



## **International Congress on Industrial and Applied Mathematics will bring together 4,000 mathematicians in Valencia next July**

- **The most important contributions of mathematics to the current and future technological developments, including computation, aeronautics, medicine, environment, robotics and intelligent systems, will be showcased at ICIAM.**
- **The Scientific Board, headed by Alfio Quarteroni, has selected over 30 internationally renowned speakers who will show the results of their research in relation to the most relevant areas of the current technological landscape.**
- **The congress, which is celebrated every four years, is the most important globally in applied mathematics. After an international selection process that took into account the high quality of applied mathematics in Spain, this 9th edition will be held in the chosen Spanish city; Valencia.**

**Valencia, 20th June, 2019.-** The current digital and interconnected era is transforming every aspect of our lives, from the macroeconomy to daily habits. The power of mathematics makes all this possible. Mathematics is allowing and facilitating the improvement of industrial processes, cancer diagnosis, energy saving, and - of course – the development of intelligent systems. Applied mathematics in these fields amongst many others will be presented in the International Congress on Industrial and Applied Mathematics (ICIAM) which is being celebrated this year, from the 15th to 19th July, in Valencia. The ICIAM is the biggest international conference in this field. It takes place every 4 years and this is the first time it will be happening in Spain. 4,000 researchers from every corner of the world will verse about the mathematical bases of technologies of the future.

In the last decade, applied mathematicians have evolved from being a part of a scientific community – the mathematical one - with little social visibility, to being in the spotlight. María Jesús Esteban, president of the International Council on Industrial and Applied Mathematics (ICIAM), refers to this as "an explosion". "The business and industrial sectors demand increasingly more and more developments in applied mathematics", Esteban says, who is The Research Director at CNRS (Paris, France). "The more innovative the company is, the more mathematics it needs".

The latest studies on the impact of mathematics in the economy in different countries have predicted that the fields that will have most growth will be those with more mathematical activity - software, financial activities, telecommunication services -. Last April in Spain, Red Estratégica en Matemáticas (Strategic Network in Mathematics) reported that, although not so visible as in other neighbouring countries, mathematics has also started to infiltrate into the Spanish production sector, meaning a 10.1% of the Spanish GDP. This presence in the production sector has not stopped growing, as confirmed by the ICIAM 2019.

The ICIAM Council is an association of mathematical societies from all around the world which promotes applied and industrial mathematics on a global scale, and coordinates the periodic organization of ICIAM congresses. The location for each ICIAM congress is chosen by the ICIAM Council through a competitive process. The candidacy presented by the Spanish Society of Applied Mathematics (SEMA) to organize the IX edition in 2019 in Valencia was selected by the Executive Board of ICIAM in Beijing (China) in 2013.

According to Tomás Chacón, professor at the University of Seville (Spain) and president of the ICIAM2019 Organizing Committee, "mathematics is silently changing the current technological landscape: it not only drives scientific knowledge, but it also has the capacity to generate added value in all sectors it is applied to".

"The preparation of the Congress has been very complex, but we have had the help of most of the research groups from all over Spain. We are ready to make this 9th congress a success," says Rosa Donat, professor at the University of Valencia and member of the local Organizing Committee.

### **Areas of greatest mathematical expansion**

ICIAM2019 will host 4,000 mathematicians from almost a hundred countries at the Blasco Ibáñez Campus of the University of Valencia. The programme includes around thirty invited speakers, who were selected by an international scientific committee chaired by the Italian Alfio Quarteroni,

director of the Chair of Modelling and Computing at the Federal Polytechnic University of Lausanne (EPFL) in Switzerland and scientific director at the Scientific Modelling and Computing Laboratory (MOX) of the Milan Polytechnic (Italy). Quarteroni directs the European project iHEART which works to simulate the human heart, and amongst his achievements can be found the design of the Swiss sailboat Alinghi that won the America's Cup in 2003 and 2007.

Invited speakers will present papers in areas in which mathematics has traditionally had a great impact, such as computing, cryptography or aeronautics, but also in other more recently *conquered* areas: medicine and life sciences; group behavior modeling (with a social focus); artificial intelligence and machine learning; and climate and environment change, amongst others.

**Para más información:**

<https://iciam2019.org/>

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