

KNOTS IN HELLAS 2016: Exploring the world of advanced mathematics

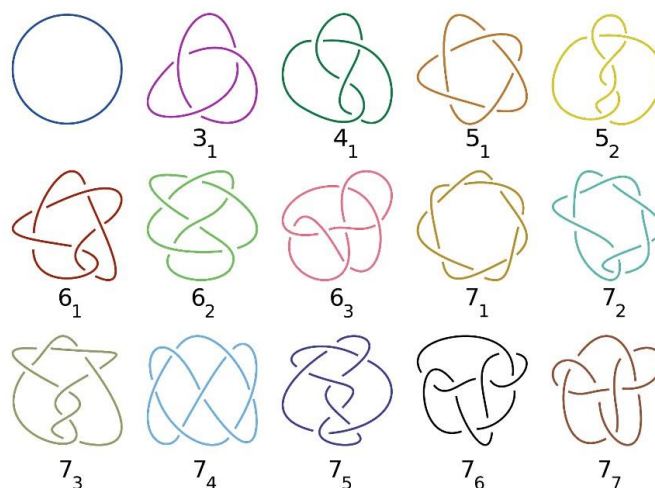
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After 18 long years, in the majestic surroundings of Ancient Olympia and more precisely the premises of the International Olympic Academy, one of the biggest international conferences of top mathematicians was organized under the title “Knots in Hellas 2016”. From 17 to 23 July 2016, 140 leading mathematicians and PhD students from some of the world’s best universities presented their research projects, focusing upon the complex world of mathematical knots. Under the aegis of the Greek Ministry of Education and the Greek Ministry of Culture, with the support of the European Mathematical Society, the National Science Foundation (NSF) of the USA, the Municipality of Ancient Olympia, the Municipality of Zacharo, of the EBPA (Athens Chamber of Commerce and Industry) and other prominent sponsors, the National Technical University of Athens, with the unreserved help of the Greek Mathematical Society and the Western Region of Greece, brought together some of the best scientists in the world, among whom were many Greeks, in order for them to associate with their fellow scientists and share interesting opinions and new ideas regarding the “Theory of Knots, Low-Dimensional Topology and Applications”.

The Conference programme featured lectures from top researcher from the fields of mathematics, physics and molecular biology, sessions containing top research papers as well as scientific posters presentations. In total, 94 research papers were presented, covering a wide range of scientific fields relating to the Theory of Knots and Low-Dimensional Topology and giving emphasis, beyond the theoretical scientific areas, to their significant applications in other sciences such as Physics, Chemistry, Biology and Medicine. Specifically, the Conference focused on invariants of knots and links, braid groups, topology of quantum field theory, 3- and 4- manifolds, topological surgery, physical knots and their applications relating to fluid flows, astrophysics, polymers and biophysics, the mechanism of DNA and the structure and function of proteins, etc.

Prominent figures like Professor V.F.R. Jones, of Vanderbilt University USA, who was awarded the 1989 Fields medal (the equivalent of the Nobel for Mathematics), Professor L.H. Kauffman of University of Illinois at Chicago (author of “Knots and Physics”), Professor C. Adams of Williams College in USA (author of “Zombies and Calculus”), Professor S. Lambropoulou of the NTUA with her Greek students, who are excelling in foreign universities, Professor K. Millett of the University of California, Santa Barbara, as

well as a large number of eminent scientists demonstrated yet again that outward-looking attitudes in mathematics and those involved in this field promote knowledge and science in areas relating to the improvement of human life.

In addition, participants had the opportunity to gain direct knowledge of the history of the Ancient Olympic Games by visiting the archeological site and the town's museum, while they were also initiated into Greek hospitality at a celebratory gathering provided by the organizers, featuring Greek dishes and traditional Greek music. In this most glorified and sacred place of Ancient Greece, at a symbolic ceremony, leading scientists were honoured for the great importance of their work. The ancient and modern worlds stood side by side, something that was extended also to the social gatherings of the participants through daily theatrical activities on mathematical topics under Professor C. Adams' direction.

Underlining its superior scientific quality, new interdisciplinary collaborations and, most importantly, new avenues of research were highlighted during the conference. In the shadow of the Kronion Hill, where in ancient times the most momentous celebration of the Greeks used to take place, scientists from all corners of the earth had the chance to organize their own celebration, offering the much-needed knowledge and pioneering material for a progressive and developed society. The praise received by the team of organizers was indisputable proof of the effort made on the part of the scientific Greek community to promote research and know-how in order for the high level of this excellent collaboration to be widened and for Greece to stand out as an international coordinating hub of education, pioneering applications and dissemination of culture.

For further details, you may visit the Conference's website: <http://www.math.ntua.gr/~sofia/KnotsinHellas2016>

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