Curriculum Vitae

Professor Dimitris Drikakis, PhD, FRAeS, CEng, SMAIAA

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PROFESSIONAL EXPERIENCE [*]			
2025 - 2018 – to date	 Dean, School of Sciences & Engineering Vice President of Global Partnerships Executive Director, Research & Innovation Professor, Medical Schools and Science & Engineering (cross-appointment) 	University of Nicosia, Cyprus	
2015 - 2017 2017 - 2018 2015 - 2018	 Executive Dean of the Faculty of Engineering Executive Director, Global University Partnerships (USA & Far East) Professor of Engineering Science 	University of Strathclyde, UK	
Other positions at 1 2017 - 2018 2016 - 2017	 the University of Strathclyde: Executive Director, Strathclyde Space Institute Associate Principal 		
2003 - 2015 2005 - 2010, & 2013 - 2015 2013 - 2015 2012 - 2013	 Professor of Fluid Mechanics and Computational Science Head, Aerospace Sciences Dept Director of Research (School of Aerospace, Transport & Manufacturing) Head, Department of Engineering Physics 	Cranfield University, UK	
2011 - 2012	Founding Director, Computation-based Science and Technology Research Centre	Cyprus Institute ¹ , Cyprus	
2001 - 2003 1999 - 2001	 Professor of Fluid Mechanics Reader in Computational Fluid Dynamics 	Queen Mary, University of London, UK	
1995 - 1999	Lecturer in Mechanical Engineering	University of Manchester ² , UK	
1993 - 1995 1992 - 1993	 Team Leader, Computational Aerodynamics Group Research Scientist 	Friedrich–Alexander University of Erlangen-Nuremberg, Germany	
1988 - 1991	Research and Teaching Assistant adership and impact is provided on pages 3 to 8	National Technical University of Athens, Greece	
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¹ In partnership with NCSA (National Centre for Supercomputing Applications) of the University of Illinois at Urbana-Champaign

² University of Manchester Institute of Science and Technology (UMIST), which since 2003 is *The University of Manchester*.

MAJOR AWARDS

- 2008 2011 William Penney Fellowship by the UK's Atomic Establishment in recognition of my contribution to compressible turbulent flows. The award is offered to world-renowned subject matter experts in scientific or engineering fields.
- 2014 The NEF's **Innovator of the Year Award** by the UK's Institute of Innovation and Knowledge Exchange for a new generation carbon capture nanotechnology that uses carbon nanotubes for filtering out carbon dioxide and other gases.
- 2014 **Technical Achievement Award** at the International Conference on Mathematical Problems in Engineering, Aerospace and Sciences.

EDUCATION

1982 –1987	Diploma in Mechanical Engineering (Meng)
1988 –1991	PhD in Computational Fluid Dynamics

National Technical University of Athens (NTUA), Greece NTUA³

HONORARY & INVITED POSITIONS

2004 –	Honorary Professor	City University, London, UK
2003	Visiting Scholar	Isaac Newton Institute for Mathematical Sciences, University of Cambridge
2003	Honorary Professor	St Andrews Centre for Plastic Surgery and Burns Broomfield Hospital, UK
2000 - 2001	Visiting Professor	University of Marseille, France

³ Scientific Collaboration with Deutsche Aerospace formerly Messerschmitt-Bölkow-Blohm.

HIGHLIGHTS OF RESEARCH & SCHOLARSHIP IMPACT

I have been active in both fundamental and applied research for over 30 years in advanced computational modelling of fluids, acoustics, fluid/solid interfaces, nanotechnology, and emerging technologies, particularly in machine learning. My work has been key to resolving significant issues across various applied science and engineering problems. Evidence of research impact and scholarship includes:

- According to a team of researchers at Stanford University, Dimitris Drikakis has been included on 100,000 top scientists worldwide, the top 2% of scientists in their field. The updated 2024 list is based on a range of citation metrics that provides standardized data across those fields and subfields containing more than 8,000,000 scientists worldwide: Ioannidis, John P.A. (2024), "August 2024 data-update for "Updated science-wide author databases of standardized citation indicators"", Elsevier Data Repository, V7, doi: 10.17632/btchxktzyw.7
- According to Research.com has been ranked in the top 500 best scientists in Aerospace and Mechanical Engineering worldwide and the top scientist in this field in Cyprus.
- The article by Dbouk, D. Drikakis, On coughing and airborne droplet transmission to humans *Phys. Fluids* 32, 053310 (2020) received one of the highest Altmetric Score of all American Institute of Physics publications. The above article has started changing policies and guidelines regarding social distancing in a few countries. About this article, there were stories from 282 news outlets worldwide. My Special Issue on the Flow and the Virus published in the Physics of Fluids journal exceeded 2 million downloads (May 2020 to date)
- I completed the supervision of 45 PhD students and several MSc by Research students and mentored 21 post-doctoral fellows. All my former students now hold positions in academia and industries around the world.
- I published as a sole author, as well as jointly with my PhD students, post-doctoral researchers and industrial collaborators, **503 articles** (journal, conference papers, and book chapters), as well as two books; **h-index 53 (Scopus)** & **59 (Google Scholar)**.
- I attracted significant funding as a Principal Investigator or a Co-investigator from various sources, including EPSRC, European Union, Industry and Government. A list of past and current industrial collaborations is provided on page 10.
- I have been an Associate Editor in five international journals and a member of the editorial board of another 20 journals.

LEADERSHIP

1. The University of Nicosia, Cyprus (October 2018 -)

1.1 Vice President of Global Partnerships

I have been responsible for

- Coordinating the University's relations and partnerships with major research funding agencies and other bodies public and private consistent with the mission and strategies of the University.
- Developing partnerships with industry and other academic institutions, which can also lead to joint research and degree programs and other initiatives.
- My role is to provide leadership in respect of global partnerships and international relations for the five university's schools: Science and Engineering, Medical School, Humanities, and the Law School.

1.2 Executive Director of Research and Innovation

I have been responsible for

- Leading the University's Research and Innovation Office. My main goals have been to ensure the implementation of the University's research strategy and increase the probability of research funding success by coordinating the establishment of appropriate infrastructure. The above includes systems, processes and staff recruitment to support the University's Faculty in research.
- **Guiding academic staff** in respect of the preparation of research proposals. I also coordinate the Virtual Reality research activities of the University.
- **The University Rankings**: A significant part of executive director role concerns leading the University's efforts to enter and maintain a respectable position in the various University rankings, particularly
 - Times Higher Education,
 - QS Emerging Europe and Central Asia (EECA), and
 - Times Higher Education Impact Rankings.

Under my responsibility, the university entered the THES Rankings for the first time and moved to the band of 501-600 within 3 years.

2. University of Strathclyde (2015 - 2018)

2.1 Executive Dean (Engineering)

I was responsible for providing strategic leadership of the Faculty of Engineering that comprised eight academic departments and five industrial-scale research centres with a budget of £103 million; 850 staff (academic, administrative and research); and more than 5,500 students. I was responsible for ensuring that the Faculty maintains and develops its national and international profile, as well as for the efficient and effective management of the Faculty's resources in the provision of teaching, research, knowledge exchange and internationalisation activities. As an Executive Dean, I was a member of the University Executive and, as such, a member of the senior management team responsible for the development of the University Strategy.

I was responsible for the following academic departments:

- Design, Manufacture and Engineering Management
- Electronic and Electrical Engineering
- Mechanical and Aerospace Engineering
- o Architecture
- Biomedical Engineering
- o Chemical and Process Engineering
- Civil and Environmental Engineering
- Naval Architecture, Ocean and Marine Engineering

and University's Industrial Research Centres:

- Advanced Forming Research Centre
- Power Networks Demonstration Centre
- o Advanced Nuclear Research Centre
- Oil & Gas Institute, and
- Maritime and Safety Research Centre.

Key Responsibilities

- Provide the Faculty with clear academic leadership and strategic direction.
- Continue the growth of the Faculty's commercial and internationalisation activities with several universities and companies overseas in Europe, Asia-Pacific region, and the USA.
- Actively engage in external networks and public bodies, both national and international, to ensure the Faculty and the University are up-to-date and abreast with external opportunities and challenges and are in a position of significant influence in the sector.
- Continue to develop and raise the Faculty's and the University's national and international profile within academic, policy-making and industrial fora, with charities, trusts and foundations and with high-profile individuals.
- Oversee the further development of research and knowledge exchange activity in the Faculty.
- Lead on a cohesive and ambitious vision for the Faculty, which is aligned with the University's broader strategic vision, mission and values.
- Ensure the effective and efficient management of the Faculty's resources and finances to ensure the enhancement of the quality of the Faculty's teaching and learning, research and knowledge exchange.
- Participate effectively as a member of the senior management of the University and lead on specific university-wide projects as requested by the Vice Chancellor.

- Fully engage with staff and students of the Faculty through effective communication mechanisms.
- Provide an academic environment in which student learning can thrive, and the quality of the student experience can be enhanced.
- Represent the University's Values across the Faculty and university-wide to lead, develop and motivate Heads of Department and all Faculty staff.
- Through regular university-wide interaction, to actively identify and nurture academic and research talent internally retain it, and externally to attract it to the University.
- Control Faculty budgets and work closely with both the Chief Operating Officer and Chief Financial Officer to ensure that the Faculty planning processes and resources (financial, staffing, physical and IT infrastructure) are aligned with strategic objectives.
- Ensure that the teaching and professional activities of the areas of the Faculty are professionally met and in line with the internal and external quality assessment framework.
- Ensure compliance with the University's policies and procedures including Health and Safety at Work regulations, Equality and Diversity, Data Protection and other managerial responsibilities towards all staff and students.

2.2 Associate Principal

I was responsible for a University-wide portfolio aiming to support the growth and sustainability of the University across the four Faculties: Science, Engineering, Business, Humanities & Social Sciences, with specific objectives: i) to deliver tangible improvements in the University's financial performance, through international student recruitment and research income growth; and ii) create sufficient headroom for strategic investment over the medium to long term.

Other roles in Strathclyde (2017 - 2018)

2.3 Executive Director of Global University Partnerships (the USA and the Far East)

As an Executive Director of Global University Partnerships, I was responsible for the strategic university partnerships with major universities in the USA and the Far East. The portfolio included Stanford University, New York University, Caltech, Hong Kong University of Science and Technology, MIT, and Nanyang Technological University (Singapore). My role was to maintain and further develop Strathclyde's international profile through the above partnerships while providing support to the academics involved to build grant-winning, joint publications, and collaborative activities and events.

2.4 Executive Director of the Strathclyde Space Institute

The Strathclyde Space Institute (SSI) was a pan-university institute, involving the Engineering, Science, Humanities and the Business Faculties, aiming to deploy practical solutions, over a wide range of Technology Readiness Levels. I was responsible for coordinating the development of space science and engineering at Strathclyde and support the growth of the space sector in Scotland and the UK. The overall aim was to expand on long term strategic areas of research that require a cross-disciplinary approach bridging the gaps between science, engineering and societal changes.

2.5 Co- Director of the Robotics and Autonomous Systems Institute

My role as a Co-Director of the newly established Robotics and Autonomous Systems Institute was to provide an overall structure and strategic leadership through alignment of the Strathclyde University activities in the above sector. Furthermore, I offered a framework for teaching and training activities; promoted more efficient use of resources; maximised our national and international visibility in Robotics and Autonomous Systems. I was also

responsible for the engagement with our industry partners and funding bodies and promoted internal collaborative research leading to increased volume and quality of research outputs.

3. Cranfield University (2003 - 2015)

3.1 Head of Academic Departments (Aerospace, Engineering Physics)

My role was to provide strategic leadership in all the academic activities of the Department and manage staff and financial resources. I aimed to foster excellence in teaching and research; establish new educational programmes of study and research facilities. I represented and promoted the Department and Cranfield University externally, as well as facilitated the development of collaboration strategies and partnerships with industry and academia worldwide. Furthermore, I contributed to the management and development of the School as a member of the School's Executive and the University's Senior Management Team.

3.2 Director of Research (School of Aerospace Transport & Manufacturing)

My role was to provide input to the Research Strategy of the University. I was responsible for the leadership and management of the School's (Aerospace, Transport & Manufacturing) Research and Innovation. The School had an annual turnover of £45 million and a research budget of £17 million. My tasks included the provision of recommendations for regulations for the academic and administrative processes for the management of all research students of the School; coordination of the School's external research peer review exercises (for REF); coordination of the School's research initiatives (EPSRC and other national funding initiatives). I was also responsible for the activities of the Doctoral Training Centres, and I enhanced the quality of the research supervision and assessment, as well as disseminating best practices for ensuring an excellent research environment. I was a member of the School's Executive Management Team, the University's Senior Management Team and the University's Research Committee.

BOARDS, MAJOR COMMITTEES, DIRECTORSHIPS

2021 2021	Awards Committee MDPI Cyprus Construction Awards	MDPI Publisher
2013-2019	European Research Council	Deputy Chair (Engineering), Expert Panel
2020 -	Member of the Council, University of Nicosia	
2019-2022	International Academic and Industrial Advisory Council of the Cyprus Marine and Maritime Institute	Member of the Council
2019	European Development Program (Ministry of Citizen Protection, Greece)	Advisory Board
2018 -	Institute for the Future, Cyprus	Board of Directors
2016-2018	UK Oil & Gas Technology Centre	Academic Advisory Board
2004-2018	Osborne Reynolds Awards	Scientific Committee Member
2005-2015	AWE-Cranfield	Board of Management
2013-2016	European Aeronautics Science Network	Board of Directors & Scientific Advisor
2012-2017	European Commission	Expert Evaluator and Panel Member
2018	European Science Foundation	College of Expert Reviewers
2015	National Nuclear Security Administration, Department of Energy, USA	Expert Evaluator
2010-2013	American Institute of Aeronautics and Astronautics	Fluid Dynamics Technical Committee
2004-	Engineering and Physical Sciences Research Council	Peer-Review College
2015-2018	Specialist Gas Separation Ltd	Director

Membership on International Conference Committees is presented in Annex I.

FELLOWSHIPS, MEMBERSHIPS AND PROFESSIONAL SOCIETIES

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Fellow	Royal Aeronautical Society (RAeS)
Fellow	Institute of Nanotechnology (IoN) (2004-2015)
Senior Life Member	American Institute of Aeronautics and Astronautics (AIAA)
Life Member	American Physical Society
Member	American Society for Mechanical Engineers
Member	American Nano Society
Chartered Engineer	Engineering Council, UK
Business Fellow	London Technology Network (2000-2003)

SELECTIVE (PAST & PRESENT) COLLABORATIONS WITH INDUSTRY AND MAJOR **FUNDING BODIES⁴**

- **BAE Systems (UK)** •
- Atomic Weapons Establishment (UK)
- EPSRC
- Oil & Gas Institute. UK
- European Space Agency
- **GKN** AgustaWestland
- UK Atomic Energy Authority (UKAEA)
- MBDA
- Lockheed Martin
- Chemring Defence
- Airbus Defence and Space
- Jaguar Land Rover
- US Air Force (USAF)
- Commercial Aircraft Corporation of China
- German Aerospace Agency (DLR)
- Aircraft Research Association (UK) •
- NASA Ames
- Tendeka (Swellfix Ltd)
- Los Alamos National Lab
- Altus-LSA Commercial and Manufacturing SA

- **ITER** (France)
- **Reaction Engines** •
- SAFRAN Turbomeca
- Redring Xpelair Group •
- MagnaParva Ltd •
- UK Ministry of Defence •
- European Union (H2020)
- Los Alamos National Lab •
- BHR Ltd
- QualityPark AviationCenter GmbH
- **TEKEVER** Group
- **Xchanging Solutions**
- Eaton Aerospace
- Intracom Defence
- **Research Promotion Foundation** (Cyprus)
- Intrasfot International
- Grant Thornton Ltd
- Aditess Advanced Integrated **Technology Solutions and Services Ltd**

and several other companies and organisations through EU (H2020) projects

EVALUATOR, FUNDING BODIES

- Engineering and Physical Sciences National Research Fund (Qatar) Research Council (UK)
- European Commission (EU, FP7 & Leverhulme (UK) H2020)
- European Research Council
- Finnish Academy of Science
- Fund for Scientific Research (Belgium)
- Natural Sciences & Engineering La Caixa Foundation, Spain Research Council (Canada)
- National Council for R&D, Romania
- Nuffield Foundation (UK)
- Russian Science Foundation
- Department of Energy. Office of Science. USA

⁴ Collaborations in my capacity as University Professor.

EDITORSHIPS

The Aeronautical Journal Computers and Fluids Journal of Fluids Engineering

Journal of Computational and Theoretical Nanoscience Nanotechnology Reviews

Encyclopedia of Aerospace Engineering Associate Editor Associate Editor Associate Editor (2004-2014) Associate Editor

Associate Editor (2012-2013) Associate Editor Royal Aeronautical Society Elsevier American Society for Mechanical Engineers American Scientific Publishers De Gruyter

Wiley

EDITORIAL BOARDS

- Physics of Fluids (Advisory Board), American Institute of Physics.
- Nature Scientific Reports
- International Journal for Numerical Methods in Fluids
- Energies
- Computation
- Journal of Nanotechnology
- Research Letters in Nanotechnology
- Journal of Nanotechnology: Nanomedicine & Nanobiotechnology
- International Journal of Applied Engineering Research
- Mathematics Applied in Science and Technology
- Research in Applied Mathematics
- Journal of Astrophysics & Aerospace Technology
- International Journal of Mechatronics and Automotive Research (IJMAR)
- Simulation and Additive Manufacturing,
- Journal of Nuclear Medicine & Radiation Therapy
- American Research Journal of Nanotechnology,
- Advance in Environmental Waste Management & Recycling,
- Thermal Science and Engineering
- Inventions Section 'Inventions and innovation in Energy and Thermal/Fluidic Science', International Journal of Aeronautics
- Journal Sci.
- FELIP International Journal on Engineering Analysis

NATIONAL AND INTERNATIONAL THINK TANKS/ASSOCIATIONS/CONSORTIA

2009 - 2013	2013 EPSRC - Bridging Applied Nano-Technologists		
2009 - 2018	UK Turbulence Consortium	UK	
2009	Government Think Tank of Fluid Dynamics in	UK	
	Performance Sport		
2006 - 2010	Management Committee, European Co-operation in the	EU	
	Field of Scientific and Technical Research in HPC and		
	Large Eddy Simulation Methods for Advanced Industrial		
	Design		
2005 - 2008	National Physical Laboratory (NPL) Steering Panel on	UK	
	Dynamic Measurements		
1995 - 1999		UK	
	European Research Community on Flows, Turbulence		
	and Combustion (ERCOFTAC) Association, UK-North		
	Pilot Centre		

PhD STUDENTS (completion date in brackets)			
M. Guillemette (active) D. Yiannakides (active) R. Kamenicky (2022) K. Singh (2022) M.Papanikolaou (2017) C. Barmparousis (2015) M. Frank (2015) J. Appleyard (2014) M.Probyn (2014) I. Zissimos (2014) M.Kio (2014) K. Karantonis (2013) L. Konozsy (2013) D.Mantzalis (2013)	 A. Mihaiescu (2013) T. Oggian (2013) A. Antoniadis (2013) A.Baranda Inok (2012) B. Obadia (2012) Z. Rana (2012) D. Sourmaidou (2012) P. Barton (2011) M. Benke (2011) M. Lai (2011) A. Milonas (2011) J. Milnes (2011) 	E. Quaranta (2011) C. Papachristou (2011) Y. Shimada (2011) C. Vamvakoulas (2011) S. Tissera (2011) N. Asproulis (2010) Z. Malick (2010) N. Epiphaniou (2010) M. Porton (2010) P. Tsoutsanis (2010) I. Kokkinakis (2009) J. Lechuga (2009)	S. Loiodice (2009) A. Mosedale (2009) Z. Zachariadis (2009) M. Hahn (2008) M. Kalweit (2008) S. Patel (2008) B. Thornber (2008) P. Neofitou (2001) A. Bagabir (2000) A. Kani (2000) G. Barakos (1999)

TEACHING & LEARNING

- I am an experienced lecturer (35 years of experience) and have prepared and delivered a number of different courses to Aerospace and Mechanical Engineering students both at undergraduate (BEng and MEng) and postgraduate (Master) levels at the University of Manchester, Queen Mary, University of London, Cranfield University, University of Erlangen-Nuremberg, Germany, and the University of Nicosia, Cyprus.
- Due to the multi-disciplinary character of my research, I can teach a wide range of courses. I have offered courses covering the whole spectrum from introductory to research levels. In almost all of my classes, I have prepared teaching material that became available to the students. The most defining characteristic of my teaching style is the direct and informal interactions that I have with my students, as well as linking the taught material to engineering applications. I have known many of my students personally, and I frequently advised them in the context of their career choices. In all of my classes, I have always received excellent student feedback.
- Furthermore, I have extensive experience in establishing new Master programs. At Cranfield University, I founded the MSc in Computational Fluid Dynamics and the MSc in Autonomous Vehicles Dynamics and Control, which attracted several international students. These MSc Courses also attracted keen industrial interest, which led to sponsored studentships and employment opportunities for graduates.

University of Nicosia	 Spring semester: Fluid Mechanics (undergraduate) Medical Physics (undergraduate) 	
University of Strathclyde	 Initiated the establishment of a new MSc in Autonomous Systems and Robotics Co-director of the Biofluid Mechanics MSc 	
Cranfield University	 Advanced and Classical Turbulence Modelling Fluid Mechanics and Heat Transfer MSc Aerospace Group projects Other related duties: 1) Founded the following new MSc Programmes in Computational Fluid Dynamics (also acted as a Director and co-director) Autonomous Vehicles Dynamics and Control 2) Director of Cranfield Aerospace Doctoral Training Centre (2008-2010). 	
	Computational Fluid Dynamics Advanced Aerodynamics	

Queen Mary, University of London	 Stability and Control of Aircraft 		
University of Manchester (UMIST)	 Computational Fluid Dynamics Fluid Mechanics Heat Transfer 	ThermodynamicsEngineering Design	
University of Erlangen- Nuremberg	Computational Fluid DynamicsHeat Transfer	Fluid MechanicsParallel Computing	
Short Courses (Selective) Industrial short courses External Examiner			
	College (2006-2010), University o University of Manchester (2014 - 2 – 2016) and PhD examiner in sev	f Southampton (2006-2010), 2018), Brunel University (2012	

Research publications

(Scopus Author ID: 56273846200)

- *h-index*: 59 (Google Scholar), 53 (Scopus)
- *i10-index*: 189 (Google scholar)

Books

- 1. D. Drikakis and W. Rider⁵ *High-Resolution Methods for Incompressible and Low-Speed Flows*, Springer, 2005, 622 pages CFD textbook, (ISBN: 3-540-22136-0).
- 2. D. Drikakis and B. Geurts⁶ (Eds) *Turbulent Flow Computation*, Kluwer Academic Publishers, 369 pages, 2002 (ISBN: 1-4020-0523-7).

Journal publications (Peer-reviewed)

- Dimitris Drikakis, Ioannis William Kokkinakis, Daryl Fung, S. Michael Spottswood; Informers for turbulent time series data forecast. Physics of Fluids 1 January 2025; 37 (1): 015112.
- 2. Nicholas Christakis, Dimitris Drikakis, Ioannis W. Kokkinakis; Advancing understanding of indoor conditions using artificial intelligence methods. Physics of Fluids 1 January 2025; 37 (1): 015160.
- 3. Filippos Sofos, Dimitris Drikakis, Ioannis William Kokkinakis, S. Michael Spottswood; Spatiotemporal super-resolution forecasting of high-speed turbulent flows. *Physics of Fluids* 1 January 2025; 37 (1): 016124.
- 4. Filippos Sofos, Dimitris Drikakis, Ioannis William Kokkinakis; Enhancing indoor temperature mapping: High-resolution insights through deep learning and computational fluid dynamics. *Physics of Fluids* 1 January 2025; 37 (1): 015206.
- Panagiotis Tirchas, Dimitris Drikakis, Ioannis W. Kokkinakis, S. Michael Spottswood; The effects of hyperparameters on deep learning of turbulent signals. *Physics of Fluids* 1 December 2024; 36 (12): 125174.
- 6. Dimitris Drikakis; Shock waves. Physics of Fluids 1 December 2024; 36 (12): 120401.
- 7. Talib Dbouk, Dimitris Drikakis; Flow and plants. Physics of Fluids 1 November 2024; 36 (11): 110402.
- 8. Ioannis W. Kokkinakis, Dimitris Drikakis, S. Michael Spottswood, Kirk R. Brouwer, and Zachary B. Riley, AIAA Journal 2024, 1-16
- 9. Sofos, F., Drikakis, D. and Kokkinakis, I.W., 2024. Comparison of super-resolution deep learning models for flow imaging. Computers & Fluids, 283, p.106396.
- Sachhin SM, Mahabaleshwar US, Laroze D, Drikakis D. Correction: Sachhin et al. Darcy–Brinkman Model for Ternary Dusty Nanofluid Flow across Stretching/Shrinking Surface with Suction/Injection. Fluids 2024, 9, 94. Fluids. 2024; 9(10):241
- 11. Christakis, N. and Drikakis, D., 2024. On particle dispersion statistics using unsupervised learning and Gaussian mixture models. Physics of Fluids, 36(9).
- Triantafyllou, G., Sovatzidi, G., Dimas, G., Kalozoumis, P.G., Drikakis, D., Kokkinakis, I.W., Markakis, I.A., Golna, C. and lakovidis, D., 2024. Sensor-Based Fuzzy Inference of COVID-19 Transmission Risk in Cruise Ships. Studies in health technology and informatics, 316, pp.1817-1821.
- 13. Drikakis, D., Kokkinakis, I.W., Tirchas, P. Sparsity and mixing effects in deep learning predictions of temperature and humidity. *Physics of Fluids* 1 August 2024; 36
- 14. Kokkinakis, I.W., Drikakis, D., Michael Spottswood, S., Brouwer, K.R. and Riley, Z.B., 2024. Aeroacoustic loading of impinging supersonic boundary-layer interaction on statically deformed surfaces. AIAA Journal, pp.1-18.

⁵Los Alamos National Laboratory (now at Sandia Labs), USA.

⁶University of Twente, The Netherlands.

- 15. Sofos, F., Drikakis, D. and Kokkinakis, I.W., 2024. Ultra-scaled deep learning temperature reconstruction in turbulent airflow ventilation. Physics of Fluids, 36(6).
- 16. Sofos, F., Drikakis, D., Kokkinakis, I.W., Deep learning architecture for sparse and noisy turbulent flow data. Physics of Fluids, 2024, 36(3), 035155.
- 17. Drikakis, D., Kokkinakis, I.W., Fung, D. and Spottswood, S.M., 2024. Self-supervised transformers for turbulent flow time series. Physics of Fluids, 36(6).
- 18. Sachhin, S.M., Mahabaleshwar, U.S., Laroze, D., Drikakis, D. Darcy–Brinkman Model for Ternary Dusty Nanofluid Flow across Stretching/Shrinking Surface with Suction/Injection, Fluids, 2024, 9(4), 94.
- 19. Christakis N, Evangelou I, Drikakis D, Kossioris G. A Computational Methodology for Assessing Wind Potential. *Energies*. 2024; 17(6):1385. https://doi.org/10.3390/en17061385
- 20. Sofos, F., Drikakis, D., Kokkinakis, I.W., and Spottswood S.M. A deep learning superresolution model for turbulent image upscaling and its application to shock wave– boundary layer interaction, Physics of Fluids 36, 025117 (2024)
- 21. Dimitris Drikakis, Ioannis William Kokkinakis, Panagiotis Tirchas, S. Michael Spottswood, Physical consistency and invariance in machine learning of turbulent signals, Physics of Fluids 36, 016130 (2024).
- 22. Dimitris Drikakis, Ioannis William Kokkinakis, Daryl Fung, S. Michael Spottswood, Generalizability of transformer-based deep learning for multidimensional turbulent flow data, Physics of Fluids, 36, 026102 (2024).
- 23. Nicholas Christakis, Dimitris Drikakis, Konstantinos Ritos, Ioannis W. Kokkinakis, Unsupervised machine learning of virus dispersion indoors, Physics of Fluids 36, 013320 (2024).
- 24. Konstantinos Ritos, Dimitris Drikakis, Ioannis William Kokkinakis, The effects of ventilation conditions on mitigating airborne virus transmission, Physics of Fluids 36, 013322 (2024).
- 25. Lebental, B., West, K., Vainer, O., Hoffman, M., Hadjiefthimiadis, S., Andreou, B., Bonazountas, M., Palaiokosta, I., Papadakis, A., Grigoropoulos, N. and Ntemou, A., 2024. Scenarios for Sensors and Actuators Deployment to Prevent and Mitigate Epidemics on Cruise Ships. In The Blue Book: Smart sustainable coastal cities and blue growth strategies for marine and maritime environments (pp. 171-195). Cham: Springer International Publishing.
- 26. Poulinakis, K.; Drikakis, D.; Kokkinakis, I.W.; Spottswood, S.M.; Dbouk, T. LSTM Reconstruction of Turbulent Pressure Fluctuation Signals. Computation 2024, 12, 4. <u>https://doi.org/10.3390/computation12010004</u>
- 27. Sofos, F., Drikakis, D., Kokkinakis, I.W., and Spottswood S.M., Convolutional neural networks for compressible turbulent flow reconstruction", *Physics of Fluids*, 35, 116120 (2023).
- 28. Ritos, K., Drikakis, D., & Kokkinakis, I. W. (2023). Virus spreading in cruiser cabin. *Physics of Fluids* 35, 103329 (2023).
- 29. Kokkinakis, I. W., Drikakis, D., Spottswood, S. M., Brouwer, K. R., & Riley, Z. B. (2023). High-speed shock–boundary-layer interaction over deformed surfaces. *Physics of Fluids*, *35*(10).
- 30. Drikakis, D.; Sofos, F. Can Artificial Intelligence Accelerate Fluid Mechanics Research? *Fluids* **2023**, *8*, 212. https://doi.org/10.3390/fluids8070212
- Christakis, N.; Drikakis, D. Reducing Uncertainty and Increasing Confidence in Unsupervised Learning. *Mathematics* 2023, *11*, 3063. <u>https://doi.org/10.3390/math11143063</u>
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Annex I

KEYNOTE AND INVITED PRESENTATIONS

2023	Keynote	Hellenic Air Force Conference	Greece
2022	Keynote	Cyprus Air Force Conference	Cyprus
2020	Keynote	Aerodynamics 2020	Virtual
2020	Keynote	V-Applied2020, International	Virtual
	•	Webinar on Applied Science	
2019	Invited	ETH Zurich	Switzerland
2019	Keynote	International Conference on	Dubai
		Aviation and Space Technology	
2018	Invited	CCPS 2018, Collaborative	Barcelona, Spain
		Conference on Fluid Dynamics,	· •
		September 10-14, 2018	
2018	Keynote	21st International Conference on	London, UK
	•	Advanced Nanoscience and	·
		Nanotechnology, June 21-23, 2018	
2018	Keynote	16 th International Conference on	London, UK
	•	Emerging Materials and	·
		Nanotechnology, March 23 rd .	
2018	Keynote	International Conference on	Cambridge, UK
	-	Computational Materials Science	
		and Thermodynamic Systems	
		(CMST 2018), March 22 nd .	
2017	Lecture in Fluid Mechanics	UK Atomic Engergy Auhority,	Oxford, UK
		Culham Science Centre	
2017	Lecture in Fluid Mechanics	National University of Singapore	Singapore
2017	Lecture in Fluid Mechanics	University of Oxford	Oxford, UK
2017	Plenary, First World	ILEC Conference Centre	London, UK
	Congress on Condition		
	Monitoring		
2017	Lecture in Fluid Mechanics	Universitat Politècnica de	Barcelona, Spain
		Catalunya (UPC)	
2017	Lecture in Fluid Mechanics	Nanyang Technological University	Singapore
2016	Keynote International	University of Trento	Italy
	Workshop on Recent		
	Advances in Numerical		
	Methods for Hyperbolic		
	Conservation Laws		
	and Nonlinear Time		
	Dependent Partial		
	Differential Equations		
	in Honour of the 70th		
	Birthday of		
	Prof. Dr. Dr. hc. Eleuterio F.		
	Toro, OBE		
	Keynote, Workshop on	Technische Universität	Munich, Germany
2016	"Hybrid Simulation Methods	München	
	in Fluid Dynamics: Models,		
	Software, and Applications"		

2016	Keynote , Multiphase CFD Modelling	Institution of Mechanical Engineers	London, UK
2015	Clarendon Lab, Department of Physics	University of Oxford	UK
2015	European Workshop on High Order Nonlinear Numerical Methods for Evolutionary PDEs: Theory and Applications	University of Trento	Italy
2014	Keynote, 4th Micro and Nano Flows Conference		London, UK
2014	Keynote, 11th International Conference of Condition Monitoring and Machinery Failure Prevention Technologies (Selected as the Best Conference Paper)	British Institute of Non-Destructive Testing and US Society for Machinery Failure Prevention Technology	Manchester, UK
2014	Keynote , 10th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences	Narvik University,Embry-Riddle Aeronautical University	Narvik, Norway
2014	International Meeting of Specialists on Heat Transfer to Fluids at Supercritical Pressure	University of Manchester	Manchester, UK
	•		<u></u>
2014	High-Order and Multi-Scale	NASA Ames Research Centre,	CA, USA
2014 2014	Methods for Flight Physics 3 rd International Workshop on Computational Experiments in	NASA Ames Research Centre, Advanced Supercomputing Division M.V. Keldysh Institute of Applied Mathematics	CA, USA Svetlogorsk,Russia
	Methods for Flight Physics 3 rd International Workshop on Computational Experiments in Aeroacoustics Keynote , Flying Test Beds for Novel Aircraft Configurations for Future	Advanced Supercomputing Division M.V. Keldysh Institute of Applied	
2014	Methods for Flight Physics 3 rd International Workshop on Computational Experiments in Aeroacoustics Keynote , Flying Test Beds for Novel Aircraft Configurations for Future Air Transport Annual Keynote Lecture , Flying Concepts and Computational Science in Support of their	Advanced Supercomputing Division M.V. Keldysh Institute of Applied Mathematics European Commission,	Svetlogorsk,Russia
2014 2012	Methods for Flight Physics 3 rd International Workshop on Computational Experiments in Aeroacoustics Keynote , Flying Test Beds for Novel Aircraft Configurations for Future Air Transport Annual Keynote Lecture , Flying Concepts and Computational Science in Support of their Development 9th UK - Japan Seminar on	Advanced Supercomputing Division M.V. Keldysh Institute of Applied Mathematics European Commission, Aeronautics	Svetlogorsk,Russia Brussels, Belgium
2014 2012 2013	Methods for Flight Physics 3 rd International Workshop on Computational Experiments in Aeroacoustics Keynote , Flying Test Beds for Novel Aircraft Configurations for Future Air Transport Annual Keynote Lecture , Flying Concepts and Computational Science in Support of their Development 9th UK - Japan Seminar on Multi-Phase Flow Keynote , Mosaic3DX	Advanced Supercomputing Division M.V. Keldysh Institute of Applied Mathematics European Commission, Aeronautics Airbus Group UK-Japan Collaboration Microsoft research and Univ. of	Svetlogorsk,Russia Brussels, Belgium Bavaria, Germany
2014 2012 2013 2013	Methods for Flight Physics 3 rd International Workshop on Computational Experiments in Aeroacoustics Keynote , Flying Test Beds for Novel Aircraft Configurations for Future Air Transport Annual Keynote Lecture , Flying Concepts and Computational Science in Support of their Development 9th UK - Japan Seminar on Multi-Phase Flow	Advanced Supercomputing Division M.V. Keldysh Institute of Applied Mathematics European Commission, Aeronautics Airbus Group UK-Japan Collaboration	Svetlogorsk,Russia Brussels, Belgium Bavaria, Germany London, UK

2012	3rd International EULAG Workshop on Eulerian/Lagrangian Methods for Fluids	Natural Environment Research Council, National Centre for Atmospheric Science	Loughborough, UK
2011	Keynote , EU Marie Curie Workshop on Combustion and Atmospheric dispersion	University of Cyprus	Cyprus
2011	International Workshop on Numerical Methods and Modelling for Compressible Multimaterial Flows and Mixing	Institute of Applied Physics and Computational Mathematics	Beijing, China
2011	3rd Micro and Nano Flows Conference		Thessaloniki, Greece
2011	High Performance Computing: Regional Developments and Future Opportunities	Joint HP-SEE, LinkSCEEM-2 and PRACE HPC Summer Training	Athens, Greece
2011	Frontiers of numerical jet modelling: from engineering to environmental flows	Royal Society Seminars	Kavli Centre, UK
2011	Invited seminar	Royal Society Research Fellow International Scientific Seminar	Cambridge, UK
2011	IChemE's Event: What next for fluid simulations of fluid mixing processes?	IChemE, King's College	London, UK
2010	Keynote, Mars Workshop on Drying Technologies	Mars GmbH	Verden, Germany
2010	Multiphysics and Unsteady Simulations for Aeronautical FlowsMUSAF Colloquium	Centre Européen de Recherche et de Formation Avancée en Calcul Scientifique (CERFACS)	Toulouse, France
2010	Invited seminar	Aeronautics Department, University of Southampton	Southampton, UK
2010	7th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics		Antalya, Turkey.
2009	Workshop on Modern Trends in Computational Aerodynamics (MTCA'09)	College of Engineering and Physical Sciences, University of Birmingham	Birmingham, UK
2009	Applied Mathematics Seminars	University of Birmingham	Birmingham, UK
2008	Royal Society Conference: Applied Large Eddy Simulation	Royal Society	London, UK
2009	EPSRC Workshop on Computational Fluid Dynamics	University of Warwick	Warwick, UK
2009	First International Conference on Computational Methods for Thermal Problems		Naples, Italy
2009	Keynote, Parallel CFD Conference	NASA Ames	CA, USA

2007	Second International Conference in Advanced	University of Cambridge	Cambridge, UK
2007 2007	Computing and Simulation Invited Seminar Keynote , World Engineering Congress	University of Southampton	Southampton, UK London, UK
2007	Colloquium on LES for External Aerodynamic Flows	Royal Aeronautical Society	London, UK
2006	Workshop on Classical versus Implicit Large Eddy Simulation	Oxford University	Oxford, UK
2005	Invited seminar on CFD and Multi-Scale Methods	BAE Systems	Bristol, UK
2003 2003	ERCOFTAC Lecture Conference on Multiphase Fluid Flows and Multi- Dimensional Hyperbolic Problems	ETH Isaac Newton Institute for Mathematical Sciences, Cambridge University	Zurich, Switzerland Cambridge, UK
2001 2000	Invited Seminar ECCOMAS Conference, Forum on "Low Mach Number Flows"	University of Greenwich ECCOMAS	London, UK Barcelona, Spain
2000	Forum on CFD in Aeronautics organised by European Union Industrial Directorate	ECCOMAS	Barcelona, Spain
2000	Sixth International Conference on Applications of High-Performance Computers in Engineering		Hawaii, USA
1999	International Conference "Godunov Methods: Theory and Applications	St Anne's College, Oxford University	Oxford, UK
1999	Keynote, IMechE Conference on CFD	Institution of Mechanical Engineers	London, UK
2001	Symposium on Modelling Biological Flows: Status & Challenges for the Future	Daresbury Laboratories	Daresbury, UK
2001	ECCOMAS CFD Conference	Swansea University	Swansea, UK
2001	Workshop on Five-Year Vision for Prediction and Control of Unsteady Flow Phenomena in Aerospace Aerodynamics	European Commission	London, UK
2001	Symposium on Advective Methods	British Applied Mathematics Colloquium	Reading, UK

Invited/Keynote presentations before 2001: Univ. of Greenwich, UK (2001), University of Marseille, France (2000), Isaac Newton Inst. (1999), Cambridge Univ. - DAMTP (1998, 1999), Imperial College - Aerospace Eng. Dept. (1998), Nottingham University - Mechanical Eng. Dept. (1998), BAe \& ERCOFTAC UK South Workshop on Turbulence Structures (1998), University of Manchester - Physics Department (1997), University of Toronto - Institute of Aerospace Studies (1997), University of Waterloo (Canada) - Mech. Eng. Dept. (1997), CEC High-Performance Computing Conference (1996), MMU - Applied Mathematics Dept. (1996), GKN Westland Helicopters (1996), Glasgow University - Aerospace Eng. Dept. (1995) Technical University of Prague - Mechanical Eng Dept. (1995), Institut de Mecanique des Fluides de Toulouse (1994), Royal Institute of Technology, Sweden (1994), University of Freiburg (Germany) - Applied Mathematics Dept (1993), Daimler Benz Aerospace (DASA) (1993)

Scientific, Advisory and Organising Committees 2024 8th International Conference on Computational and George Mason Mathematical Biomedical Engineering (CMBE24) University, Arlington, Virginia, United States 2021 Athens, Greece 12th International Conference on Mechanical and Aerospace Engineering (ICMAE) International Conference on Smart Cities and Smart Grid 2021 Frankfurt, Germany (CSCSG 2021) 2020 14th World Congress in Computational Mechanics and Paris. France ECCOMAS Congress 2020 International Scientific Committee, ECCOMAS 5th Young 2019 Kraków, Poland Investigators Conference (1-6 Sept, 2019) 2018 12th International Conference on Challenges in Industrial Ankara, Turkey Engineering and Operations Management Conference, 11-12 September. International Advisory Committee of the International 2018 UK **Condition Monitoring Conference** 3rd International Conference on Design and production 2018 Valencia, Spain Engineering, December 03-04, 2018 2018 ICMAE 2018 - 9th International Conference on Budapest, Hungary Mechanical and Aerospace Engineering Astronomy and Space Science, October 18-19 2018 Rome, Italy 2018 4th International Conference on Condensed Matter and London, UK Materials Physics, August 16-17, 2018 (Materials Physics 2018) 2018 Programme Committee, EMN 2018, Energy Materials International and Nanotechnology Conference Series. various countries 2018 Organising Committee, Pumps and Pipes (medical Aberdeen, Scotland, science meets oil industry meets space science" -UK called) 2018 Scientific Advisory Committee for International Kuala Lumpur, Conference on Condensed Matter and Material Science Malaysia (ICCMS-2018) **Global Summit on Physics** 2018 Madrid, Spain 12th Edition of International Conference on Dublin, Ireland 2018 Nanopharmaceutics and Advanced Drug Delivery.

2018	2nd International Conference on Medical and Health Informatics (ICMHI 2018)	Hong Kong
2018	16 th International Conference on Emerging Materials and	London, UK
2018	Nanotechnology 4th International Conference on Physics	Berlin, Germany
2018	Joint 6 th European Conference on Computational	Glasgow, UK
2010	Mechanics (ECCM) and 7 th European Conference Computational Fluid Dynamics (ECFD)	Glasyow, OK
2018	3 rd International Conference on Fluid Dynamics & Aerodynamics, 25-26 October	Berlin, Germany
2017	Chair , 1st International Aerospace Symposium on Acoustic Fatigue	Glasgow, UK
2017	Chair of the International Parallel CFD Conference	Glasgow, UK
2017	CMBE17: International Conference on Computational and Biomedical Engineering	Pittsburgh, USA
2017	World Congress & Expo on Nanotechnology and	Dubai, UAE
-	Nanoengineering	, -
2017	3rd Int'l Conference on Microsystems and	Shenzhen, China
	Nanotechnologies (ICMN 2017)	Shanghai, China
2016	2nd Int'l Conference on Microsystems and	
0040	Nanotechnologies (ICMN 2016)	
2016	6 th EASN International Conference on Innovation in	Porto, Portugal
2015	European Aeronautics Research. IMA Conference on Numerical Methods for Simulation	Oxford, UK
2015	8th European Symposium on Aerothermodynamics for Space Vehicles (Organiser: European Space Agency)	Lisbon, Portugal
2014	4th EASN Association International Workshop on Flight Physics and Aircraft Design	Aachen, Germany
2011-2015	4 th International Conference on Computational and	USA, Hong Kong,
	Biomedical Engineering	France
2010-2014	International Conference on Computational Fluid	Russia, USA, China
2014	Dynamics	Slovenia
2014	3 rd International Conference on Computational methods for Thermal Problems	Siovenia
2007-2014	World Engineering Congress	London, UK
2014	11th International Conference of Condition Monitoring	Manchester, UK
2011	and Machinery Failure Prevention Technologies	
2014	Mech Aero-2014, 2nd International Conference and	Philadelphia, USA
	Exhibition on Mechanical & Aerospace Engineering	•
2012	Chair, 13 th International Workshop on the Physics of	Woburn, UK
	Compressible Turbulent Mixing	
2012	9th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements	Thessaloniki, Greece
2012	New Models & Hydrocodes 2012 Conference	London, UK
2011	8th International Symposium on Shock Waves	Manchester, UK
2011	2011 American Institute of Aeronautics and Astronautics (AIAA) Conference on CFD	Hawaii, USA
2009-2011	2nd African Conference on Computational Mechanics, AfriComp11	Cape Town, South Africa
2010	12 th International Workshop on the Physics of	Moscow, Russia
	Compressible Turbulent Mixing	
2001, 2006, 2010	ECCOMAS CFD Conference	UK, The Netherlands, Portugal

2009	Workshop on Quality and Reliability of Large Eddy Simulations II	Pisa, Italy
2009	2nd Micro and Nano Flows Conference	London, UK
2009	1st African Conference on Computational Mechanics, Africomp'09	Cape Town, South Africa
2009	Large Eddy Simulation Short Course, jointly with F. Grinstein (LANL) and N. Georgiadis (NASA Glenn)	Cranfield, UK
2008	2nd South African International Aerospace Symposium (SAIAS2008)	Cape Town
2007	Symposium on Quality of Large Eddy Simulations - QLES2007	Leuven, Belgium
2006	"Micro and Nanoscale Flows: Advancing the Engineering Science and Design Conference"	Glasgow, UK
2005	Conference on "High Order Non-Oscillatory Methods for Wave Propagation: Algorithms and Applications"	Trento, Italy
2000-2005	ASME International Mechanical Engineering Congress and Exposition (IMECE 200-2005)	Boston, New York, New Orleans, Washington DC, Anaheim, Orlando, USA
2000	Sixth International Conference on "Applications of High Performance Computers in Engineering (HPC 2000)"	Hawaii, USA
1999	Conference "Godunov Methods: Theory and Applications" on the occasion of Prof. Godunov's 70th birthday	Oxford, UK
1999	2nd Joint ASME & JSME (Japanese Society for Mechanical Engineers) International Symposium on Validation Systems Transients Analysis Codes," ASME Fluids Engineering Conference	San Francisco, USA.
1998	Symposium "Multilevel Methods for Incompressible Viscous Flows", 4th SIAM International Conference on Numerical Methods and Applications	Sofia, Bulgaria
1997	5th International Conference on Applications of High Performance Computers in Engineering (HPC 97)	Santiago de Compostela,Spain
1997	International Parallel CFD'97 Conference	Manchester, UK
1996	Parallel CFD Workshop	Slovenia
1996	UMIST 7th CFD Colloquium	Manchester, UK
1994	EUROMECH Colloquium 315: "Efficient Numerical Methods and Parallel Computing in Fluid Mechanics"	University of Erlangen-Nuremberg, Germany