

Personal details, professional career and scientific profile

1. Personal details

Name: **Dr. Ravindra V. Jategaonkar**
Senior Scientist

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Date of birth: 3rd September 1950
Place of birth: Bhiwandi, Maharashtra State, India

Nationality: Indian

Family status: married since 1977, 2 daughters



2. School and university education

School:
1956 - 1967 Primary and High school, School Leaving Certificate.
C. L. Boys' High School, Bombay, India

University:
1967 - 1972 B. Sc. (Engg), Bachelor's degree in Engineering
with Honors, 3rd Rank in the University
University of Calicut, Calicut, India

1972 - 1975 M. Sc. (Engg), Master's degree in Engineering
with Honors, 1st Rank in the University
University of Calicut, Calicut, India

Branch: Electrical Engineering (Control systems) / Flight mechanics

3. Doctorate

1983 - 1986 Ph. D. (Doctor of Philosophy, Faculty of Engineering)
Indian Institute of Science, Bangalore, India

Topic: „Maximum Likelihood Parameter Estimation Method for a Class of Nonlinear Systems and Its Applications to Problems in Flight Mechanics.“

Annotation: Because of the scientific excellence, the research work was completed in just 2½ years, with outstanding external, national and international, reviews.

4. Professional experience

- 1975 - 1981 Scientist, National Aeronautical Laboratory (NAL), Bangalore, India.
Work areas:
1) Development of real time and computer controlled control systems for wind tunnel measurement to determine dynamic stability derivatives of aircraft,
2) Estimation of system frequency and damping from model response excited through wind tunnel turbulence, and
3) Development of real time and computer controlled control systems for full scale fatigue tests of aircraft.
- 1981 – 1983 Guest scientist, as a DAAD (German Academic Exchange Service) Fellow, at DLR, Institute of Flight Mechanics, Braunschweig, Germany.
Work area:
Development of system identification methods for nonlinear systems with measurement noise.
- 1983 – 1986 Scientist, National Aeronautical Laboratory (NAL), Bangalore, India.
Work areas:
1) Introduction of system identification methods at NAL, Bangalore,
2) Development of aerodynamic databases and Verification of wind tunnel generated derivatives, and
3) Doctoral research in the area of system identification of nonlinear systems.
- 1986 - 1991 Scientist, Special Research Project SFB-212 "Safety in Air Traffic" of Technical University of Braunschweig, Germany. (in sub-project A6 of DLR Institute of Flight Mechanics).
Work areas:
1) Identification of parameters from linear and nonlinear systems with measurement and process noise, and
2) "Data Gathering" and determination of aerodynamic characteristics of research aircraft ATTAS of DLR from flight data.
- 1991 – to date Scientist, Institute of Flight Research, DLR (German Aerospace Center).
Work areas:
1) Identification of unstable aircraft (X-31A) using filter error and extended Kalman filter methods,
2) "Data Gathering" and determination of aerodynamic characteristics of a military transport aircraft C-160 "Transall" for a Phase III training simulator,
3) Development of a database of a passenger transport aircraft Dornier 328 for a Level D Flight simulator,
4) Calibration of measured flight test data using flight path reconstruction and parameter estimation techniques,
5) Development of parameter estimation methods for large-scale systems and huge amount of flight data,

- 6) Development and commercialization of an integrated software tool for system identification and simulation of dynamic systems,
- 7) Guidance to guest scientists under the DLR-NAL and other cooperative programs, University students for Master's thesis and Post-Doctoral fellows, and
- 8) Contribute to international committees.

5. Publications

„Survey Paper“ and invited contributions in Peer reviewed journals:	2
Contributions in Peer reviewed journals:	15
DLR Research reports:	7
Invited contributions in conference proceedings and lectures:	3
Contributions conference proceedings and lectures:	23
Invited lectures:	3
DLR Mitteilungen:	5
Short-Course Lecture-Notes:	2
Technical reports, Memorandums:	48

6. Honors and awards

1. DAAD (German Academic Exchange Service) Fellowship; 1981 – 1983.
2. Elected to Senior Member AIAA (American Institute of Aeronautics and Astronautics); 1996.
3. Survey-Paper Citation, AIAA (American Institute of Aeronautics and Astronautics) 1996.
4. International member of the AFM-TC (Atmospheric Flight Mechanics Technical Committee) of AIAA; 1997 - present.
5. Technical Program Co-Chair Citation, AIAA (American Institute of Aeronautics and Astronautics), 2000.
6. Scientific Excellence award, DLR German Aerospace Center, Board of Directors, Germany, December 2001.
7. Elected to Associate Fellow AIAA (American Institute of Aeronautics and Astronautics); January 2002.

7. Activities in the international conferences and as a reviewer

1. Session Chair, AIAA AFM-Conference, 1998, Boston, MA, USA.
2. Session Chair, AIAA AFM-Conference, 1999, Portland, OR, USA.
3. Session Chair, AIAA AFM-Conference, 2000, Denver, CO, USA.
4. Technical Program Co-Chair, AFM (Atmospheric Flight Mechanics) Conference, AIAA, Denver, CO, USA, August 2000.

5. Session Chair, AIAA AFM-Conference, 2002, Monterey, CA, USA
6. Reviewer for technical papers in AIAA Journal of Aircraft.
7. Reviewer for technical papers in AIAA Journal of Guidance, Control, and Dynamics.

8. Short Course (Tutorials)

1. AIAA Professional Development Course - Tutorial; AIAA Atmospheric Flight Mechanics Conference, Boston, MA, USA, August 1998.
Topic: Aircraft System Identification.
2. Short Course; DGLR Annual Meeting, Hamburg, Sept. 2001.
Topic: Flight Vehicle System identification in Time Domain.
3. Short Course: ENSICA, Toulouse, France, Nov. 2002
Topic: Flight Vehicle System identification in Time Domain.
4. AIAA Professional Development Course - Tutorial; AIAA Atmospheric Flight Mechanics Conference, Austin, TX, USA, August 2003 (To be conducted).
Topic: Flight Vehicle System identification in Time Domain.