: Rodrigo Delfini Edo, Silvio Renato Messias de Carvalho and Yuzo Iano

Plenary Talks - PANEL 6

October 16th, 2026 (10:00 – 11:00)

Panel discussion 6: Technologies applied to urban infrastructure.

Topic covered: Smart Cities, Urban environmental comfort, Technologies applied to urban planning, Technology and management of urban infrastructure, Innovation and technology in the urban environment, Intelligent technology and transport, Urban monitoring.

Moderator:

Angela Maria Alves, PhD.



10:00 - 10:10

009 - Paper: Artificial intelligence and justice in Brazil: biases and impacts of misuse

Authors: Bergantini Dias, S., Chuma, E.

10:10 - 10:20

020 - Paper: Application of the SSAM model for conflict reduction and reducing the risk of accidents at high-flow intersections. Authors: Leonardo gomez, J., Cueva Escudero, R.

Plenary Talks - PANEL 7

October 16th, 2026 (14:00 – 14:40)

Panel discussion 7: Applied Biomedicines.

Topic covered: Medicine, Covid-19, Dentistry, Biology, Biomedicine, Nursing, Medicines, Vaccines.

Moderators:

João Gabriel Ribeiro Damian, PhD



14:00 - 14:10

002 - Paper: Supporting Process Capability Evaluation in a Hospital Sterilisation Department Using a ChatGPT-Based Agent: A Case Study
Authors: Rozo, I., Jiménez, C., Azzolini, W., Henrique dos Santos, C., Romano, A.

14:10 - 14:20

025 - Paper: Teaching Statistics with Open-Source Software at UNEMAT in Sinop, Mato Grosso, Brazil: Community Engagement and Student Development with R and RStudio
Authors: Lopes, L., GABRIEL RIBEIRO, J., Vale, G., Oliveira, V., Biscaro, A., Braga do Vale, G., TARDIO, M.

14:20 - 14:30

039 - Paper: Predicting Coronary Heart Disease Presence from the UCI Cleveland Dataset: A Comparative and Explainable Machine Learning Study Using Permutation-Based
Authors: Nilay Vaidya, Kanubhai K. Patel, Kamini Solanki

Official Closing – Event Virtual

October 16th, 2026 (19:00 – 20:00)	
19:00 - 20:00	Official Closing Moderator: Kelem Pereira Jordão, PhD 
	Lecture – O avanço e impacto da Telecomunicação. Uma abordagem: Brasil no século XXI. Speaker: Eduardo Camargo, BSc. 

Sponsor:



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**Thank you very
much!**