Book Announcements

CROUCH, P. E. and **VAN DER SCHAFT, A. J.,** ***Variational and Hamiltonian Control Systems,*** Lecture Notes in Control and Information Sciences, Vol. 101, Springer-Verlag, New York, 1987, 121 pages.

Purpose: This volume is concerned with the charaterization of Hamiltonian control systems in terms of their variational input-output behavior.

Contents: Hamiltonian realization problem; variational and adjoint variational systems; minimality of the prolongation and Hamiltonian extension; self-adjointness criterion; variational criterion; general nonlinear systems; comments on some open problems.

REINSCHKE, K. J., ***Multivariable Control: A Graph Theoretic Approach,*** Lecture Notes in Control and Information Sciences, Vol. 108, Springer-Verlag, New York, 1988, 274 pages.

Purpose: This monograph presents a graph theoretic approach to the analysis and synthesis of linear time-invariant multivariable control systems.

Contents: Digraph modeling of large-scale dynamic systems; digraph approach to controller synthesis based on static state and output feedback; further exploitation of the graph theoretic approach to controller synthesis.

KECKMAN, V., ***State-Space Models of Lumped and Distributed Systems,*** Lecture Notes in Control and Information Sciences, Vol. 112, Springer-Verlag, New York, 1988, 280 pages.

Purpose: This work is devoted to the science and art of the mathematical description of dynamics of systems with spatially lumped and distributed parameters.

Contents: Lumped processes; distributed processes; mass storage; fluid flow; heat processes; mechanical processes; mass and energy transportation processes; processes with equalization; processes with periodic state changes.

RADHARAMANAN, R., (Ed.), ***Robotics and Factories of the Future '87,*** Springer-Verlag, New York, 1988, 844 pages.

Purpose: This volume is the proceedings of the second international conference on robotics and factories of the future.

Contents: Planning of automation; CAD/CAM; CIM/FMS; kinematic analysis; dynamics and control; trajectory planning; sensors and vision systems; AI and expert systems; mobile robots/robotic devices; robot applications; automation and innovation in mining; CAD/CAM and robotics education/training; safety, human resources, and social economic implications.

ANDERSON, J. D., ***Introduction to Flight,*** 3rd ed., McGraw-Hill, New York, 1989, 616 pages.

Purpose: This book presents the fundamentals of aerospace engineering at the introductory level.

Contents: The first aeronautical engineers; fundamental thoughts; standard atmosphere; basic aerodynamics; airfoils, wings, and other aerodynamic shapes; elements of airplane performance; principles of stability and control; astronautics; propulsion; hypersonic vehicles.

SKELTON, R. E., ***Dynamic Systems Control: Linear Systems Analysis and Synthesis,*** Wiley, New York, 1988, 497 pages.

Purpose: This text is designed for a second course in modeling and control of dynamic systems.

Contents: Mathematical preliminaries; models of dynamic systems; properties of state-space realizations; controllability and observability; equivalent realizations and model reduction; stability; optimal control of time-invariant systems; state estimation; model error concepts and compensation.

Erratum

Expert Systems Approach for Generalized Traveling Salesman Problem

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JGCD, pp. 425-429, (1988)

THE following errors were introduced inadvertently during the production of the paper:

p. 425:

On line 4 of the first paragraph, the definition for "NP-hard" in parentheses should appear as "(not polynomially hard)."

p. 428:

The last line in the rule VR2 belongs to the left-hand side of the next rule, VR3.