

K. R. Sreenivasan

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Katepalli R. Sreenivasan is a physicist, engineer, and leader in international scholarship.

Born in 1947, he earned his undergraduate and graduate degrees at Bangalore University and the Indian Institute of Science, Bangalore, where he was awarded a doctorate in aerospace engineering in 1975 working with Prof. Roddam Narasimha. Following two years of post-doctoral study in Sydney and Newcastle, Australia, he traveled to the United States to serve as a researcher at Johns Hopkins University in Baltimore, Maryland, and then joined the faculty at Yale University, New Haven, Connecticut in 1979, where he was the Harold W. Cheel professor of mechanical engineering and professor of physics, applied physics and mathematics. There he served, for a long time, as chairman of Mechanical Engineering.

At Yale, he had a close collaboration with Benoit Mandelbrot in developing theories of fractals and multifractals and their applications to turbulence. His crowning achievement was the development of multifractal theories, published in the landmark 1990 article "Joint multifractal measures: theory and applications to turbulence" (co-authored with C. Meneveau, P. Kailasnath and M. S. Fan)^[1].

In January 2002, after 22 years of service at Yale, he took the position at the University of Maryland, College park as Director of the Institute for Physical Sciences and Technology. He was appointed Director of the International Centre for Theoretical Physics (ICTP) in Trieste, Italy in March 2003. There he holds the title of Abdus Salam Honorary Professor. The ICTP Director has the rank of Assistant Director General in the UNESCO.

Professor Sreenivasan has held visiting positions at the Indian Institute of Science, Caltech, Rockefeller University, Institute for Advanced Study at Princeton University, and, as the Sir C.V. Raman Professor, at the Indian Academy of Sciences.

He served as editor or associate editor of the journals *Theoretical and Computational Fluid Mechanics*, *Physical Review Letters*, *Physical Review E*, *Journal of Applied Mechanics*, *Physics of Fluids*, and the *Journal of Fluid Mechanics*. At the American Physical Society (APS), he served as the Chair of the Division of Fluid Dynamics, and the founding Chairman of the Topical Group in Statistical and Nonlinear Physics.

He is the Fellow of the American Academy of Arts and Sciences and the Third World Academy of Sciences, member of the National Academy of Engineering, the National Academy of Science, Honorary Fellow of the Indian Academy of Sciences, and a recipient of Distinguished Alumnus Award of the Indian Institute of Science. He received the Humboldt and Guggenheim Fellowship. He is also the fellow of the American Physical Society (APS), American Society of Mechanical Engineers (ASME), and American Association for the Advancement of Science (AAAS). He received the Distinguished Scholar Award from the American Chapter of the Indian Physics

Association, the 1995 Otto Laporte Memorial Award of APS, and the 2002 Medal in Engineering Sciences from the Third World Academy of Sciences.

Sreenivasan's career interests include fluid dynamics, turbulence, complex fluids, cryogenic helium and nonlinear dynamics.

Notes and References

1. Meneveau, C., K.R. Sreenivasan, P. Kailasnath and M. S. Fan. "Joint multifractal measures: theory and applications to turbulence". *Phys Rev A* 41 (1990):894

References

- [^] Meneveau, C., K.R. Sreenivasan, P. Kailasnath and M. S. Fan. "Joint multifractal measures: theory and applications to turbulence". *Phys Rev A* 41 (1990):894

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Categories: Indian physicists | Fluid dynamicists | 1947 births | Living people

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- [personal home page of Katepalli R. Sreenivasan](#) 



Name: **Katepalli Raju Sreenivasan**

Title: Abdus Salam Honorary Professor and Director

Office: MB, 2nd floor

Phone: +39 040 2240 251

E-mail: <mailto:krs@ictp.trieste.it>

Highlights of past employment:

At Yale U, assistant, associate and full professor, 1979-88; Harold W. Cheel Professor, 1988-2002; Andrew W. Mellon Professorship, 1991-1996; Professor of Physics, 1989-2002; Professor of Applied Physics, 1993-2002; Professor of Mathematics, 2000-2002. Chairman, Mechanical Engineering Department, 1987-1992; acting Chairman, Council of Engineering (equivalent, in a previous form, to the Faculty of Engineering, consisting of the departments of Applied Physics, Chemical Engineering, Electrical Engineering, and Mechanical Engineering), 1989.

At U. Maryland, College Park: Distinguished University Professor, Professor of Physics, and Glenn L. Martin Professor of Engineering, since 2002; Director, Institute for Physical Science and Technology, 2002-2003.

Major visiting positions:

Department of Aeronautics, California Institute of Technology, spring 1985; Department of Physics, Rockefeller U, spring 1988; School of Mathematics, Institute for Advanced Study, Princeton, 1995-96; Rothschild Distinguished Visiting Professor, Newton Institute, Cambridge University, spring 1999; Professor S. Dhawan Distinguished Professor of Aerospace Engineering, Indian Institute of Science, summer 2001; Sir C.V. Raman Distinguished Professor, Indian Academy of Sciences, summer 2002

Some service activities:

Member or Chairman, External Advisory Committee for the Department of Mechanical Engineering, Johns Hopkins University, Baltimore, since 1994; Chairman of the Division of Fluid Dynamics of the American Physical Society, 1990; Founder-Chair, Topical Group on Statistical and Nonlinear Physics, American Physical Society, 1996 and 1997; Member, Vice-Chair or Chair of the Mechanical Engineering Peer Committee, U.S. National Academy of Engineering, 2001-2004; Member, Committee on Membership, U.S. National Academy of Engineering, 2004-2007; Member, Committee of Human Rights, U.S. National Academy of Sciences, since 2001; Secretary, Vice-Chair or Chair of Section 10 of the U.S. National Academy of Engineering, from 2003; Member, Governing Council, Third World Academy of Sciences, from 2003.

Principal awards and honors:

Humboldt Fellow, 1983; Fellow, American Physical Society, 1985; Guggenheim Fellow, 1989; Society of Scholars, Johns Hopkins University, 1991; Distinguished Alumnus Award, Aerospace Department, Indian Institute of Science, 1992; Fellow, American Society of Mechanical Engineers, 1993; Otto Laporte Award, American Physical Society, 1995; Distinguished Scholar Award, American Chapter of the Indian Physics Association, 1996; Fellow, American Academy of Arts and Science, 1997; Fellow, American Association for the Advancement of Science, 1998; Member, National Academy of Engineering, 1999; Fellow, Third World Academy of Sciences, Trieste, Italy, 1999; Distinguished Faculty Fellow, Jawaharlal Nehru Center for Advanced Scientific Research, since 2001; 2002 Medal Lecture in Engineering Sciences, Third World Academy of Sciences, 2003; Honorary Fellow, Indian Academy of Sciences, 2003; Honorary Professor, Tehran University, since 2004

Some named lectures:

The first Stanley Corrsin Memorial Lecture, Johns Hopkins University, 1987; Phillips Lecture, Haverford College, 1988; Sabita Choudhury Memorial Lecture, Indian Institute of Science, 1992; Distinguished Lecturer, University of Illinois, Urbana-Champaign, 1995; P.-Y. Zhou memorial plenary lecture at the seventh Asian Congress of Fluid Mechanics, Madras, 1997; Sadowsky Lecture in Applied Mechanics, Rensselaer Polytechnic Institute, 1998; Distinguished Lecturer, University of Maryland, College Park, 1998; Carl Gunnard Johnson Lecturer, Worcester Polytechnic Institute, 1998; Distinguished Lecturer in Fluid Mechanics, Pennsylvania State University, February 2001; Shih-i Pai Lecturer, University of Maryland, March 2001; C.H.B. Priestley Lecturer, CSIRO Atmospheric Research, Aspendale, Australia, 2002; Burgers Lecturer, Technological University, Delft, 2003; hundredth anniversary lecture in honor of Professor Carlo Ferrari, Politecnico di Torino, 2003; the inaugural Satish Dhawan memorial plenary lecture at the Tenth Asian Congress of Fluid Mechanics, Peradeniya, Sri Lanka, 2004; L.S.G. Kovaszny Lecturer, University of Houston, 2004

Others:

Authored about 200 scientific papers and book chapters in international journals (in addition to various abstracts and unpublished reports) on fluid dynamics and other aspects of physics. Detailed list can be found in the attached CV (pdf).

Editor, Associate Editor, or Editorial Board Member of some 15 International Journals on Physics, Engineering and Mathematics.

Editor of seven books or conference proceedings.

Supervised 25 Ph.D. students and many post-doctoral associates.

Organized a large number of international conferences and workshops.

Keynote or invited speaker in numerous scientific conferences.

Served on many educational, scientific and prize committees.

Curriculum Vitae of Katepalli R. Sreenivasan

International Center for Theoretical Physics
Strada Costiera 11, 34014 Trieste, Italy
Tel: 39-044-224-0250; Fax: 39-040-334-0410; e-mail: krs@ictp.it

Academic Degrees

- 1968, B.E. (Mech. Engg.), Bangalore University (first rank, with Sir M. Visvesvaraya Memorial Prize and Indumati Lalbai Memorial Gold Medal; the Institution of Engineers Prize and its Honorary Graduate Membership awarded for achieving the first place in all branches of engineering for all three universities in the State of Karnataka)
- 1970, M.E. (Aero. Engg.), Indian Institute of Science (J.R.D. Tata Fellowship; first rank)
- 1975, Ph.D. (Aero. Engg.), Indian Institute of Science (P.S. Narayana Medal for the best Ph.D. thesis in Mechanical Sciences)
- 1985, M.A. (Privatim), Yale University
- 2006, D.Sc. (Honoris Causa), Lucknow University, India
- 2007, D.Sc. (Honoris Causa), University of Hyderabad, India

Employment history

(a) Research appointments

- 1975-77, Post-doctoral Fellow, Universities of Sydney and Newcastle, Australia
- 1977-79, Research Associate and Lecturer, Johns Hopkins University

(b) At Yale University (until December 2001)

- 1979-1982, Assistant Professor, Department of Engineering and Applied Science
- 1982-1985, Associate Professor, Department of Mechanical Engineering
- 1985-1988, Professor, Department of Mechanical Engineering
- 1988-2002, Harold W. Cheel Professor of Mechanical Engineering
- 1991-1996, Andrew W. Mellon Professor
- 1989-2002, Professor of Physics
- 1993-2002, Professor of Applied Physics

- 2000-2002, Professor of Mathematics
- 1995-2000, Member, Center for Computational Ecology
- 1987-1992, Chairman, Mechanical Engineering Department
- 1989, Acting Chairman, Council of Engineering (equivalent, in a previous form, to the Faculty of Engineering, consisting of the departments of Applied Physics, Chemical Engineering, Electrical Engineering, and Mechanical Engineering).

(c) At the University of Maryland, College Park (since January 2002)

- Distinguished University Professor, Professor of Physics, and Glenn L. Martin Professor of Engineering (on leave of absence since July 2003)
- Until July 2003, Director, Institute for Physical Science and Technology

(d) Current (since March 2003)

Abdus Salam Research Professor and Director, International Center for Theoretical Physics (ICTP). (The rank in the UNESCO system is that of Assistant Director General.)

Visiting Positions

- Summers of 1981, 82, 84, Visiting Scientist, Center for Atmospheric and Oceanic Sciences, Indian Institute of Science
- 1983, Visiting Scientist, DFVLR, Göttingen, Germany
- Spring 1985, Visiting Professor of Aeronautics, California Institute of Technology
- Spring 1988, Visiting Professor of Physics, Rockefeller U
- Fall 1992, Visiting Professor of Fluid Mechanics, Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore
- 1995-96, Member, School of Mathematics, Institute for Advanced Study, Princeton
- Spring 1999, Rothschild Distinguished Visiting Professor, Newton Institute, Cambridge University, England; also in Fall 2008.
- 2001-, Distinguished Faculty Fellow, Jawaharlal Nehru Center for Advanced Scientific Research
- Summer 2001, Satish Dhawan Distinguished Professor of Aerospace Engineering, Indian Institute of Science
- Summer 2002, Sir C.V. Raman Distinguished Professor, Indian Academy of Sciences

Research interests, teaching and publications

Primary expertise: fluid mechanics and turbulence. Other interests: complex fluids, nonlinear and nonequilibrium phenomena and cryogenic helium. Emerging interests: mathematical modeling of global change and biomechanical phenomena.

Taught undergraduate and graduate courses on such topics at Yale, often short courses elsewhere.

About 220 journal publications and book articles relating to areas of my specialization, and also on sonic booms, nucleation of droplets in condensation, chaos, fractals, cosmology, and so forth.

Invited and special lectures

Delivered numerous plenary and principal invited lectures in international meetings and workshops on fluid dynamics and related fields such as plasma physics, aeronautics, condensed matter physics, nonlinear dynamics, applied mathematics, fractals, and complexity. Opening addresses at many conferences at ICTP and elsewhere.

Numerous invited seminars in Universities and in Government and Industrial Research Laboratories all over the world. Among them:

- 1986, Emerging Scholar Lecture, University of Notre Dame
- 1987, The inaugural Stanley Corrsin Memorial Lecture, Johns Hopkins University
- 1988, Phillips Lectures, Haverford College
- 1992, Sabita Choudhury Memorial Lecture, Indian Institute of Science
- 1995, Distinguished Lecturer, University of Illinois, Urbana-Champaign
- 1997, P.-Y. Zhou Memorial Plenary Lecture at the Seventh Asian Congress of Fluid Mechanics, Chennai
- 1998, Sadowsky Lecture in Applied Mechanics, Rensselaer Polytechnic Institute
- 1998, Distinguished Lecturer, University of Maryland, College Park
- 1998, Carl Gunnard Johnson Lecturer, Worcester Polytechnic Institute
- 2001, Distinguished Lecturer in Fluid Mechanics, Pennsylvania State University
- 2001, Shih-i Pai Lecturer, University of Maryland
- 2002, C.H.B. Priestley Lecturer, CSIRO Atmospheric Research, Aspendale
- 2003, The inaugural J.M. Burgers Lecturer, Technological University, Delft
- 2003, Lecture at the hundredth anniversary of Professor Carlo Ferrari, Politecnico di Torino
- 2004, L.S.G. Kovasznay Lecture, University of Houston, Texas

- 2004, The inaugural Satish Dhawan Memorial Plenary Lecture at the Tenth Asian Congress of Fluid Mechanics, Peradeniya, Sri Lanka
- 2004, C.K. Majumdar Lecturer, Indian Association for the Cultivation of Science, Kolkata, 2004
- 2005, Plenary Lecturer, Inaugural Meeting of the World Year of Physics, Paris
- 2006, Distinguished Lecturer, Central University of Hyderabad, India
- 2006, The Abdus Salam Lecturer, Jamia Millia Islamia University, New Delhi, India; the Government College University, Lahore, Pakistan
- 2006, Inaugural Foundation Lecturer, Applied Mathematics Centre, Bangalore University
- 2006, Sir James Lighthill Distinguished Lecturer, Florida State University
- 2007, Stanford S. and Beverly P. Penner Distinguished Lecturer, University of California, San Diego

Awards, Honors, Academies, etc.

- 1983, Humboldt Fellow
- 1985, Fellow, American Physical Society
- 1988, Member, Connecticut Academy of Science and Engineering
- 1989, Guggenheim Fellow
- 1991, Society of Scholars, Johns Hopkins University
- 1992, Distinguished Alumnus Award, Aerospace Department, Indian Institute of Science
- 1993, Fellow, American Society of Mechanical Engineers
- 1993, Associate Fellow, American Institute for Aeronautics and Astronautics
- 1995, Otto Laporte Award, American Physical Society
- 1996, Distinguished Scholar Award, American Chapter of the Indian Physics Association
- 1997, Fellow, American Academy of Arts and Sciences
- 1998, Fellow, American Association for the Advancement of Science
- 1999, Member, United States National Academy of Engineering
- 1999, Third World Academy of Sciences (TWAS, now called the Academy of Sciences for the developing World), Trieste, Italy
- 1999, Member, Connecticut Academy of Arts and Science
- 2000 (deferred), Ulam Scholar, Los Alamos National Laboratory

- 2001, Professor B.D. Tilak Distinguished Fellow, Department of Chemical Technology, Mumbai University
- 2003, The 2002 Medal & Lecture in Engineering Sciences, TWAS
- 2003, Honorary Fellow, Indian Academy of Sciences, Bangalore
- 2003, Distinguished Alumnus Award, Indian Institute of Science, Bangalore
- 2004-, Honorary Professor, Tehran University
- 2005, Fellow, Institute of Physics, London
- 2005, Foreign Member, Mongolian National Academy of Sciences
- 2006, Fellow, the World Innovation Foundation, UK
- 2006, International Prize and Modesto Panetti and Carlo Ferrari Gold Medal, Academia delle Scienze di Torino, Italy
- 2006, Distinguished Service Award and Inaugural Endowment Lecture at the Centre for Applied Mathematics, Bangalore University, India
- 2007, Recipient of the National Order of Scientific Merit Certificate by the Brazilian Government and the Academy of Sciences
- 2007, Foreign Fellow, African Academy of Sciences
- 2007, UNESCO Medal for Promoting International Scientific Cooperation and World Peace from the World Heritage Centre, Florence, Italy
- 2007, President Dr. Zakir Husain Memorial Award from the Duty Society of AMU and the Indian Society of Applied and Industrial Mathematics
- 2007, Member, United States National Academy of Sciences
- 2007, Foreign Fellow, Indian National Academy of Sciences, New Delhi
- 2007, Honorary Member, Academia Torre e Tasso, Duino-Aurisiana, Trieste, Italy

Editorial: Journals

- Associate Editor, *ASME Journal of Applied Mechanics*, 1984-1990
- Editorial Board Member, *Proceedings of the Indian Academy of Science, series C (Sadhana)*, 1988-1991
- Editorial Board Member, *American Scientist*, 1990
- Member, Advisory Board, Springer Book Series on *Interdisciplinary Applied Mathematics*, 1990-2000
- Editorial Board Member, *Journal of Nonlinear Science*, 1991-2002

- Divisional Associate Editor, *Physical Review Letters*, 1991-1995
- Editor, *Journal of Theoretical and Computational Fluid Dynamics*, 1992-1995
- Associate Editor, *Physical Review E*, 1994-1997
- Associate Editor, *Physics of Fluids*, 1995-2000
- Editorial Board Member, *Physical Review E*, 1997-2001
- Editorial Board Member, Springer Book Series on *Applied Mathematics*, since 2000
- Editorial Board Member, Elsevier Book Series on *Applied Mathematics and Mechanics*, since 2000
- Associate Editor, *Journal of Fluid Mechanics*, 2000-2006
- Associate Editor, *Journal of Fluid Dynamics*, since 2004
- Member, Advisory Board, *Journal of Turbulence*, since 2004
- Associate Editor, *African Physical Review*, since 2006

Editorial: Books

- *Experimental Heat Transfer, Fluid Mechanics and Thermodynamics*, volumes 1 and 2, Elsevier, 1993 (Proceedings of the Third World-Conference), with R.K. Shah and Y. Joshi
- *Developments in Fluid Dynamics and Aerospace Engineering*, Interline, 1995 (conference proceedings), with S.M. Deshpande, A. Prabhu and P.R. Viswanath
- Two issues of *Pramana: Journal of Physics*, on *Nonlinearity and Chaos in the Physical Sciences*, Indian Academy of Science, 1997, with R. Ramaswamy
- *Flow at Ultra-High Reynolds and Rayleigh Numbers: A Status Report*, Springer, 1998, with R.J. Donnelly
- *Perspectives and Problems in Nonlinear Physics*, Springer, 2003, with E. Kaplan and J.E. Marsden
- Two issues of *Flow, Turbulence and Combustion: Special Issues in Honor of Professor R.A. Antonia*, pp. 91-492, 2004 (with R.W. Bilger)
- *100 Reasons to be a Scientist*, The Abdus Salam International Centre for Theoretical Physics, 2004 (translated into Chinese, Marati, Portuguese, Italian, Bengali, etc)
- *One Hundred Years of Boundary Layer Research*, Solid Mechanics and its Applications, Springer, 2006 (with G.E.A. Meier and H.-J. Heinemann)
- *ICTP and Africa*, The Abdus Salam International Centre for Theoretical Physics, 2007
- *The ICTP Experience: Diploma and Step Students*, The Abdus Salam International Centre for Theoretical Physics, 2007

- *The ICTP Experience: The TRIL Programme*, The Abdus Salam International Centre for Theoretical Physics, 2007
- *Collective Phenomena in Macroscopic Systems*, Proceedings of the Conference Villa Olmo, Como, Italy 4 - 6 December, 2006, World Scientific, 2007 (with G. Bertin, R. Pozzoli & M. Rom)
- *ICTP and Latin America*, The Abdus Salam International Centre for Theoretical Physics, 2007

Students and post-docs

- Supervised 28 Ph.D. students (plus currently 5)
- 14 post-docs (plus currently 2)

Miscellaneous

Mentioned in “American Men and Women of Science”, “Who is Who in the East,” “Who is Who in the World”, “Who is Who in America”, and so forth; Honorary Member, Lions Club di Trieste Host; prefaces to books authored by others, etc.

Examples of service activities at Yale University

- Yale College Faculty Review Committee, 1993
- Member, Advisory and Tenured Appointments Committee for Physical Sciences and Engineering, 1993 and 1996-2000
- Faculty Development Committee, co-chair, 1993, member, 1994-1996
- Factfinder, Yale College Executive Committee, 1994-95
- Silliman Lecture Committee, 1994-1998 (chairman 1997, 98) Applied Mathematics Committee, 1993-1996 (chairman 1996)
- Member, Executive Committee, Cowles Foundation for Economics Research, 1998
- Geophysics search committee, Department of Geology and Geophysics, 1998
- Chairman, Committee to recruit Assistant Dean for Yale College and Director of Asian American Cultural Center, 1999
- Member, Search Committee for Dean of Engineering, 1999
- Member, Yale Health Plan Advisory Committee, 2000, etc.

Examples of service activities at the University of Maryland

- Chairman, Search Committee, Director of Cooperative Institute for Earth Systems and Climate Studies, 2002

- Member, Selection Committee for the Kim Endowed Professor, 2003
- Member, Selection Committee for Outstanding Research Award, 2003
- Member, Advisory Committee for the Applied Mathematics and Scientific Computation Program Committee, 2003
- Member for the Physical Science Complex, 2003
- Member, Burgers Board, from 2003, etc.

Examples of service activities elsewhere

- Representative, Division of Fluid Dynamics (DFD) of the American Physical Society (APS), for the Committee on the International Freedom of Scientists, 1981-1987
- Member, Executive Committee of DFD, 1986-1991 (Chairman 1990; Ex-Officio Member until 1997)
- Member, Fluid Dynamics Prize Committee, APS, 1991
- Member, Nominating Committee, Connecticut Academy of Science and Engineering, 1997-2000
- Frenkiel Award Committee for DFD, Member 1989, Chairman 1999
- Member, Publications Committee, DFD, 1992-1994
- Member, NRC Committee on Nonlinear Science, 1993
- Member, External Advisory Committee for the Department of Mechanical Engineering, Johns Hopkins University, since 1994, Chairman 2000-2003
- Member, Committee of Visitors, National Science Foundation (Fluid Dynamics and Hydraulics), 1995
- Member, Otto Laporte Award Committee, APS, 1996
- Member, NRC Committee on Condensed Matter and Materials Physics, Board on Physics and Astronomy, 1997-1999
- Founder-Chair, Topical Group in Statistical and Nonlinear Physics, APS, 1996 and 1997
- Onsager Prize Committee, APS, Member 1997-2000 (Chair 1997)
- Member, Fluids Engineering Division of the American Society of Mechanical Engineers (ASME), 1988-1991
- Member, New Haven Chapter of ASME, 1998-2000
- Member, Publications Oversight Committee, American Physical Society, 1999-2002
- Member (2001-2003), Vice-Chair (2002) and Chair (2003) of the Mechanical Engineering Peer Committee, U.S. National Academy of Engineering

- Member, Committee of Human Rights, U.S. National Academy of Sciences, since 2001
- Member, Biomass Task Force, Connecticut Academy of Science and Engineering, 2001
- Member, Search Committee for Editor of Physical Review E, 2002
- Secretary (2003), Vice-Chair (2004) and Chair (2005), Section 10 of the U.S. National Academy of Engineering
- Member, Committee on Membership, U.S. National Academy of Engineering, 2003-2006
- Member, Governing Council, TWAS, the Academy of Sciences for the Developing World, since 2003
- Chairman, Engineering Sciences Prize Committee, TWAS, 2003-2006
- Member, Scientific Advisory Council, National Centre for Physics, Islamabad, since 2004
- Co-chairman, World Conference on Sustainable Development, Durban, South Africa, 2005
- Patron, Indian Society for Industrial and Applied Mathematics, since 2006
- Member, IUTAM Symposia Panel for Fluid Mechanics, since 2006
- Member, Scientific Advisory Council, National Mathematics Institute, Abuja, Nigeria, since 2006
- Chairman, the G8-UNESCO World Forum on Education, Research and Innovation: New Partnership on Sustainable Development, Trieste, Italy, 2007
- Associate Member, C13 commission on “Physics for development”, IUPAP, since 2007

Miscellaneous

- Mentioned in “American Men and Women of Science”, “Who is Who in the East,” “Who is Who in the World”, “Who is Who in America”, and so forth
- Honorary Member, Lions Club di Trieste Host
- News items or articles about krs in *Phys. Today* **xxx**, xx-xx (2003); *Phys. World* **xx**, xx (2002), **xx**, 8-9 (2004); *Nature* **438**, 1046-1047 (2005), *Nature Materials* **5**, 843-845 (2006), many newspaper accounts in New Haven, in Trieste and vicinity, in India, in Italy at large, etc.

Ph.D. students, the titles of their theses and last known positions

1. P.J. Strykowski: “The control of absolutely and convectively unstable flows”, 1985. Morse Alumni Professor of Mechanical Engineering, University of Minnesota, MN
2. T.B. Lynn: “Manipulation of the structure of a turbulent boundary layer”, 1987. Vice President, Dexsil Corporation, CT

3. S. Raghu: “The control of combustion and acoustic coupled fluid dynamic instabilities”, 1987. President, Advanced Fluidics, MD
4. M.S. Garelick: “Numerical analysis of manipulated laminar flows”, 1988. Professor of Engineering, U.S. Merchant Marine Academy, NY
5. R. Ramshankar: “The dynamics of countercurrent mixing layers”, 1988. Director, Marketing and Strategic Analysis, Cummins, Inc.
6. C. Meneveau: “The multifractal nature of turbulence”, 1989. Louis M. Sardella Professor of Mechanical Engineering, Johns Hopkins University, MD
7. A.B. Chhabra: “The thermodynamic formalism of multifractals and its applications to chaotic dynamical systems and turbulence”, 1989. Chief Investment Officer, Institute for Advanced Study, Princeton (formally registered with R.V. Jensen)
8. D.J. Olinger: “Universality in the transition to chaos in open fluid flows”, 1990. Associate Professor of Mechanical Engineering, Worcester Polytechnic Institute, MA
9. M.S. Fan: “Features of vorticity in turbulent flows”, 1990. Department Manager, Microelectronics Group, NASA Goddard Space Flight Center, Greenbelt, MD
10. D.M. Kyle: “The instability and breakdown of a round variable-density jet”, 1991. Staff Researcher, Oak Ridge National Laboratory, TN
11. A.W. Johnson: “Laminarization and retransition of turbulent boundary layers in supersonic flow”, 1993. Combustion/aerothermal design engineer, General Electric Aircraft Engines, OH
12. L.M. Zubair: “Studies in turbulence using wavelet transforms for data compression and scale separation”, 1993. Research Scientist, Earth Institute, Columbia University, NY
13. P. Kailasnath: “Reynolds number effects and the momentum flux in turbulent boundary layers”, 1993. Senior Research Scientist, Diagnostic Radiology, Yale Medical School, CT
14. J.R. Saylor: “Differential diffusion in turbulent and oscillatory, non-turbulent water flows”, 1993. Associate Professor, Clemson University, SC
15. G. Stolovitzky: “Statistical order of small scales in turbulence”, 1994. Manager, Functional Genomics Program, IBM, Yorktown Heights, NY
16. A. Juneja: “Scaling laws in turbulence: their manifestation and utility”, 1995. Director of Product Quality, Egain Corp., Sunnyvale, CA
17. A. Denner: “Classification of cardiac disease state by electrocardiographic signal processing”,

1996. Systems Analyst, Morgan Stanley, NY

18. A. Sahay: “The mean velocity and Reynolds shear stress in turbulent pipe and channel flows”, 1997. Lecturer, Department of Mathematics, University of Wisconsin, Madison

19. B. Dhruva: “Experiments in high-Reynolds-number turbulence”, 1999. Research Director and Discipline Manager, Schlumberger Cambridge Research

20. R. Bhiladvala: “Development of microfabricated thermal sensors with guard heating for wall shear stress measurements in turbulent flows”, 2000. Post-doctoral Fellow, Nanofabrication Center, Cornell University

21. I. San Gil: “Fractal character of isoscalar surfaces in shear free turbulence and some effects of shear on the turbulence structure”, 2001. Bioinformatics Specialist, Yale Medical School

22. S. Kurien: “Anisotropy and the universal properties of turbulence”, 2001. Staff Scientist, Theory Division, Los Alamos National Laboratory, NM

23. C.M. White: “High Reynolds number turbulence in small apparatus”, 2001. Assistant Professor, Department of Mechanical Engineering, University of New Hampshire, CA

24. K.G. Aivalis: “Measurement and analysis of scalar fluctuations in turbulent flows”, 2004. Self-employed as a consultant.

25. J. Cleve: “Data-driven theoretical modelling of the turbulent energy cascade”, 2004 (co-supervised with Dr. Martin Greiner). Research Scientists, Siemens, Germany

26. A. Karpikov: “Drag reduction by dilute addition of long-chain polymers: simulations using the Lattice Boltzmann methods”, 2005 (co-supervised with S.A. Orszag). Post-doctoral Fellow, School of Medicine, Yale University

27. M.R. Mohyuddin: “On solutions of nonlinear equations arising in the Rivlin-Ericksen work”, SANDWICH student from Pakistan, 2005

28. G.P. Bewley: “Using frozen hydrogen particles to observe rotating and quantized flows in liquid helium”, 2006. Post-doctoral Fellow, Max-Planck Institute for Fluid Mechanics, Goettingen, Germany

Current Ph.D. students, supervised in conjunction with a co-advisor

- Kaveri Joshi (thermal convection in liquid sodium, Maryland)
- Vicky Taffoti (SANDWICH student, Cameroon)
- Xsitaaz Chadee (SANDWICH student, Trinidad)

- Gabriella Silano (simulations of convection, Trieste)
- Valentina Stocca (LES modeling of stratified atmospheric flows, Trieste)

Post-Doctoral—only those who stayed for significant amounts of time are listed (along with the positions to which they moved next)

- Surya Raghu (Ph.D., Yale; Assistant Professor, Department of Mechanical Engineering, SUNY Stonybrook, NY)
- Rahul Prasad (Ph.D., Yale; Vice President, Science Research Laboratory, CA)
- Ashvin Chhabra (Ph.D., Yale; Post Doctoral Fellow, University of Chicago)
- Richard Everson (Ph.D., Leeds; Research Associate, Rockefeller University, NY)
- John Ringland (Ph.D., Austin Texas; Assistant Professor of Mathematics, SUNY Buffalo)
- Hyundoo Shin (Ph.D., Brown; Samsung Electronics Company, South Korea)
- Anil Suri (Ph.D., Harvard; unknown)
- Daniel Lathrop (Ph.D., Texas; Assistant Professor of Physics, Emory University, Atlanta)
- Lareef Zubair (Ph.D., Yale; Assistant Professor, Institute of Fundamental Research, Sri Lanka)
- Anupam Sahay (Ph.D., Yale; Lecturer, Department of Mathematics, University of Madison-Wisconsin)
- Eric van Doorn (Ph.D., Duke; Research Assistant Professor, Department of Physics, Rutgers University)
- Adonios Karpelis (Ph.D., Yale; Combustion Research Facility, Sandia National Laboratory, Livermore, CA)
- Rustom Bhiladvala (Ph.D., Yale; Nanofabrication Center, Cornell University)
- Joerg Schumacher (Ph.D., University of Marburg; Assistant Professor, University of Ilmenau)
- A. Sameen (Ph.D., Indian Institute of Science)
- Jean-Daniel Rüedi (Ph.D., Switzerland)

Many visitors (both short and long term)

Scientific Publications of Katepalli R. Sreenivasan¹

1. Relaminarization in highly accelerated boundary layers. *J. Fluid Mech.* **61**, 417-448 1973 (with R. Narasimha)
2. Rapid distortion of axisymmetric turbulence. *Current Science* **42**, 632-634, 1973
3. Distorted wakes. *Adv. Geophys.* **18B**, 317-328, 1974 (with A. Prabhu & R. Narasimha)
4. Rapid distortion of shear flows. *Aero. Soc. India, Silver Jubilee Technical Conference, Bangalore*, Paper 2.3, 1974 (with R. Narasimha)
5. The determination of intermittency from the probability density function of a passive scalar. *Phys. Fluids* **19**, 1471-1474, 1976 (with R.W. Bilger & R.A. Antonia)
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