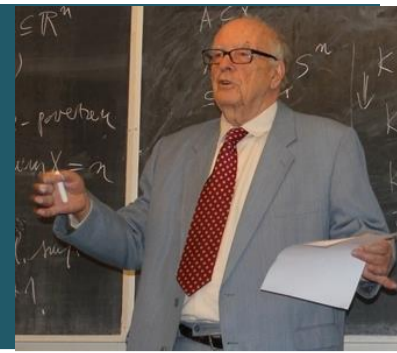




Kolokvij Matematičkog odsjeka "Sibe Mardešić"



Endre Süli is Professor of Numerical Analysis in the Mathematical Institute, University of Oxford, Fellow and Tutor in Mathematics at Worcester College, Oxford and Chair of the Faculty of Mathematics at the University of Oxford (2018--).

He was educated at the University of Belgrade and at St Catherine's College, Oxford.

His research is concerned with the mathematical analysis of numerical algorithms for nonlinear partial differential equations.

Endre Süli is a Foreign Member of the Serbian Academy of Sciences and Arts (2009), Fellow of the European Academy of Sciences (2010), Fellow of the Society for Industrial and Applied Mathematics (SIAM, 2016) and Fellow of the Institute of Mathematics and its Applications (FIMA, 2007).

Other honours include: Charlemagne Distinguished Lecture (2011), IMA Service Award (2011), Professor Hospitus Universitatis Carolinae Pragensis, (2012--), Distinguished Visiting Chair Professor Shanghai Jiao Tong University (2013--), President, SIAM UK and RI Section (2013–2015), London Mathematical Society/New Zealand Mathematical Society Forder Lecturer (2015), Aziz Lecture (2015), BIMOS Distinguished Lecture (2016), John von Neumann Lecture (2016). He was invited speaker at the International Congress of Mathematicians in Madrid in 2006, and was Chair of the Society for the Foundations of Computational Mathematics (2002–2005).

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GALERKIN METHODS IN THE 21ST CENTURY

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ABSTRACT

The mathematical analysis of numerical methods for partial differential equations (PDEs) is a rich and active field of modern applied mathematics. The steady growth of the subject is stimulated by ever-increasing demands from the natural sciences, engineering and economics to provide accurate and reliable approximations to mathematical models involving PDEs whose exact solutions are either too complicated to determine in closed form or, in many cases, are not known to exist. While the history of numerical solution of ordinary differential equations is firmly rooted in 18th and 19th century mathematics, the mathematical foundations of the field of numerical solution of PDEs are much more recent: they were first formulated in a landmark paper Richard Courant, Karl Friedrichs, and Hans Lewy published in 1928. The aim of the lecture is to survey recent developments in the area of numerical analysis of partial differential equations, focusing in particular on discontinuous Galerkin finite element methods, whose mathematical analysis has been an area of active research during the past decade