



Dr Ranjan Vepa

BTech(IITMadras) MASc(Wat) PhD(Stan)

School of Engineering and Materials Science Queen Mary University of London Mile End Road London E1 4NS

tel: +44 (0)20 7882 5193 email: r.vepa@qmul.ac.uk web: www.sems.qmul.ac.uk/r.vepa

2024

Rainwater for drinking purposes: An overview of challenges and perspectives.

. Wiley Interdisciplinary Reviews Water vol. 11, (5). Wiley.

A review of modeling and control of remote-controlled capsule endoscopes.

. Expert Review of Medical Devices vol. 21, (4) 293-306. Taylor & Francis.

Space Vehicle Maneuvering, Propulsion, Dynamics and Control, A Textbook for Engineers.

. Springer Nature.

2023

Flight Dynamics, Simulation, and Control, For Rigid and Flexible Aircraft.

. Taylor & Francis.

2022

Current State of the Art of Modelling and Simulation of Propulsion Systems for Hybrid-Electric Aircraft.

. Progress in Sustainable Aviation 37-64. Springer.

Active Blade Pitch Control and Stabilization of a Wind Turbine Driven PMSG For Power Output Regulation.

. Wind Engineering. Sage Publications.

Transonic small disturbance unsteady potential flow over very high aspect ratio wings.

. The Aeronautical Journal vol. 126, (1305) 1834-1852. Cambridge University Press (Cup).

Feedback Tracking Control of Optimal Reference Trajectories for Spacecraft Relative Motion.

. Advances in Space Research. Elsevier.

Feedback control of light cycle oscillations and transonic buzz, using the nonlinear transonic small disturbance aerodynamics.

. Journal of Vibration and Control vol. 29, (3-4) 772-783. Sage Publications.

Feedback control of limit cycle oscillations and transonic buzz, using the nonlinear transonic small disturbance aerodynamics.

. Journal of Vibration and Control vol. 29, (3-4) 772-783. Sage Publications.

2021

Optimal Trajectory Synthesis for Spacecraft Asteroid Rendezvous.

. Symmetry.Mdpi.

Synthesis of an Active Flutter Suppression System in the Transonic Domain using a Computational Model.

. The Aeronautical Journal. Cambridge University Press (Cup).

Hybrid renewable energy/hybrid desalination potentials for remote areas: Selected cases studied in Egypt.

. Rsc Advances vol. 11, (22) 13201-13219.

2020

Development of an off-grid solar energy powered reverse osmosis desalination system for continuous production of freshwater with integrated photovoltaic thermal (PVT) cooling.

. Desalination vol. 495, (2020). Elsevier.

Electric Aircraft Dynamics, A Systems Engineering Approach.

. Taylor & Francis.

Feedback Control of a Spacecraft Electro-dynamic Thruster.

. Acta Astronautica. Elsevier.

Optimal Trajectory Synthesis and Tracking Control for Spacecraft Large Attitude Manoeuvers.

. Advances in Spacecraft Attitude Control. Intechopen.

2019

Model Predictive Control and Controller Parameter Optimisation of Combustion Instabilities.

. International Journal of Turbo and Jet Engines vol. 36, (2) 185-194.

Dynamics and Control of Autonomous Space Vehicles and Robotics.

. Cambridge University Press (Cup).

2018

Mars Powered Descent Phase Guidance Design Based on Fixed-time Stabilization Technique.

. IEEE Transactions On Aerospace and Electronic Systems. Institute of Electrical and Electronics Engineers.

Enhanced and Speedy Energy Extraction from a scaled-up Pressure Retarded Osmosis process with a Whale Optimization based Maximum Power Point Tracking.

. Energy vol. 153, (2018) 618-627. Elsevier.

Modeling and Dynamics of HTS Motors for Aircraft Electric Propulsion.

. Aerospace (Mdpi).Mdpi Ag.

Influence of Flame Dynamics on the Optimal Control of Combustion with Uncertainties.

. Combustion Science and Technology. Taylor & Francis.

Application of the Nonlinear Tschauner-Hempel Equations to Satellite Relative Position Estimation and Control.

. Journal of Navigation vol. 71, (1) 44-64.

2017

Joint position localisation of spacecraft and debris for autonomous navigation applications using angle measurements only.

. Journal of Navigation vol. 70, (4) 748-760.

2016

Nonlinear Control of Robots and Unmanned Aerial Vehicles, An Integrated Approach.

. Taylor & Francis.

Control and Estimation of a Variable Pitch Wind Turbine for Maximum Power Point Tracking.

. Wind Turbines - Design, Control and Applications. Intechopen.

Dynamic battery cell model and state of charge estimation.

. Journal of Power Sources vol. 308, 109-120. Elsevier.

Optimum Power Output Control of a Wind Turbine Rotor.

. International Journal of Rotating Machinery vol. 2016, (1) 1-8. Hindawi.

2014

Flight Dynamics, Simulation, and Control, For Rigid and Flexible Aircraft.

. Taylor & Francis.

2013

Dynamic Modelling, Simulation and Control of Energy Generation.

. Springer.

Modelling and control of the barrett hand for grasping.

. Proceedings Uksim 15th International Conference On Computer Modelling and Simulation Uksim 2013 230-235.

Biomimetic Robotics.

. Engineered Biomimicry. Elsevier.

Modelling of synchronous and induction machines.

. Lecture Notes in Energy 113-139.

Principles of energy conversion.

. Lecture Notes in Energy 61-112.

Non-conventional energy generation: Solar, wave, and tidal energy generation.

. Lecture Notes in Energy 349-373.

Wind power generation and control.

. Lecture Notes in Energy 141-210.

Introduction to energy generation principles.

. Lecture Notes in Energy 1-60.

Dynamic modeling of gas turbines and compressors.

. Lecture Notes in Energy 211-269.

Modelling and simulation of fuel cells.

. Lecture Notes in Energy 271-321.

Batteries: Modeling and state of charge estimation.

. Lecture Notes in Energy 323-347.

Chapter 4 Biomimetic Robotics.

. Engineered Biomimicry 81-105. Elsevier.

2012

Inertial Navigation Position and Orientation Estimation with Occasional Galileo Satellite Position Fixes and Stereo Camera Measurements.

. Annual of Navigation vol. 19, (2) 131-153.De Gruyter.

Nonlinear unscented H suspension and tracking control of mobile vehicles.

. IEEE Transactions On Vehicular Technology vol. 61, (4) 1543-1553.

Adaptive state estimation of a PEM fuel cell.

. IEEE Transactions On Energy Conversion vol. 27, (2) 457-467.

2011

Temporal Redistribution of Plantar Pressure Points in the Healthy and Diabetics: A Time Series Analysis of the Neuro-Capillary Chaos.

. Models and Applications of Chaos Theory in Modern Sciences 84-92. Taylor & Francis.

Nonlinear, optimal control of a wind turbine generator.

. IEEE Transactions On Energy Conversion vol. 26, (2) 468-478.

Ambulatory position tracking of prosthetic limbs using multiple satellite aided inertial sensors and adaptive mixing.

. Journal of Navigation vol. 64, (2) 295-310.

2010

High-Precision Kinematic Satellite and Doppler Aided Inertial Navigation System.

. Journal of Navigation vol. 64, (4) 91-108. The Royal Institute of Navigation.

Dynamics of Smart Structures.

. Wiley.

Nonlinear Filtering of Oscillatory Measurements in Cardiovascular Applications.

. Mathematical Problems in Engineering vol. July, 2010, Hindawi Publishing Corporation.

Modelling and Quasi-Linear Control of Compressor Surge and Rotating Stall Vibrations.

. Mathematical Problems in Engineering (Special issue on: Non). Hindawi Publishing Corp.

On the Numerical Prediction of Stability in Thin Wall Machining.

. Electronic Engineering and Computing Technology 681-690. Springer Verlag.

Dynamics of Smart Structures.

.

Spacecraft large attitude estimation using a navigation sensor.

. Journal of Navigation vol. 63, (1) 89-104.

On the Numerical Prediction of Stability in Thin Wall Machining.

. Electronic Engineering and Computing Technology 681-690. Springer Nature.

Nonlinear Filtering of Oscillatory Measurements in Cardiovascular Applications.

. Math Probl Eng.

Modelling and Quasilinear Control of Compressor Surge and Rotating Stall Vibrations.

. Math Probl Eng.

2009

Biomimetic Robots: Mechanisms and Control.

. Cambridge University Press.

2008

Aeroelastic analysis of wing structures using equivalent plate models.

. Aiaa Journal vol. 46, (5) 1216-1225.

2007

Active suppression of flutter with a smart flap.

. J Guid Control Dynam vol. 30, (5) 1536-1538.

Active flutter suppression by feedback compensation of transport lags.

. J Guid Control Dynam vol. 30, (3) 879-882.

2002

On the stability analysis of systems with internal resonance.

. J Sound Vib vol. 253, (4) 926-940.

2001

Active-passive decomposition with application to arrays of chaotic systems.

. Int J Bifurcat Chaos vol. 11, (6) 1593-1606.

Extended active-passive decomposition of chaotic systems with application to the modelling and control of synchronous motors.

. Nonlinear Control in The Year 2000, Vol 2 vol. 259, 543-554.

1995

Application of observers to monitoring, failure detection and fault diagnosis in aircraft flight control.

. Proceedings of The Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering vol. 209, (1) 65-73.

APPLICATION OF OBSERVERS TO MONITORING, FAILURE-DETECTION AND FAULT-DIAGNOSIS IN AIRCRAFT FLIGHT CONTROL.

. P I Mech Eng G-J Aer vol. 209, (G1) 65-73.

1994

Robotic Systems: Advanced Techniques and Applications.

. Intelligent Systems Engineering vol. 3, (1). Institution of Engineering and Technology (Iet).

1993

Design of Fuzzy Learning Compensators and Controllers for Autonomous. Redundant Robot Manipulators.

. Ifac-Papersonline vol. 26, (1) 312-317. Elsevier.

A review of techniques for machine learning of real-time control strategies.

. Intelligent Systems Engineering vol. 2, (2). Institution of Engineering and Technology (Iet).

1992

INTRODUCTION TO FUZZY LOGIC AND FUZZY SETS.

. Application of Artificial Intelligence in Process Control 146-163. Elsevier.

MONITORING AND FAULT DIAGNOSIS IN CONTROL ENGINEERING.

. Application of Artificial Intelligence in Process Control 456-496. Elsevier.

1986

ON REDUCING THE ORDER OF TRANSFER-FUNCTIONS.

. J Dyn Syst-T Asme vol. 108, (3) 270-272.

1979

Comment on Active Flutter Control Using Generalized Unsteady Aerodynamic Theory.

. Journal of Guidance Control and Dynamics vol. 2, (5) 446-447. American Institute of Aeronautics and Astronautics (Aiaa).