

Professor Kemal Hanjalić, PhD, DSc, Dr.h.c.

FANUBiH, (Int)FREng, (Int)FRAS, FIAS, FASME, FInstP, FICHMT,
Emeritus Professor, Faculty of Mechanical Engineering, Univ. of Sarajevo, BIH
Emeritus Professor, Faculty of Applied Sciences, Delft Univ. of Technology, NL.

EDUCATION

1970 Ph.D. (Fluid Mechanics) Imperial College of Science and Technology, Univ. London, UK
1966 M.Sc. (Thermodynamics and Related Studies) Univ. Birmingham, UK
1964 Dipl. Ing. (Mechanical Engineering - Energy Engineering) Univ. Sarajevo, Yugoslavia

PROFESSIONAL APPOINTMENTS / EMPLOYMENT

Academic/Research positions

2011-16 Lead Scientist, Novosibirsk State University/ Institute of Thermophysics SB RAS, Russian Fed.
2007-10 Marie Curie Chair holder, Dept. of Mechanics and Aeronautics, Sapienza Univ. of Rome, Italy
2005-06 DAAD Guest Professor, Darmstadt University of Technology, Germany
1994-05 Professor and Head of Thermo-Fluids Section, Faculty of Applied Sciences, Delft University of Technology, Delft, The Netherlands
1993-94 Professor, Mechanical Eng. Dept., Michigan Technological University, Houghton, Mi, USA Guest Professor of the German Research Association (DFG/Humboldt Foundation), Friedrich- Alexander Univ. Erlangen-Nuremberg, Germany
1979-91 Professor of Fluid Mechanics and Turbomachinery, Faculty of Mech. Eng. Univ. of Sarajevo, YU
1964-79 Assistant / Lecturer/ Assoc. Professor, Faculty of Mech. Eng. Univ. of Sarajevo, Yugoslavia
1964-79 Research Assistant/ Research Fellow, Institute for Thermal and Nuclear Engineering, Energoinvest Co, Sarajevo, Yugoslavia.

Administrative positions

1987-91 Cabinet Minister (Science and Technology) in the Government of Bosnia and Herzegovina, YU
1985-87 Mayor of Sarajevo, Bosnia and Herzegovina, YU
1984-85 Dean of the Faculty of Mechanical Engineering, University of Sarajevo, YU
1980-84 Director, Institute for Process- Power and Environmental Engineering, Univ. of Sarajevo, YU
1975-78 Head of Department, Faculty of Mechanical Engineering, University of Sarajevo, YU

HONOURS AND AWARDS (selected)

- Royal Decoration of the Netherlands "Officer of the Order of Oranje-Nassau", 2010
- State Decoration of Finland "Commander 1st Class, Order of Lion of Finland", 1987

- (Foreign) Fellow of the Russian Academy of Science (RAS), Russian Federation, 2019
- Fellow of the World Islamic Academy of Science, FIAS, Amman, Jordan, 2006
- (International) Fellow of the Royal Academy of Engineering, (Int)FREng, UK, 2005

- (Fellow) of the Academy of Sciences and Arts of Bosnia and Herzegovina (corresponding member from 1981, full member (Fellow) from 1987)
- Fellow of International Centre for Heat and Mass Transfer, FICHMT, 2006
- Fellow of the American Society of Mechanical Engineers, FASME, USA, 2006
- Fellow of the Institute of Physics, FInstP, UK, 1999

- Dr. h.c. (Doctor honoris causa), International Burch University, Sarajevo, Bosnia & Herzegovina, 2018
- Dr. h.c. (Doctor honoris causa), University or Reims, Ardenne and Champagne, France, 2009
- D. Sc. (Eng), University of London (higher doctorate "*for published work of a high standard containing original contributions to the advancement of knowledge and learning which has given the candidate distinction in his field of study*"), London, UK, 1998

- AIAA Energy Systems Award (American Institute for Aeronautics and Astronautics) "for *his pioneering and outstanding contribution to the modelling of turbulent flows, heat, mass transfer, and its application for the advancement of energy and process technologies"*, USA, 2026
- City of Sarajevo Award "The 6th April" for societal and scientific achievements, Sarajevo, Ba, 2023
- Nusselt-Reynolds Prize (The Assembly of World Conferences on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics) "*for his outstanding contributions to the modelling of turbulent fluid flow and heat transfer, which constitute the cornerstone of the computational fluid dynamics (CFD), and for devising smart experiments to support his arguments and validate the models*", 2021
- Max-Plank Research Prize (A. von Humboldt Stiftung – Max-Plank-Gesellschaft) "*for achievements in turbulence research*" (with F. Durst), Germany, 1992
- The State Award "July the 27" of Bosnia and Herzegovina, YU, 1989
- Veselin Masleša Award "*for scientific achievements"*, Bosnia and Herzegovina, YU 1973

- Luikov Medal (*"for outstanding contributions to the science and art of Heat and Mass Transfer and for activities in international scientific cooperation"*), ICHMT, 2020
- Crystal Space Shuttle Award, Aerospace Engineering Department, Texas A&M University, USA, 2007

VISITING POSTS (Researcher / Fellow / Professor, by invitation)

- Plumer Visiting Research Fellow of St Anne's College/Osney Thermo-fluids Lab., Oxford Univ., UK, 2017
- Marie-Curie Mobility Programme, AGH University, Krakow, Poland, 2006/07
- Distinguished Academic Visitors Programme, Data Storage Institute, Singapore, 2006
- National University of Singapore – Institute for Mathematical Sciences (2004)
- University of Rome "La Sapienza", Italy, 2003
- Imperial College of Science, Technology and Medicine, Aeronautics Dept. Univ. London, UK, 2001, 2002
- Distinguished Lecturer, Ohio Space Institute, Cleveland, Ohio USA, June 2000
- Chalmers University of Technology, Gothenburg, Sweden, 2000
- Cambridge University, Isaac Newton Inst. for Mathematical Sciences, UK, 1999
- Kyoto University Foundation, Kyoto University, Japan, 1996
- Institute for Computer Applications in Scie. and Engineering - ICASE/NASA Langley Res., USA, 1995
- Friedrich-Alexander University, Erlangen-Nuernberg, Germany, 1984, 1991-93
- University of California at Davis, USA, 1978, 1979, 1980
- Imperial College of Sci. and Techn., Mech. Eng. Dept., Univ. of London, UK, 1972, 1973, 1974

MEMBERSHIP AND FUNCTIONS IN PROFESSIONAL ORGANIZATIONS

- American Association of Mechanical Engineers (ASME, Fellow)
- American Physics Society (APS)
- International Association of Hydraulic Research (IAHR)
- European Research Community for Flow, Turbulence and Combustion (ERCOFTAC)
- Past member of the Scientific Programme Committee and of the Ind. Advisory Committee, ERCOFTAC
- Past Chairman of the ERCOFTAC Special Interest Group (SIG) for Turbulence Modelling
- Past Chairman of the IAHR Working Group on Refined Flow Modelling
- Past President (2015-2018), Vice-President and Chairman of the Executive Committee, Member of the Scientific Council, Int. Center for Heat Mass Transfer (ICHMT), Ankara, Turkey

OFFICIAL AND REPRESENTATIVE FUNCTIONS (selected)

- President of the Yugoslav Association of Republican Research Foundations, 'SIZ", 1987/89
- President of the Yugoslav Association of Towns and Communes, 1985/87
- Representative of Yugoslavia in the OECD Environmental Committee – Air Management Policy and
- Energy and Environment Groups, 1984-1991

JOURNAL EDITORSHIP

- Editor-in-Chief, Int. Journal "*Flow, Turbulence and Combustion*" (Kluwer/Springer) (2005-15)
- Member of the Editorial Advisory Board of the *Int. Journal of Heat and Fluid Flow* (Elsevier)
- Member, Editorial Advisory Board, *Journal of Turbulence*, Taylor and Francis
- Member, Advisory Board, *Int. Journal of Thermal Sciences* (Elsevier)
- Member, Honorary Editorial Advisory Board, *Int. J. Heat and Mass Transfer* (Pergamon/Springer)
- Member, Honorary Editorial Advisory Board, *Int. Communications in Heat and Mass Transfer* (Springer)
- Member, Editorial Board, *Int. J. of Fluid Dynamics* (Research India Publications)

ORGANIZER AND (CO-)CHAIRMAN OF INTERNATIONAL CONFERENCES AND WORKSHOPS (1987-2025)

- 20 international conferences (Sarajevo, Lisbon, Erlangen, Delft, Nagoya, Antalya, Dubrovnik, Rome, Palermo, Rio de Janeiro, Tokyo...).
- Member of Scientific and Advisory Committees of a number of international conferences

INVITED KEYNOTE, PANEL AND COURSE LECTURES AT INTERNATIONAL CONFERENCES, SUMMER SCHOOLS, COURSES, … (selected)

- Over 70 invited keynote and plenary lectures at international conferences and other events
- Over 80 invited seminar lectures worldwide
- Lectures series in short graduate/doctoral courses (Belgium, Germany, India, Italy, Japan, Kazakhstan, Netherlands, Poland, Russia, Singapore, UK, USA) among which (selected):
- Indian Institute of Technology, Gandhinagar, India, March 2018.
- Osney Thermo-Fluids Laboratory, University of Oxford, UK, April-May 2017
- ERCOFTAC industrial courses "Best Practice for Engineering CFD", CWI Amsterdam, Nl, 2013
- ERCOFTAC SIG15 on Turbulence Modelling, 15th Workshop, Oct 17-18,2011, Chateau, Paris, France

- Silesian University of Technology, Institute of Thermal Engineering, Gliwice, Poland 2011
- Politecnico di Milano, Italy, 2011
- Al-Farabi Kazakh National University, Almati, Kazakhstan 2010, 2011
- Summer school of Thermodynamics, lecture series, Rome 2009, Anzio 2010
- DSI (Data Storage Institute), Singapore, lecture series, October 2006.
- Von Karman Institute of Fluid Dynamic, Rhode Saint Genese, Belgium, 2004,2002,2000,1984
- National University of Singapore – Inst. for Mathematical Sciences, 2004
- Institute of Thermal Physics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, 2002
- Michigan State University, East Lansing, Michigan, USA, 2000
- University of Tokyo / JSME Thermal Engineering Division, Tokyo, Japan, 2000
- Course organizer and lecturer in the Int. Summer Academy (Sarajevo, BIH, 1997, Makarska, 1998, Pula, 1999 and Dubrovnik 2000, 2001, 2002, Croatia)
- Instructional Conference, Isaac Newton Institute of Mathematical Sciences/The Royal Academy of Engineering, Univ. of Cambridge, 1999
- Delft University of Technology – JM Burgers Centre (Biennial graduate/postdoctoral courses) 1995-2006
- Polish Academy of Science/ERCOFTAC Pilot Centre, Summer School, Chestohowa, Pl., 2001
- University of Erlangen, Germany, "Turbulenz", "NUMET", (biennial short courses), 1993-2008
- University of California at Davis, USA, 1978, 1980

TEACHING AND STUDENT GUIDANCE

Universities in Sarajevo, Banja Luka, Zenica (Ba), Zagreb (Croatia), Novi Sad (Serbia), Podgorica (MNE/CG), Erlangen (DE), Michigan Tech. Univ. (USA), Delft Univ. of Technology (NL), Darmstadt Univ. of Technology (DE), Sapienza University of Rome (Italy), Novosibirsk State University/Institute of Thermophilus SB RAS.

Undergraduate courses: Fluid Mechanics, Thermodynamics, Gas Dynamics, Transport Phenomena, Thermal Turbomachinery

Graduate courses: Advanced courses in Fluid Dynamics, Gas Dynamics, Transport Phenomena, Turbulence and its Modeling and Simulation,

*Theses supervision: close to 4*0 Ph.D, around 50 M.Sc. and Dipl.-Ing., over 30 postdocs and research visitors.

PUBLICATIONS

- Number of papers in the international peer-reviewed journals: ~280
- Number of papers in referred books and conference proceedings: ~300
- Books: (co-) authored 5 books, edited 20 volumes / monographs, published by Cambridge Univ. Press, Springer, Taylor & Francis, Hemisphere Publ. Corp., Begell House Publ., VSND (NL), Svjetlost, TKD Šahinpašić (BIH).

World ranking: Listed (and ranked in the top quarter) in the Elsevier BN/Stanford Univ. 2% of the world most influential scientists.

PATENTS AND INDUSTRIAL CONSULTING

Patents on detonation wave technique for on-line cleaning of gas-side surfaces in steam boilers fired by fossil fuels (with I. Smajevic) (Belgrade, Yugoslavia, 1989)

Consulting with industry in Europe, the USA, Singapore.