TIMES OF OMAN

Top global mathematicians to participate in SQU meet

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BARKA: Professors of the Department of Mathematics and Science of the German University of Technology in Oman (GUtech) will participate in the upcoming 'Third International Conference on Numerical Analysis and Optimisation' to be held from January 5 to 9, 2014 at the Sultan Qaboos University (SQU).

The conference is being organised by the Department of Mathematics and Statistics of the College of Science at the SQU and will bring together internationally recognised scholars.

The conference is open to anyone interested in the field of applied mathematics, in particular students and teachers of mathematics.

"We are looking forward to this third conference and are expecting a large number of participants from the academia and from various private sector platforms that are in need of effective and efficient mathematical algorithms," said the head of the organising committee, Prof Dr Mehiddin Al Baali.

"We will have speakers from the UK, Japan, Italy, Canada, Germany, China, New Zealand, the USA and Belgium, all highly ranked scientists in the field of numerical analysis," specified Prof Bernhard Heim, Dean of the Faculty of Science at GUtech and member of the conference's organising committee. After the success of the previous International Mathematics Conferences in Muscat, we are organising this conference in cooperation with a number of colleges and universities in Oman, the UAE and Italy," explained Prof Bernhard Heim.

Numerical mathematics and optimisation are the cornerstones of all industrial endeavours — for example while planning vaccination strategies, exploiting oil fields or deciding about exact strategies to land a human being on the moon.

From the GUtech, a majority of the faculty of mathematics will participate and give presentations ranging from approximation theory to stochastic dynamical systems. Prof. Dr Elena Berdysheva will give a presentation on 'Bernstein Basis Polynomials and their Applications'.

Introduced in 1913 by the Russian mathematician Sergey Bernstein in the frame of theoretical approximation theory, Bernstein basis polynomials are today of particular importance in applied areas as well, like statistics, machine learning, and computer graphics.

Prof. Florian Rupp's presentation will be about 'Numerical Analysis and Simulation of Random Partial Differential Equations with Boundary Excitations.'

"The research in the field of a mathematical treatment of random effects, as they occur in nature, is still in its beginning, we have good approximations, but real noise is still hard to analyse.

"Thus, it is quite satisfying to these types of random perturbations under control for the most prominent physical applications, like wind or earthquake induced shaking of buildings and bridges or deformations due to random stress and shear forces," mentioned Prof. Rupp.

He will present his recent results on improving student learning in science, including the key drivers for student's success in mathematics as taught in the schools in the Sultanate of Oman.