

## Message from the Program Chairs

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Welcome to the 37th Conference on Graphics, Patterns, and Images (SIBGRAPI 2024). SIBGRAPI is an international event annually promoted by the Brazilian Computer Society (SBC) through its Special Interest Group on Computer Graphics and Image Processing (CEGRAPI), this year also with co-promotion of IEEE South Brazil RAS Chapter. The event proceedings are published by the IEEE Computer Society Press and have been available at IEEE Xplore since 1997. In addition, a small number of SIBGRAPI 2024 featured papers have been published as a Special Section of Elsevier's Computers & Graphics Journal and as a Special Stream of the IEEE Geoscience and Remote Sensing Letters (IEEE GRSL). These journal papers were selected before the conference via a special call for papers. In 2024, SIBGRAPI was held in an in-person format in the beautiful city of Manaus, Amazonas, in northern Brazil. SIBGRAPI 2024 provided a unique opportunity for participants worldwide to safely attend its technical sessions, tutorials, workshops, and keynote speakers presentations.

This year, SIBGRAPI featured an excellent technical program that included 48 full papers plus five tutorial papers, now published in this volume and available in the IEEE Xplore digital library, totaling 53 high-level publications. Each submission was reviewed by at least three members of the Program Committee to ensure high-quality standards. This year, the main track papers published in the conference proceedings underwent a two-stage double-blind review process, similar to the articles published in the Computers & Graphics and IEEE GRSL journals. The 48 main track papers were presented orally at the conference and grouped into thematic sessions. Five distinguished keynote speakers enhanced the SIBGRAPI 2024 program. The opening talk entitled "What do image generators know?" was presented by David Forsyth (University of Illinois at Urbana-Champaign). Jean Cousty (ESIEE Paris and Université Gustave Eiffel) presented "A Journey through Hierarchies, watersheds, and minimum spanning trees for image segmentation". Esteban Walter Gonzalez Clua (Fluminense Federal University) presented "Enhancing Realistic Rendering for Mixed and Virtual Reality Games", while Alexandru Telea (Utrecht University) presented "Seeing is learning in high dimensions". The capstone talk, "Graph-based image segmentation subject to high-level constraints", was presented by Paulo André Vechiatto de Miranda (University of São Paulo).

SIBGRAPI 2024 hosted five tutorials: Tutorial 1 - "INTERACT-NET: An Interactive Interface For Multimedia Machine Learning", Tutorial 2 - "Advanced Virtual Human Modeling with Metahumans: Focus on Genderless Characters", Tutorial 3 - "How to Choose a Binarization Algorithm for a Document Image?", Tutorial 4 - "Mastering Scene Understanding: Scene Graphs to the Rescue", and Tutorial 5 - "Learning Visual Patterns in Remote Sensing: An Overview of Agricultural Applications". In addition, SIBGRAPI 2024 also hosted the following workshops: Workshop of Theses and Dissertations (WTD), Workshop of Industry Applications (WIA), Workshop of Undergraduate Works (WUW), Workshop of Works in

Progress (WiP), and a Thematic Workshop "Visualization in the Moment of Machine Learning" (VMML).

Finally, SIBGRAPI 2024 devoted a tribute to two distinguished researchers who greatly contributed to the community: Carla Maria Dal Sasso Freitas (UFRGS) and Gerald Jean Francis Banon (INPE).

The SIBGRAPI 2024 Program Chairs wish to acknowledge the people who contributed to the successful organization of the program: João Luis Dihl Comba (UFRGS, Brazil) and Rita Borgo (King's College London, United Kingdom), chairs of the Computers & Graphics Special Track, Joaquim Jorge (University of Lisbon, Portugal), Editor-in-Chief of Computers & Graphics; Luiz Gonzaga da Silveira Jr (Unisinos, Brazil) and Wesley Nunes Gonçalves (UFMS, Brazil), chairs of the IEEE GRSL Special Track, Ronny Haensch (German Aerospace Center / DLR, Germany), Editor-in-Chief of IEEE GRSL; Soraia Raupp Musse (PUCRS, Brazil), Zenilton Kleber Gonçalves do Patrocínio Júnior (PUCMinas, Brazil), and Ricardo Marroquim (TU Delft, The Netherlands), Tutorials chairs; Ricardo Marroquim (TU Delft, The Netherlands) and Daniel Pedronette (UNESP, Brazil), chairs of the Workshop of Theses and Dissertations; Nivan Roberto Ferreira Júnior (UFPE, Brazil) and William Robson Schwartz (UFMG, Brazil), chairs of the Workshop of Works in Progress; Bruno Motta de Carvalho (UFRN, Brazil) and Dennis Giovani Balreira (UFRGS, Brazil), chairs of the Workshop of Undergraduate Works; Paulo L. J. Drews-Jr (FURG, Brazil) and José L. S. Pio (UFAM, Brazil), chairs of the Workshop of Industry Applications; Marcos Lage (UFF, Brazil) and Thiago Oliveira dos Santos (UFES, Brazil), Thematic workshops chairs; and Luis Gustavo Nonato (USP, Brazil) and Filip Sadlo (Heidelberg University, Germany), chairs of the Workshop on Visualization in the Moment of Machine Learning (VMML). Also, the support of Gerald Banon (INPE, Brazil) and Thales Sehn Körting (INPE, Brazil) was essential for keeping alive the SIBGRAPI Digital Library Archive repository.

We are deeply grateful to all members of the Program Committee for their hard work and commitment during the new two-stage reviewing process, acting as reviewers and meta-reviewers. Without their efforts, this conference would not have been possible. We are also grateful to Leonardo Ramos Emmendorfer (UFES) and Antonio Claudio Kieling (UEA), publication chairs for Sol-SBC and IEEE Xplore Proceedings, Ricardo da Silva Barboza and all the Local Organizing Committee from the Escola Superior de Tecnologia, Universidade do Estado do Amazonas, and to this year's sponsors: CAPES, SIDI, SIDIA, and ELDORADO. Finally, we also acknowledge the invaluable help of Silvio Jamil Ferzoli Guimarães (PUC Minas, Brazil), president of the SBC's Special Interest Group on Computer Graphics and Image Processing (CEGRAPI).

Manaus, AM, Brazil, September 30th - October 3rd, 2024.

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