# Matemática Contemporânea



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## Preface

M. C. Júnior  $\bigcirc^1$ , T. M. Dalbelo  $\bigcirc^2$ , N. G. Grulha Júnior  $\bigcirc^3$  and C. M. Ruiz  $\bigcirc^4$ 

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We are thrilled to present this special volume of Matemática Contemporânea, showcasing the contributions of participants from the 2nd International Meeting of Young Researchers in Singularity Theory and Related Fields. The inaugural edition of the International Meeting of Young Researchers in Singularity Theory and Related Fields took place at IMPA, Brazil, from March 2nd to 7th, 2020, as part of the Thematic Program in Singularity Theory. The second edition was held remotely from February 7th to 11th, 2022.

This esteemed event aims to bring together graduate students and young researchers from all corners of the globe as speakers, representing diverse subjects within the realm of singularity theory.

The organizing committee and the scientific committee of the 2nd International Meeting of Young Researchers in Singularity Theory and Related Fields consisted of the following esteemed members:

### Organizing Committee:

- Camila Ruiz (Universidade Federal de Uberlândia Brazil)
- Dahisy Lima (Universidade Federal do ABC Brazil)
- Fernando Lourenço (Universidade Federal de Lavras Brazil)

- Nivaldo Grulha (Universidade de São Paulo Brazil)
- Rafaella Martins (Universidade do Estado de Santa Catarina Brazil)

#### Scientific Committee:

- Carolina Araujo (Instituto Nacional de Matemática Pura e Aplicada
  Brazil)
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- Maria Pe Pereira (Universidad Complutense de Madrid Spain)
- Miriam Pereira (Universidade Federal da Paraíba Brazil)
- Thaís Dalbelo (Universidade Federal de São Carlos Brazil)
- Ursula Ludwig (Universität Münster Germany)

The call for papers was eagerly responded to by the distinguished scientific committee of the meeting, under the invitation of Professor Jaqueline Mesquita, esteemed editor-in-chief of Matemática Contemporânea. Their diligent efforts have resulted in an exceptional special issue comprising eleven remarkable articles that delve into the fascinating realm of Singularity Theory and its intriguing intersections with Commutative Algebra, Foliatins, Dynamical Systems, and Algebraic Topology.

Each article in this volume offers interesting insights and advancements in their respective areas, contributing to the rich tapestry of knowledge within the Singularity Theory. The authors have brought forth their expertise and research, shedding light on the profound connections between the Singularity Theory and the aforementioned fields. Their contributions not only deepen our understanding of singularity phenomena but also foster cross-disciplinary collaborations and stimulate further exploration in related domains.

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We express our most sincere gratitude to the authors for their exceptional research and scholarship, as well as to the referees for their meticulous selection and guidance throughout the publication process. Their collective efforts have resulted in this very important collection of articles, which we believe will captivate and inspire researchers and enthusiasts in the field of mathematics. Contributed papers

- T. F. da Silva, Categorical aspects of the double structure of a module
- J. T. Essig, A generalized de Rham Theorem for Intersection Spaces
- Thuy Nguyen Thi Bich, A singular variety associated to the smallest degree Pinchuk map
- M. Corrêa, On classification and moduli spaces of holomorphic distributions
- F. Reis, M. Ribeiro, and E. da Silva, Topology of first integrals via Milnor Fibrations
- N.G. Grulha Jr., D.V.S. Lima, K.A. de Rezende e M.A.J. Zigart, The Effect of Singularization on the Euler Characteristic
- F. Lourenço and F. Reis, A brief survey on residue theory of holomorphic foliations
- A. P. Francisco, Functions on a swallowtail
- M. Zach, On the topology of complex univariate polynomials
- R. A. Barbosa e M. E. Hernandes, Quasi-ordinary hypersurfaces obtained from others of smaller dimensions
- M. F. Z. Morgado, Affine and projective Lê cycles

We extend our heartfelt appreciation to the contributors and to the readers of Matemática Contemporânea for their unwavering support and enthusiasm. It is through such collaborative endeavors and intellectual exchange that we continue to advance the frontiers of knowledge and foster a vibrant academic community. Thank you for your unwavering support and continued interest in Matemática Contemporânea.

#### **Editorial Board**

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