

BTSym'24

Brazilian Technology Symposium

Conference Program

October 16th, 17th and 18th -2024
UNICAMP University, Campinas – SP - Brazil

Welcome to the BTSym'2024 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'24 organizing committee invites researchers to attend and submit papers addressing the current research topics of interest. In 2024, the event will be held on **October 16th, 17th, and 18th at the CTI Renato Archer, SP**. Proceedings of the event will be published by **Springer** publisher through the book **Proceedings of the 10th Brazilian Technology Symposium - Emerging Trends and Challenges in Technology**, and will be submitted for indexing by **Scopus, WoS, and EI Compendex database**.

In 2024, we received **70 research works, divided into: 50 articles submitted for option A and 20 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:

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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 16th, 2024 (14:00 – 17:00)

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:

Maria Thereza de Moraes Gomes Rosa, PhD



14:00 - 14:10

010 - Paper: Metaverse to Shape Stakeholder Interaction for Scaling Up Sustainable Co-Innovations.

Authors: Selma Oliveira, João Pedro Passos, Lucas Sampaio Motta.

14:10 - 14:20

015 - Paper: A Comparative Analysis of Food Group Consumption in Households Across the Three Regions of Peru: ENAHO, 2023.

Authors: JHOSELINE STAYCE GUILLEN SANCHEZ.

14:20 - 14:30

033 - Paper: Automated Detection of Moisture-Evaporation Membranes in Automotive Taillights Using Machine Learning and Computer Vision.

Authors: Gabriel Rennó, Talisson de Souza Barbosa.

14:30 – 14:40

035 - Paper: Process Capability Analysis of Sample Turnaround Time and Test Results Fulfilment in a Colombian Hospital Laboratory.

Authors: Ivanhoe Rozo, Claudia Jiménez, Juan Barrero, Walther Azzolini, Francisco Giocondo, Orlando Contreras, Nicolás Rodríguez.

14:40 - 14:50

052 - Paper: Development of an “Asset Administration Shell” of an NVPT bench for process simulation.

Authors: Enrik Lima.

14:50 - 15:00

068- Web Scraping y Machine Learning applied to decision.

Authors: Percy Edwin De la Cruz Velez de Villa, Diego Antonio Arce-Esteban, Miguel Fajardo-Inca, Hugo Vega-Huerta, Gisella Luisa Elena Maquen Niño, Maria Laura Barrera-Cajachagua.

Plenary Talks - PANEL 2

October 16th, 2024 (19:00 – 21:00)

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	<p>013 - Paper: Comparative Analysis of Small Language Models (SLMs) Pre-Trained with Phi-2: Adaptation to Portuguese and Performance in Question Answering Tasks with Data from SQUAD and Wikipedia.</p> <p>Authors: Leonardo Bruscatini, Vagner Sanches Vasconcelos, Vitor Pereira Andrade, Luis A. S. Pessoa, Miguel Lopes da Silva Filho, Thiago Felipe de Almeida, Leonardo Silveira.</p>
19:10 - 19:20	<p>019 - Paper: Adaptation in the design of a passive isolation system to control the displacement of its base using new dominant frequencies.</p> <p>Authors: Skarleth Guerovich, Jean Pool Valdivia Jeri.</p>
19:20 - 19:30	<p>020 - Paper: Generative Solutions for Musical Composition.</p> <p>Authors: Lucas Scocca, Magno Silva.</p>
19:30 – 19:40	<p>029 - Paper: System for Generating and Receiving Lamb Ultrasonic Waves Using FPGA Applied to Fault Detection on Composite Plates.</p> <p>Authors: Orest Kaleniuk Filho, Roberto d'Amore, Osamu Saotome.</p>

Plenary Talks - PANEL 3

October 17th, 2024 (10:00 – 12:00)

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:

João Carlos Gabriel, MSc



10:00 - 10:10

017 - Paper: Use of BIM 4D models to improve the dynamism of construction layout planning in the structural stage of multifamily housing in Metropolitan Lima.

Authors: Karem Ulloa, Yhoel Huacre, Adalberto Saldaña.

10:10 - 10:20

018 - Paper: Procedure to Improve the Confidence in the Selection of Design Equipment Subcontractors by Implementing Set Based Design (SBD) and Choosing By Advantages (CBA) Methodologies in Multifamily Building Projects.

Authors: Karem Ulloa, Milagros Celestino, Grecia Gonzales.

10:20 - 10:30

048 - Paper: Viability of a Kanban model to increase the work motivation of the professional construction team in residential projects.

Authors: JORGE DE LA TORRE SALAZAR.

10:30 – 10:40

055 - Paper: Application of BIM Revit Dynamo to improve precision in the quantification and cost of formwork in residential projects.

Authors: JORGE DE LA TORRE SALAZAR.

10:40 - 10:50

059 - Paper: Forecast Model Applied to an Installed Photovoltaic Electricity and Generation System in the City of Sinop-MT, Brazil, via Complex Exponential Smoothing: A Case Study.

Authors: João Gabriel Ribeiro.

Plenary Talks - PANEL 4

October 17th, 2024 (14:00 – 16:00)

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

009 - Paper Reference Modeling Enabled by Generative Adver-sarial Networks to Reinforce Educational Strategies in a Conventional Environment.

Authors: Selma Oliveira, Fabrício Santa Helena Ilha.

14:10 - 14:20

027 - Paper: Analysis of the mechanical performance of structural concrete reinforced with metakaolin and glass fibers.

Authors: Antuannet Emily Meza Mory, Leonid Llamozza Pariguana, Karla Lisette Lopez Pasapera.

14:20 - 14:30

053 - Paper: You Secure: Passwordless Authentication.

Authors: Gabriel Kemmer.

14:30 – 14:40

054 - Paper: Automatic vocal tract detection to aid speech pattern recognition.

Authors: Haroldo Gomes Barroso Filho.

Plenary Talks - PANEL 5

October 17th, 2024 (19:00 – 21:00)

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	047 - Paper: Inspeção de Etiqueta de Carregadores de Celular numa Linha de Produção Utilizando Visão Computacional com Labview. Authors: ANDRE GAMA DE MATOS.
19:10 - 19:20	049 - Paper: A Comprehensive Predictive Maintenance Framework for Industry 4.0. Authors: Wandercleiton Cardoso.
19:20 - 19:30	051 - Paper: Fuel Cells: Perspectives, Applications, and Challenges in the Energy Transition. Authors: Wandercleiton Cardoso.
19:30 - 19:40	060 - Paper: Drone-Based Sheep Recognition and Counting: A Comparative Study of Color-Shape, and YOLOv5 Algorithms. Authors: Juan Ronaldo Condori Ticona, Gavino José Flores Chipana, Guido Humberto Cayo Cabrera, Teobaldo Raúl Basurco Chambilla, Gabino Rey Vidangos Ponce.
19:40 – 19:50	066 - Paper FPGA-based Hardware Accelerator for PAPR Reduction Using UPMC Signal Precoding Technique with OpenCL. Authors: Gabriel Pedro Paião.

Plenary Talks - PANEL 6

October 18th, 2024 (10:00 – 12:00)

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	<p>011 - Paper: Big Data Analytics and Environmental, Social and Governance (ESG). Authors: Victória Fortaleza, Selma Oliveira.</p>
10:10 - 10:20	<p>022 - Paper: An automation-based strategy for monitoring software requirement changes. Authors: Jose Diogo Bezerra de Souza, Jullianne Coelho Abreu, Educe Leitão Veras, Bruno Simoes Cardoso Ferreira, Lyan Mota, fabio coelho ramos, Priscila Saldanha Barros, Rennan Salgado.</p>
10:20 - 10:30	<p>032 - Paper: Stress Echocardiography Image Segmentation with Convolutional Neural Networks. Authors: Gabriel Baltazar, Rangel Arthur.</p>
10:30 - 10:40	<p>050 - Paper: Graphite: Mineral Occurrences and the Evolution of Its Applications. Authors: João Felipe Campanaro.</p>
10:40 - 10:50	<p>069 - Paper: Regulatory proposal for bikesharing and scooter sharing in the cities of Brazil. Authors: Luiz Vicente Figueira de Mello Filho, Luiz de Freitas de Ayres, João Carlos Gabriel.</p>

Plenary Talks - PANEL 7

October 18th, 2024 (14:00 – 16:00)

Panel discussion 7: Applied Biomedicines.

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

Moderators:

Wandercleiton Cardoso, PhD



14:00 - 14:10

039 - Paper: Proposal for the Mechanical Design of a Hand Prosthesis using ABS material.

Authors: VICTOR HUAMAN, Fernando de Azevedo Silva.

14:10 - 14:20

045 - Paper: Evaluating the Effectivity of Natural Antioxidants in Food Emul-sions: a review.

Authors: JHOSELINE STAYCE GUILLEN SANCHEZ.

14:20 - 14:30

046 - Paper: Comparative Analysis of Deep LSTM and SVM Models for Bitcoin Price Forecasting.

Authors: Suja A. Alex.

14:30 – 14:40

057 - Paper: Detecting Dengue Infection's Initial Stages using Neural Networks.

Authors: Gisella Luisa Elena Maquen Niño.

Official Closing – Event Virtual

October 18th, 2024 (19:00 – 21:00)

19:00 - 21:00	Official Closing Moderator: Gabriel Gomes de Oliveira, PhD	
	Lecture – Digital Government - (Cyber Security). Speaker: Kelem Christine Pereira Jordão, PhD.	

Sponsor:



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**Thank you very
much!**