

Three Nonlinear Days in Coimbra: a CAMGSD-CMUC Workshop in Nonlinear Analysis

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Between the 13 and 15 of July 2022, the event entitled *Three Nonlinear Days in Coimbra: a CAMGSD-CMUC Workshop in nonlinear Analysis* took place at the University of Coimbra. Jointly organised by the *Centre for Mathematics at the University of Coimbra* (CMUC) and the *Centre for Mathematical Analysis, Geometry and Dynamical Systems* (CAMGSD-IST), the workshop gathered international specialists working in the fields of nonlinear analysis, variational problems and methods, regularity theory for elliptic equations, free boundary problems, and other related topics.

The structure of the event comprised two mini-courses and nine plenary talks. The list of plenary speakers included **Isabeau Birindelli** (Rome), **Denis Bonheure** (Brussels), **Jean-Baptiste Casteras** (Lisbon), **Simão Correia** (Lisbon), **Cristina De Filippis** (Parma),

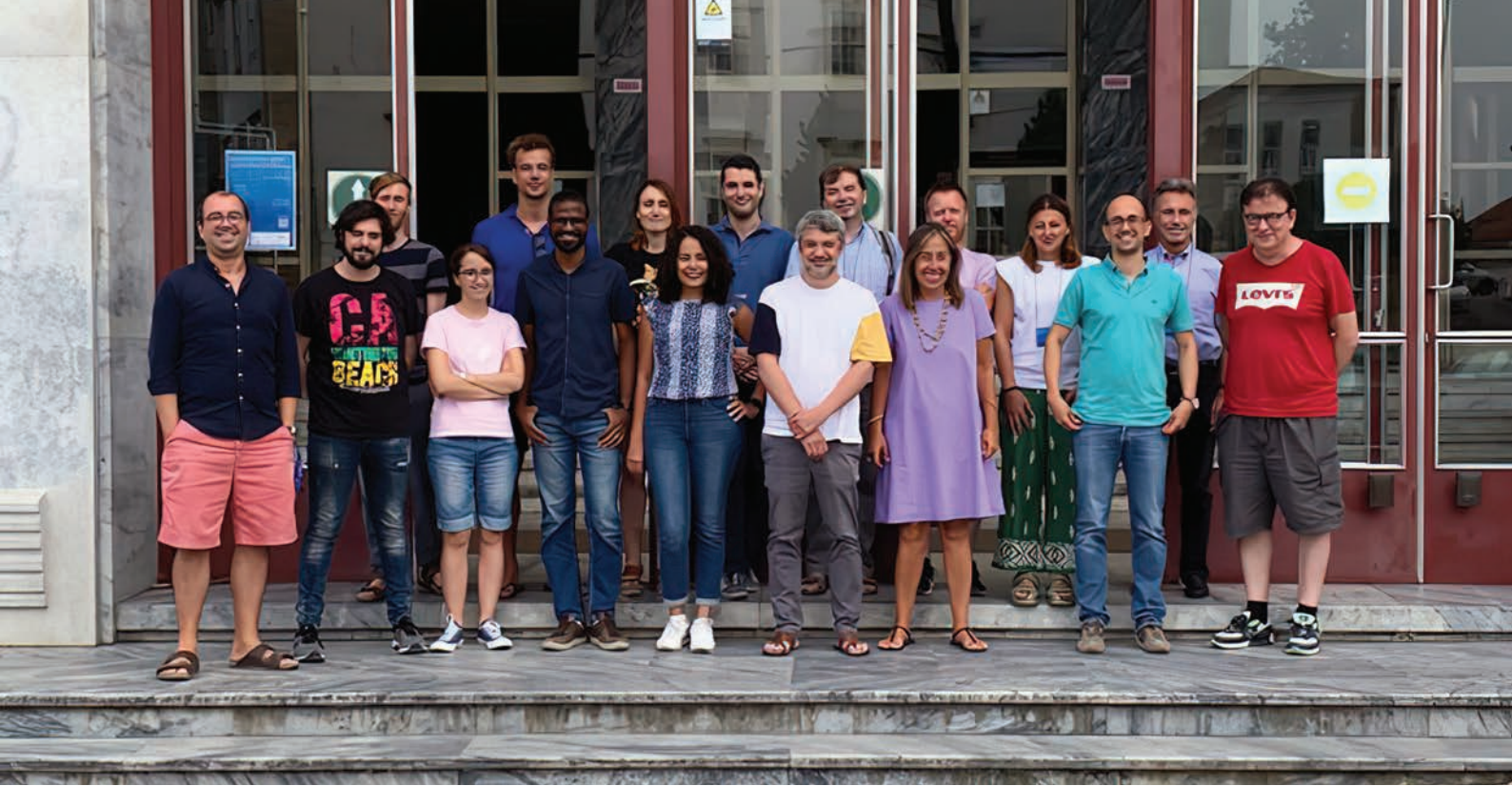
Manuel del Pino (Bath), **Jean Dolbeault** (Paris), **Fabiana Leoni** (Rome), and **Gianmaria Verzini** (Milan).

The material presented in those talks provided the audience with an in-depth and in-breadth account of recent results in the field. Showcasing important advances and newly developed techniques, this part of the scientific program equipped the participants with a general perspective on trendy, further directions of research yet to be pursued.

As concerns the mini-courses, there were lectures by **Jose Carrillo** (Oxford), on the topic of *nonlocal aggregation-diffusion equations*, and by **Yannick Sire** (Johns Hopkins U.), on *harmonic maps*. We highlight that both lines of research are still very incipient within the Portuguese mathematical community. As a consequence, those mini-courses presented an important opportunity

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for advanced students and young researchers to get acquainted with beautiful, and mathematically very challenging classes of problems.

A series of contributed talks completed the program. In addition to being a space of scientific interaction, this part of the workshop also succeeded in giving young researchers the opportunity to talk about their work. It reinforces the systematic concern of the organisation with creating training opportunities for new graduates in the context of the local community. The list of

contributed speakers included **Makson Santos** (Lisbon), **Delia Schiera** (Lisbon), **Rafayel Teymurazyan** (Coimbra) and **David Jesus** (Coimbra).

The event also offered an opportunity for long-term collaborators to catch up with their research agendas. We also expect new collaborations to arise from the several discussions taking place in the workshop environment. In particular, we highlight the networking opportunities, created mostly by young researchers and advanced students.

