

Contents

- 02 Editorial**
by [Ana Cristina Moreira Freitas](#)
- 03 In Memoriam — Isabel Maria Narra de Figueiredo (1959–2023)**
by [João Filipe Queiró](#)
- 04 43rd Conference on Stochastic Processes and their Applications**
Report by [Ana Bela Cruzeiro](#) and [Patrícia Gonçalves](#)
- 05 An Interview with Bruno Loff**
by [Carlos Florentino](#)
- 11 The influence of Greek authors on Francisco de Melo's theory of vision**
by [Daniel Pinto](#)
- 16 7th Workshop: New Trends in Quaternions and Octonions — NTQO 2023**
Report by [Alexandra Baptista](#), [Ana Mendes](#), [Milton Ferreira](#) and [Nelson Vieira](#)
- 17 An interview with Richard A. Davis**
by [Miguel de Carvalho](#)
- 23 V Non-Associative Day in Barcelos**
Report by [Natália Maria Rego](#)
- 25 Geometry on surfaces and Higgs bundles**
by [Peter B. Gothen](#)
- 35 Global portuguese mathematicians**
Report by [João Gouveia](#)
- 37 A tour through some Diophantine equations**
by [Ariel Pacetti](#)
- 44 LxDS Spring School 2023**
Report by [Telmo Peixe](#)
- 46 Particle systems and PDEs XI**
Report by [Ana Jacinta Soares](#) and [Patrícia Gonçalves](#)
- 49 On the geometry of learning from data — Bayes meets Hilbert**
by [Miguel de Carvalho](#)
- 55 Some results on control theory for problems in fluid dynamics**
by [Susana Gomes](#)
- 66 Atlantic Conference in Nonlinear PDEs Dispersive and Elliptic Equations and Systems**
Report by [Simão Correia](#), [Hugo Tavares](#), [James Kennedy](#) and [Gianmaria Verzini](#)
- 68 ENUMATH 2023**
Report by [Adélia Sequeira](#) and [Ana Silvestre](#)
- 70 3rd Women in Mathematics Meeting**
Report by [Sílvia Barbeiro](#) and [Susana Moura](#)

Editorial

In this issue of the bulletin, we pay a heartfelt tribute to Isabel Figueiredo, who passed away last September. Isabel was the President of CIM and a distinguished professor from the department of Mathematics of the University of Coimbra, but, more importantly, she was a dear friend, and we will miss her and her constant good mood. We have invited João Filipe Queiró to write a brief testimony honouring Isabel and her career.

We publish four scientific papers in different areas including Number Theory, Analysis, Geometry and Statistics. Namely, we present an article about Diophantine equations, one about control theory applied to fluid dynamics, one about geometry on surfaces and Higgs bundles and another one linking Bayesian analysis and Hilbert spaces.

Inserted in the cycle of historical articles, we feature an article dedicated to the work of Francisco de Melo and its applications to optics.

We publish two interviews. We interviewed Richard Davis who was the distinguished mathematician invited to deliver this year's Pedro Nunes' lecture, which is an emblematic initiative of CIM with the support of SPM. We also include an interview to Bruno Loff, who was awarded with a European Research Council starting grant in Computer Science.

We also count with several summaries and reports of some of the activities partially supported by CIM.

We recall that the bulletin continues to welcome the submission of review, feature, outreach and research articles in Mathematics and its applications.

Ana Cristina Moreira Freitas

Faculdade de Economia and
Centro de Matemática da Universidade do Porto
<https://www.fep.up.pt/docentes/amoreira/>