

Prof. Dr. Rao Tatavarti M.S. (IIT Madras), PhD (Dalhousie University, Canada), DRDS, FOSI, FAPAS

Distinguished Professor and Director

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2010 – 2023

Distinguished Professor and Director GVP-SIRC and GVP College of Engineering, Visakhapatnam, India
Executive Director CASTLE, Visakhapatnam - A Non-Profit Scientific Society / Think Tank
Editorial Board ICTACT Journal on Image and Video Processing, India

Teaching, R&D, Design / Development of Cutting-Edge Systems/Technologies with Aerospace/Oceanic Applications in Defence/Civilian Sectors.

2014 – To date

Founder Director & Chairman CASTLE Advanced Technologies & Systems (CATS), India
CATS Group of Companies, India – Firms dealing with Photonic and Smart Technologies & Systems.

2010 – 2017

Visiting Professor U of H – Central University of Hyderabad, Hyderabad, India
Director Srujana Dukeship Consulting – An Innovation Incubation Company
Technical Adviser Mrs. AVN College, Visakhapatnam, India
Technical Adviser Hindustan University, Chennai, India
Technical Adviser The Sun School, Vizianagaram, India
Adviser to Board of Directors Mech Well Industries, Nasik, India

2015 – 2017

Visiting Professor University of Georgia, Athens, Georgia, USA
College of Engineering, University of Georgia, USA

2013 – 2015

Regional Director National Maritime Foundation, New Delhi, India
NMF, Vizag Chapter – A Think Tank for Advancing India's Maritime Interests.

2008 – 2010

Member, Board of Management
Director (R&D), Dean (Acad. Res.)
Senior Professor

VIT University, Vellore, India

Steered R&D activities and was responsible for increasing R&D productivity at VIT University. Instrumental in streamlining the research policies and practices of VIT University. Facilitated award of 54 PhDs and 25 M.S. by Research degrees. Taught Ph.D. and M. Tech students.

1989 - 2008

Senior Scientist / Additional Director

Naval Physical & Oceanographic Laboratory (NPOL), DRDO, Kochi, India

Head, Centre for Oceanics and Optronics

Programs Director - Non-Acoustic Technologies

Significant contributions to ocean science, engineering and technology through development of new algorithms, novel monitoring techniques and innovative design and development of highly sensitive optoelectronic systems for studying the dynamics of stratified fluids and for use in naval surveillance activities. Design and Development of novel techniques and technologies to monitor ocean dynamics and was responsible for utilizing state-of-art satellite technology for surveillance activities - by developing satellite image processing algorithms that can comprehensively extract spatial feature information from any available satellite sensors covering regions of interest.

1984 - 1989

Researcher / Teaching Assistant

Dalhousie University, Halifax, Canada

Involved in R&D and Teaching Activities on Coastal and Ocean Processes at Dalhousie.

1981 - 1984

Researcher / Senior Project Officer

Indian Institute of Technology, Madras, Chennai, India

Involved in R & D and Consultancy Activities in Ocean / Coastal / Port and Harbor Engineering.

Professional Experience

40 years of R&D experience at various institutes in India, Asia, North America, Europe, and Russia.

Research Projects and Technical Consultancy

Headed and completed research and consultancy projects with a total financial outlay of more than ₹500 million in India and North America related to the Engineering Industry, Ocean Industry, Power, Oil and Natural Gas, Ports and Harbors, Defence, and Telecom.

Research Interests

Aerospace and Ocean Engineering and Technology, Signal Processing, Fluid Dynamics, Photonics, Image Processing, Satellite Image Processing, Biomedical Engineering and Bio-Technology, Structural Health Monitoring, Environmental Engineering, and Machine Learning.

Research Supervision

86 Theses/Dissertations (5 PhDs, 43 Masters, and 38 Bachelors in Engineering, Technology, and Science); Many Private and Public Funded Projects

Teaching Experience

25+ years of teaching experience at Dalhousie University, Canada; Cochin University of Science and Technology, Kochi; VIT University, Vellore, GVP College of Engineering, Visakhapatnam; Central University of Hyderabad, Hyderabad; University of Georgia, USA.

Publications / Patents / Systems

200+ - 176 Peer Reviewed Research and Classified Publications 2 Monographs 4 Book Chapters 8 Patents 12 Systems.

Systems and Technologies Developed for Commercialization

Systems for - Real-Time Monitoring of Air Quality, Air Data Products from Fighter aircraft, Environment, Eaves Dropping, and Wind Profile. System for Maritime Surveillance, System for Vibration and Condition Monitoring, Fully Instrumented Wind Tunnel Facility.

Awards

Most Active Researcher Awards - GVPCE (2011- 2018), VIT University (2010, 2009), DRDO Laboratory Award (2007), DRDO Silicon Medal (2006), DRDO Advances in Naval Technology Award (1997).

Fellowships

Fellow, A.P. Akademi Sciences, India (2017); Fellow, Optical Soc. India (2004); Berkner Fellow, American Geophysical Union, USA (1990-'94); Dalhousie Senior Fellow, Canada (1988-'89); Intl. Center Ocean Development (ICOD) Fellow, Canada (1985-'87); Dalhousie Fellow, Canada (1984-'87); Ronald Hayes Intl. Scholar Canada (1984-'85); Institute Fellow, IIT Madras (1981-'83); CSIR Fellow (1980-'81).

Membership in Professional Bodies

Life Member of Scientific and Engineering Professional Bodies in India, Asia, and North America; and the Founder of OSI, CASTLE, and CATS.