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Prof. Miloslav Feistauer seventy-fifth birthday celebration

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# PROF. MILOSLAV FEISTAUER SEVENTY-FIFTH BIRTHDAY CELEBRATION

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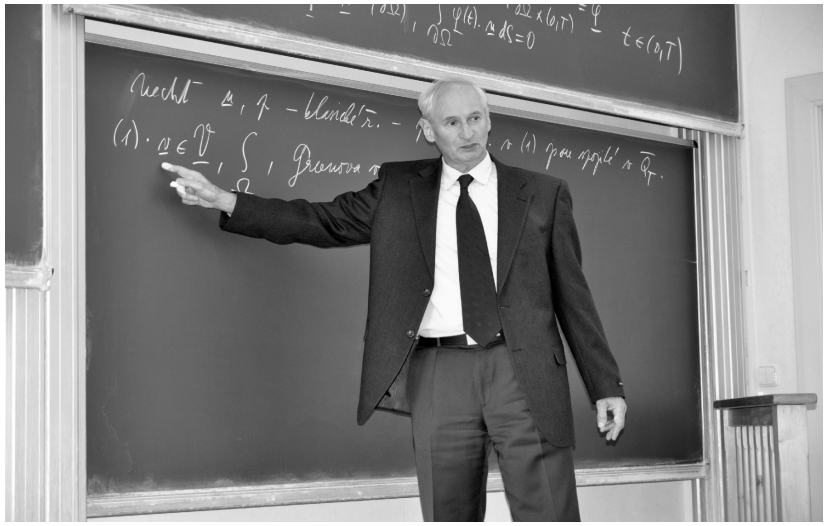
Prof. Dr. Miloslav Feistauer, DrSc., Dr.h.c., professor of mathematics at Charles University, Prague, celebrated his seventy-fifth birthday on February 8, 2018. He was born in Náchod into a family of teachers. From his early age he was interested



in mathematics and physics, and also devoted himself to music. His dream was also to become a constructor of Gothic cathedrals. Nevertheless, after eleven years at elementary and high school, in 1960 he decided to study at the Faculty of Mathematics and Physics, Charles University. There he has spent all his professional life. After graduating in Applied Mathematics in 1965, he joined the Department of Applied Mathematics. Three years later he was appointed lecturer and in the next year received the degree of Doctor of Natural Sciences (RNDr.). In 1972 he defended the scientific degree of Candidate of Sciences (Ph.D.) and in 1982 took a habilitation in mathematics. However, since Prof. Feistauer had never been politically active, his

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appointment to the position of associate professor was held up till 1988. In 1990 he was granted the degree of Doctor of Sciences (DrSc.) and shortly thereafter in 1991 was appointed full professor of mathematics in the field of approximate and numerical methods. In this position he has worked up to now. In the period of 1986–1994 he worked at the Mathematical Institute of Charles University, where he cooperated with Prof. Jindřich Nečas in the area of partial differential equations. In 1994 he gained the post of the head of the Department of Numerical Mathematics at Charles University. In this position he served till 2006.

Professionally, Prof. Feistauer has been dealing with the development and analysis of numerical methods for solving partial differential equations. In 1987–1988 he published together with Prof. Alexander Ženíšek (Technical University, Brno) two papers on the numerical solution of second order nonlinear elliptic problems using the finite element methods in the prestigious journal Numerische Mathematik. In both the papers they investigate the influence of numerical integration and approximation of curved boundaries (the so-called variational crimes) on the error of the resulting approximate solution. This pioneering work was highly recognized by the finite element community. Since early nineties, Prof. Feistauer together with his colleagues worked on the development and analysis of modern efficient methods for solving Euler and Navier-Stokes equations describing compressible flow and nonlinear convection-diffusion problems. In addition, he focused on the theory of finite volume methods and some problems in the field of nonlinear partial differential equations. During the last years, Prof. Feistauer has significantly contributed to the theory and applications of the discontinuous Galerkin method, which combines the advantages of finite volume and finite element techniques. The results of Prof. Feistauer were used in industry, thanks to long-term cooperation with Škoda Plzeň in the development of steam turbines. An attractive research area of Prof. Feistauer has been the interaction of flowing fluid and elastic structures, which has many important applications. For example, we can mention the simulation of air flow in the human vocal chords. In this field he cooperates with colleagues from the Institute of Thermomechanics of the Czech Academy of Sciences. Thanks to his results Prof. Feistauer gained the reputation of a world-renowned expert. He is the author or co-author of 91 publications in journals and more than hundred of professional and scientific papers published in the proceedings of international conferences. In 1993 he published his extensive monograph "Mathematical Methods in Fluid Dynamics" (Longman Scientific & Technical, Harlow). In 2003 he published his second monograph "Mathematical and Computational Methods for Compressible Flow" (Oxford University Press, written with two co-authors). Finally, in 2015, his third monograph "Discontinuous Galerkin Method—Analysis and Applications to Compressible Flow" (with one co-author) was published at Springer-Verlag.

Prof. Feistauer presented talks at more than 180 conferences (including 64 invited plenary lectures) and delivered 150 lectures at universities abroad. He presented papers at 15 conferences at the Mathematical Institute in Oberwolfach. He also served as visiting professor at universities in Germany, France, Austria and the United States. He was the initiator and main organizer of the conferences NMICM (Numerical Modelling in Continuum Mechanics), held in Prague. He was member of program and scientific committees of many international conferences. Since 1997 he has been member of the program committee of major international conferences ENUMATH devoted to numerical mathematics, regularly organized every two years in European cities.

Teaching activities of Prof. Feistauer are in accord with his successful research activities. In addition to courses on numerical mathematics he presents lectures on mathematical methods in fluid mechanics and mathematical modelling and supervises seminars on continuum mechanics and numerical mathematics. He has significantly contributed to the development of numerical analysis and mathematical modelling at the Faculty of Mathematics and Physics of Charles University. His lectures are highly evaluated by students. Prof. Feistauer was the supervisor of 18 students who successfully defended their Ph.D. or CSc. thesis and he supervised 46 master thesis. Many of his students were awarded in various national and international competitions. Many of his former students became prominent experts, associate professors and full professors at universities in the Czech Republic and abroad, where they continue his work and fulfil his aims and objectives.

In the years 1994–2012 Prof. Feistauer was member of the Scientific Council of the Faculty of Mathematics and Physics of Charles University. He has worked in various committees and bodies of the faculty, but also beyond. He is member of a committee for doctoral studies at Charles University, he was member of the Scientific Council of the Faculty of Mechanical Engineering at the Czech Technical University in Prague and of the Scientific Council of the Faculty of Chemical Engineering at the University of Chemistry and Technology in Prague, and for many years he worked in an advisory commission of the Grant Agency of the Czech Republic. He has been member of numerous scientific societies (GAMM, ISIMM, AMS, EUROMECH, ECMI and others) and member of the editorial boards of five international journals, in particular, in Applications of Mathematics since 1993. His research and teaching activities were awarded by the medal of the Faculty of Mathematics and Physics of Charles University and by the silver medal of Charles University. In 2004 he was elected member of the Learned Society of the Czech Republic. In the same year he was awarded the Prize for Research of the Minister of Education, Youth and Sports of Czech Republic. In 2006 Prof. Feistauer was awarded the title of Honorary Doctor of the Technical University of Dresden. In 2017 he was elected member of

the Academic Senate of the Faculty of Mathematics and Physics of Charles University.

Although there is no doubt that the substance of life of Prof. Feistauer is his scientific work, he has also many hobbies. His great love is music, and he plays violin and composes music. Since there are many mathematicians with a similar love for music, Prof. Feistauer has occasionally played with them, whether at school, for example, or at some mathematical conferences. He also likes to paint pictures, especially countryside sceneries near his cottage in Pavličky.

For 47 years Prof. Feistauer has been married to his wife Jaroslava, also a mathematician, and they have two daughters and five grandchildren. His daughter Jana graduated from the University of Economics in Prague, his other daughter Petra studied music at the Conservatory (Musical High School) and Charles University and is now a professional viola player.

Prof. Feistauer is undoubtedly one of the most outstanding personalities of Czech mathematics. We join his friends, colleagues and students who sincerely congratulate him on his important anniversary and wish him good health and, above all, the joy of creative work and many more years of active work at the Faculty of Mathematics and Physics of Charles University.

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