

Proceedings of the 1st Mediterranean Symposium

June 21 - June 23 1993

Plenary Session MI-1 (8:15-10:15) Room; Macedonia

Chairman: M.A. Christodoulou, Technical U of Crete

Keynote Lecture on Intelligent Control. G. Saridis, Rensselaer Polytechnic Institute, USA

Invited Lecture on Neural Networks for Control, Identification & Diagnosis. H.E. Rauch, Lockheed, USA

Session M2-1 (10:45-12:15): Neural Networks for Control - Part A Room: Macedonia

Chairman: P.J. Antsaklis, U of Norte Dame Co-Chairman: K. Warwick, U of Reading

A. Sideris & K. Orita. A Novel Neural Network Structure with Application to Robot Trajectory Control. University of California, Irvine, USA & Nippon Steel Corporation, JAPAN

G. Rovithakis & M.A. Christodoulou. Regulation of Unknown Nonlinear Dynamical Systems via Dynamical Neural Networks. Technical University of Crete, GREECE

E.B. Kosmatopoulos, M.A. Christodoulou & P.A. Ioannou. Nonlinear system Identification Using Exponential Error Converging Neural Networks. Technical University of Crete, GREECE & University of Southern California, USA

I.K. Konstantopoulos & P.J. Antsaklis. The Four-Parameter Controller, A Neural Network Implementation. University of Norte Dame, USA

K. Koutroumbas & Kalouptsidis. A New Associative Memory Architecture. University of Athens, GREECE

F.L. Lewis, K. Liu & A. Yesildirek. Neural Net Robot Controller with Guaranteed Tracking Performance. The University of Texas at Arlington, USA

Session M2-2 (10:45-12:15): Robotics Room: Vergina

Chairman: K.P. Valavanis, U of SW Louisiana Co-Chairman: K.J. Kyriakopoulos, R.P.I.

S.R. Malladi, K.P. Valavanis & M.C. Mulder. Trajectory Generator for a Sensor Based Redundant Manipulator. University of Southwestern Louisiana, USA

Z. Lin, P.V. Patel & C.A. Balafoutis. Augmented Impedance Control: An Approach to Impact Reduction for Kinetically Redundant Manipulators. Concordia University, CANADA

A. Curran & K.J. Kyriakopoulos. Sensor-Based Self-Localization for Wheeled Mobile Robots. Rensselaer Polytechnic Institute, USA (Temporary Address, GREECE)

S.R. Malladi, K.P. Valavanis & M.C. Mulder. Sensor Based Motion Control and Coordination of a Redundant Manipulator. University of Southwestern Louisiana, USA

[A. Ailon & R. Ortega. An Observer-Based Set-Point Controller for Robot Manipulators with Flexible Joints. Ben-Gurion University of the Negev, ISRAEL & Universite de Technologie de Compiegne, FRANCE](#)

[D.P. Tsakiris & P.S. Krishnaprasad. Motion Planning for a Class of Active Robotic Systems. University of Maryland, USA.](#)

Session M2-3 (10:45-12:15): Tracking, Noninteracting & Decoupling Control Room: Samaria

Chairman: M. Malabre., Ecole Centrale de Nantes Co-Chairman: T.G. Koussiouris, N.T.U.A.

[T.G. Koussiouris & M. Zervos. On the solvability of Morgan's problem: A necessary and sufficient condition for decoupling by state feedback and a constant singular point transformation. National Technical University of Athens, GREECE](#)

[J.C. Martinez Garcia, M. Malabre & R. Rabah. The partial non-interacting problem: geometric and structural solutions. LAN, URA, FRA- NCE & ALGERIA](#)

[B. Bona, M. Indri & A. Tornambe. Decoupling Control and Trajectory Tracking for Piezoelectric Materials. Politecnico di Torino, ITALY](#)

[S. Longhi, A.M. Perdon & D. Camillucci. Output Tracking for a Family of Linear Systems. Universita di Ancona, ITALY](#)

[O.M. Grasselli, S. Longhi & A. Tornambe. Robust Continuous-Time Tracking and Regulation for Multirate Sampled-Data Systems. Universita di Roma "Tor Vergata" & Universita di Ancona, ITALY](#)

[D. Emiris. A Singularity Robust Kinematic Control Strategy for Decoupled Robot Geometry. Technical University of Crete, GREECE](#)

Session M3-1 (2:15-3:45); Adaptive Control Room: Macedonia

Chairman: P.A. Ioannou, U of Southern California Co-Chairman: R. Lozano, U de Tech. de Compiegne

[I. Kanellakopoulos, M. Krstic & P.V. Kokotovic. Trajectory Initialization in Adaptive Nonlinear Control. University of California at Los Angeles &: University of California at Santa Barbara, USA](#)

[R. Lozano & X.-H. Zhao. Adaptive Pole Placement without Excitation Probing Signals. Universite de Technologie de Compiegne, FRANCE](#)

[G. Bartolini & A. Ferrara. Discontinuous Pole Assignment Control of Uncertain Systems Using only Input/Output Measurements. University of Geneva, ITALY.](#)

[I.N.M. Papadakis & S.C.A. Thomopoulos. An Improved Performance adaptive Control Method for Linear and Linearizable Systems. Pennsylvania State University, USA](#)

[P. Pugliese & P. Muraca. An Adaptive Filter using Moving Sensor for a Class of Distributed Parameter System. Universita della Calabria, ITALY](#)

[S. Kotsios & N. Kalouptsidis. Adaptive Control for a Certain Class of Nonlinear Systems. University of Athens, GREECE](#)

[E. Kassapakis & K. Warwick. Adaptive Receding Horizon Strategies for Real-Time Target Tracking. University of Reading, U.K](#)

Session M3-2 (2:15-3:45) : 2-D Systems - Part A Room: Vergina

Organizer: T. Kaczorek, Warsaw Technical U Chairman: T. Kaczorek, Warsaw Technical U Co-Chairman: R. Nikoukhah, INRIA

N.K. Bose. Recent Results in Modeling and Parameter Estimation of 2-D Systems and Signals. Pennsylvania State University, USA

[J.E. Kurek. A Simple Realization of Separable 2-D Systems. Polytechnika Warsza-wska ul. Chodkiewicza, POLAND](#)

[R. Nikoukhah. Estimation Theory for Graph Linear Systems: Applications to 1-D and multi-D filtering and smoothing. INRIA-Rocquancourt, FRANCE](#)

[A. Dzielinski. Optimal Reconstruction of State Vector in 2-D Systems: Survey. Warsaw University of Technology, POLAND](#)

[N.E. Mastorakis & N. Theodorou. Simple, Group and Approximate Factorization of Multidimensional Polynomials. National Technical University, GREECE](#)

Session M3-3 (2:15-3:45): Nonlinear & Infinite Dimensional Systems Room: Samaria

Chairman: E.G. Strangas, Michigan State U Co-Chairman: I.G. Kevrekidis, Princeton U

[I.G. Kevrekidis & M.D. Graham. Model reduction for stability and bifurcation calculation for nonlinear PDEs. Princeton University, USA](#)

[P. Coustal, F. Delebecque & R. Nikoukhah. Application of *Hoc*, Methods to the Control of Flexible Structures. SFIM Industries EA & INRIA, FRANCE](#)

[E.G. Strangas & H.K. Khalil. A New Flux Observer for Induction Machines. Michigan State University, USA](#)

[P.-A. Bliman & M. Sorine. Modeling and Control of a Class of Systems with Hysteresis. Application to Friction Compensation. INRIA, FRANCE](#)

[R. Outbib & J.C. Vivalda. Stabilization of the rigid body about the middle axis. INRIA, Lorraine, FRANCE](#)

[V. Mahout, P. Lopez, J.P. Carcasses & C. Mira. Chaotic Behaviors of a Two Revolute Joint Robot Controlled with a PD Algorithm. GARI & GESNLA, FRANCE](#)

TUESDAY, 22

Session T1-1 (8:45-10:15): Discrete Event Systems Room: Macedonia

Chairman: **J.N. Tsitsiklis**, M.I.T. Co-Chairman: **P.R. Kumar**, U of Illinois at Urbana

[D.P. Bertsekas & J.N. Tsitsiklis. Synchronous and Asynchronous Stochastic Control to a terminal state. M.I.T., USA.](#)

[S. Kumar & P.R. Kumar. Performance Bounds for Queueing Networks and Scheduling Policies. University of Illinois, Urbana, USA](#)

[D. Ionescu & J.-Y. Lin. A supervisor design procedure for discrete event systems in a temporal logic framework with applications. University of Ottawa, CANADA](#)

[A. Di Febbraro, S. Grosso & R. Minciardi. Analysis and Optimization of Discrete Event Systems modeling manufacturing processes. University of Genoa, ITALY.](#)

[M.A. de Ridder & M.P. Spathopoulos. Distributed control design for discrete event systems. University of Strathclyde, U.K](#)

[S.C.H. Lu, D. Ramaswamy & P.R. Kumar. Efficient Scheduling Policies to Reduce Mean and Variance of Cycle-time in Semiconductor Manufacturing Plants. University of Illinois, Urbana, USA](#)

Session Tl-2 (8:45-10:15): Computational Procedures for Polynomial Control Design Room: Vergina

Organizer: **M. Sebek**, Czech Academy of Sciences Chairman: **M. Sebek**, Czech Academy of Sciences Co-Chairman: **V. Kucera**, Czech Academy of Sciences

[V. Kucera. The Pole Placement Equation: A Survey. Academy of Sciences of Czech Republic, CZECH REPUBLIC](#)

[P.J. Antsaklis & Z. Gao. On Polynomial and Rational Matrix Interpolation. University Of Norte Dame & Cleveland State University, USA](#)

M. Sebek & S. Pejchova. Numerical Behavior of Linear Polynomial Operations or What Do Experiments Reveal?. Academy of Sciences of Czech Republic, CZECH REPUBLIC

[O. Saito, T. Uasa & L. Xu. On Application of Computer Algebra to Control Theories. Toyohashi University, Japan](#)

[D. Fragopoulos, A. Casavola & M. Grimble. A Polynomial Solution to Scalar \$H_{\infty}\$ 4-block General Distance Problem. University of Florence, ITALY & Strathclyde University, Scotland, U.K](#)

Panel Discussion. Numerical Properties of Polynomial Algorithms. Session Tl-3 (8:45-10:15): Fuzzy Logic, AI, & Expert Systems for Control Room: Samaria

Chairman: **F.L. Lewis**, U of Texas at Arlington Co-Chairman: **G. Conte**, U di Ancona

[K. Liu & F.L. Lewis. Self-Tuning Fuzzy Logic Control With a Single Function. University of Texas at Arlington, USA](#)

[V. R. Kumar. The Application of Artificial Intelligence Techniques for Intelligent Control of Dynamical Physical Systems. CSIRO, Australia](#)

[M. Zervakis. A Self-Organizing and Trainable Fuzzy-Neural Controller. University of Minnesota, USA](#)

[G. Conte & L. Silvestri. Fuzzy Controllers for Industrial Processes. Universita di Ancona, ITALY](#)

[S. Baglio, L. Fortuna, S. Graziani & G. Muscato. How the Membership Function Shape Characterizes the Dynamical Behaviors of a Fuzzy system. Universita di Catania, ITALY](#)

G. Magoulas, A. Stathaki & R. E. King. A Development System for the Design of Fuzzy Controllers. University of Patras, GREECE

Panel Discussion T2-1 (10:45-12:15): Towards Autonomous Control Systems Room: Macedonia

Chairman P.J. Antsaklis, U of Norte Dame

Session T2-2 (10:45-12:15): Stability & Control of Nonlinear Systems -

Part A

Room: Vergina

Chairman: J. Tsiniias, N.T.U.A. Co-Chairman: G. Rovithakis, T.U.C.

[J. Tsiniias. Global stabilization for planar nonlinear systems. National Technical University of Athens, GREECE](#)

[A. Cavallo & G. De Maria. Nonlinear Tracking Problem by a Sliding Manifold Approach. Universita di Napoli & Universita di Firenze, ITALY](#)

[R.A. Wright & C. Kravaris. Notions of Output Equivalence for Nonlinear Systems. Dow Chemical Company & University of Michigan, USA](#)

[R. Chabour & P. Florchinger. Exponential Mean Square Stability of Partially Linear Stochastic Systems. INRIA Lorraine & Universite de Metz, FRANCE](#)

[F. Couenne-Celle, H. Hammouri, J.-C. Marques. A Separation Principle for dissipative Control Affine system. Universite Claude Bernard Lyon I, FRANCE](#)

[P. Florchinger. Dynamic Stabilization of Nonlinear Stochastic Systems. Universite de Metz, FRANCE](#)

J.B. Pomet & C. Moog. To be announced. INRIA Sophia, FRANCE

Session T2-3 (10:45-12:15): Generalized Systems Room: Samaria

Chairman: N. Karcanias, City U Co-Chairman: K. Ozcaldiran, Bogazici U

[N. Karcanias. Control Theory Issues and Problems in Global Instrumentation. City University, UK](#)

[C.F. Fragulis. A Closed Formula for the Determination of the Impulse Solutions of Linear Homogeneous Matrix Differential Equations. Aristotle University of Thessaloniki, GREECE](#)

[K. Ozcaldiran & E. Sevilgen. Observers for singular systems. Bogazici University, TURKEY](#)

[M.L. Corradini. Self-Bounded Controlled Invariant Subspaces for Singular Systems. Universita di Ancona, ITALY](#)

[C.F. Fragulis. Minimal Realizations of the Inverse of a Polynomial Matrix using Finite and Infinite Jordan Pairs. Aristotle University of Thessaloniki, GREECE.](#)

[C.F. Fragulis & A.I.G. Vardulakis. Reachability of Polynomial Matrix Descriptions. Aristotle University of Thessaloniki, GREECE](#)

Session T3-1 (2:15-3:45): Neural Networks for Control - PartJB Room: Macedonia

Chairman: A.G. Chassiakos, California State U Co-Chairman: E.B. Kosmatopoulos, Tech. U of Crete

[K. Warwick & N. Ball. Using Self-Organizing Feature Maps for Adaptive Control. University of Reading, U.K](#)

[A.G. Chassiakos & S.F. Masri. Applications of neural networks to the identification of structural systems. California State University at Long Beach & University of Southern California, USA](#)

[T.V. Theodosopoulos & M.S. Branicky. A hierarchical algorithm for neural training and control. MIT, USA](#)

[E.B. Kosmatopoulos & M.A. Christodoulou. Stability, Robustness & Approximation Properties of Recurrent High Order Neural Networks. Technical University of Crete, GREECE](#)

[S. Panzieri & G. Ulivi. Experiments on Neural Control of a Flexible Manipulator. Universita degli Studi di Roma "La Sapienza", ITALY](#)

[C.M. Jubien & N.J. Dimopoulos. Identification of a PUMA-560 Two-Link Robot using a Stable Neural Network. University of Victoria, CANADA](#)

Session T3-2 (2:15-3:45): 2-D Systems - Part B Room: Vergina

Organizer: T. Kaczorek, Warsaw Technical U Chairman: Mertzios, Democritus U Co-Chairman: T. Kaczorek, Warsaw Technical U

[J. Gregor. On Implicit Linear n-D Systems. Czech Technical University, Czech Republic](#)

[I. Follynska. Grownall's Inequality for 2-D Systems. Technical University of Poznan, POL- AND](#)

[J. Klamka. Minimum Energy Control Problem for General Linear 2-D Systems in Hilbert Spaces. Silesian Technical University, POLAND](#)

[T. Kaczorek. Periodic Solutions to 2-D Constant Linear Systems. Warsaw Technical University, POLAND](#)

[A. Dzielinski & S. Skoneczny. Neural Network models for two-dimensional image processing and recognition. Warsaw University of Technology, POLAND](#)

Panel Discussion

Session T3-3 (2:15-3:45): Stability & Control of Nonlinear Systems -

Part B

Room: Samaria

Chairman: N. Kalouptsidis, U of Athens Co-Chairman: C.A. Floudas, Princeton U

[P. Psarris & C. Floudas. An optimization approach for robust stability analysis of linear and nonlinear systems with parametric uncertainty. Princeton University, USA](#)

[R. Chabour & A. Ferfera. Stabilization of a Class of Discrete-Time Bilinear Systems. INRIA & URA-CNRS, FRANCE](#)

[L. de Re. Hybrid feedback linearizing control for bounded bilinear dyadic plants. ETH, SWITZERLAND](#)

[W.A. Cebuhar & P.J. Hubbard. Approximate optimal control for nonlinear systems. Queen's University, CANADA](#)

[R. Chabour & H. Hammouri. Stabilization of Bilinear systems using an Observer Configuration. INRIA LORRAINE & Universite Claude Barnard Lyon I, FRANCE](#)

[A.C. Kokossis & C.A. Floudas. On the integration of optimization and stability: the matrix measure relaxation method and its application to the optimal synthesis of complex nonlinear systems. Princeton University, USA](#)

WEDNESDAY, 23

Session W1-1 (8:45-10:15): Robust Identification & Control Room: Macedonia

Chairman: M.A. Dahleh, M.I.T. Co-Chairman: P. Voulgaris, U of Illinois at Urbana

[J.S. Shamma. Optimal Control with Nonlinear Full State Feedback. University of Texas at Austin, USA](#)

[M.A. Dahleh, T.V. Theodosopoulos & J.N. Tsitsiklis. The Sample Complexity of Worst-Case Identification of F.I.R. Linear Systems. M.I.T. USA](#)

[P. Voulgaris. Optimal \$H_2\$ to \$H_\infty\$ Estimation: A Model Matching Approach. University of Illinois at Urbana Champaign, USA](#)

[Y. Theodor & U. Shaked. A Nash Game Approach to Discrete-Time \$H_\infty/H_2\$ Filtering. Tel Aviv University, ISRAEL](#)

[M.J. Grimble. Weighting Selection and Robustness of \$H_\infty\$ Designs. University of Strathclyde, UK](#)

[F. Amato, G. Ambrosino, F. Garifalo, L. Glielmo & L. Verde. Robust Stability via Polytopic Set Covering. Universita di Napoli "Federico II", ITALY](#)

[K.Y. Smyth, C. Yi & E. Rogers. Computable Performance Bounds for Linear Repetitive Processes.](#)

Session W1-2 (8:45-10:15): Control of Linear Systems Room; Vergina

Chairman: P.P. Groumpos, U of Patras Co-Chairman: A. Aspragathos, U of Patras

[L. Chisci & E. Mosca. Stabilizing Predictive Control with Dynamic Weights. Universita di Firenze, ITALY](#)

[A.V. Medvedev & H.T. Toivonen. Continuous-Time Deadbeat Observation Problem. Lulea University of Technology, SWEDEN & Abo Akademi, FINLAND](#)

[R. Suarez, J. Solis-Daun & J. Alvarez. Stabilization of Linear Controllable Systems by Means of Bounded Continuous Feedback Control. Universidad Autonoma Metropolitana-Iztapalapa, MEXICO](#)

[M. M'Saad, M. Tadjine & M. Bouslimani. Self-Tuning Partial State Reference Model Controllers with Loop Transfer Recovery. GDR CNRS "Automatique", FRANCE](#)

[S. Tzafestas & G. Vagelatos. On the Inverse Design Problem of GMBPC. National Technical University of Athens. GREECE](#)

A.V. Pagalos & **P.P.** Groumpos. The effect of interconnections on the BAS regulator of large scale systems and the BAS regulator of N identical subsystems. University of Patras, GREECE

Session W1-3 (8:45-10:15): Applications Room: Samaria

Chairman: A. Ferrara, U of Genoa Co-Chairman :G. Stavrakakis, Technical U of Crete

[A. Di Febraro & A. Ferrara. A discrete event model for freeway systems. University of Genoa, ITALY](#)

[A. Pouliezios, G. Stavrakakis & G. Tselentis. Detection of Multivariable System Noise Degradation. Technical University of Crete, GREECE](#)

[P.A. Frick & T.Q. Doan. Combined Solutions of Optimal Control and System Parameter Identification Problems for Parallel Machines. University of Colorado at Colorado Springs, USA](#)

[A. Tzes & P.-Y. Peng. Backpropagation Neural Network Control for DC-motor stiction compensation. Polytechnic University, USA](#)

[K. Stamatis, P. Lyras, P. Foundas, P. Prokopiou, J. Konstanidis & G. Papadopoulos. Implementation of an Intelligent Distributed system for Industrial Control. University of Patras, GREECE](#)

[D. Kazakos & T. Pimenides. Observer based control of culture fermentation processes. University of Patras, GREECE](#)

[S.A. Manesis & T. Pimenides. Expert rule-based control to a fish generative-cumulative plant. University of Patras, GREECE](#)

Session W2-1 (10:45-12:15) : Modeling, Estimation and Control of Infinite Dimensional Systems Room; Macedonia

Organizers: H.T. Banks, North Carolina State U & M.A. Demetriou, U.S.C. Chairman: H.T. Banks, North Carolina State U Co-Chairman: M.A. Demetriou, U.S.C.

[H.T. Banks. Control of Smart Materials Structures. North Carolina State University, USA.](#)

[J.A. Burns. An application of robust control to nonlinear distributed parameter systems. Virginia Polytechnic Institute and State University, USA](#)

[M.A. Demetriou & I.G. Rosen. Adaptive estimation of a flexible beam via piezo-ceramic actuation. University of Southern California, USA.](#)

[F. Kappel. Parameter identification for state dependent delays originating from threshold conditions. University of Graz, AUSTRIA](#)

K. Kunish. Parallel implementations of the augmented lagrangian method for parameter problems. University of Graz, AUSTRIA

[M.D. Gunzburger. Computational techniques for flow control and optimization. Virginia Tech, USA](#)

Session W2-2 (10:45-12-15) : Linear Systems Room: Vergina

Chairman: A.I.G. Vardoulakis, U of Thessaloniki Co-Chairman: M. Malabre, Ecole Centrale de Nantes

D. Aeyels & R. Sepulchre. Stability for time-variant differential equations. Univer-siteit Gent, BELGIUM

[N.P. Karampetakis, A.C. Pugh, A.I.G. Vardoulakis & G.E. Hayton. Structural Properties of Inverse Linear systems. Aristotle University of Thessaloniki, GREECE, Loughborough University of Technology, U.K. & University of Hull, U.K](#)

[M.E. Bonilla, M. Malabre & J.A. Cheang Wong. On the Use of Derivators \(and Approximations\) for Solving Basic Control Problems. Ecole Centrale de Nantes, FRANCE](#)

[I. G. Kevrekidis, R.A. Adomaitis, C.E. Frouzakis & R. Rico-Martinez. Noninvertibility and its role in the dynamics of adaptively-controlled systems University of Maryland & Princeton University, USA](#)

[N.P. Karampetakis & A.I.G. Vardoulakis. On the Solution Space of Discrete Time AR Representations. Aristotle University of Thessaloniki, GREECE](#)

Session W2-3 (10:45-12-15) : Intelligent Methods for Control Room: Samaria

Chairman: B.G. Mertzios, Democritus U Co-Chairman: R.E. King, U of Patras

[K.P. Valavanis & M.A. Bayoumi. A VLSI Based Architecture for Plan Formulation and Organization in Multisensory Robotic Systems. University of Southwestern Louisiana, USA](#)

[E. Dermatas, A. Nearchou & A. Aspragathos. Solving the inverse kinematic problem of a robot arm using the error back-propagation algorithm. University of Patras, GREECE](#)

[C. Tatsiopoulos & B.G. Mertzios. Ways to Improve Machine Learning and Intelligent Techniques. Democritus University of Thrace, GRE- ECE](#)

R. E. King & A. Stathaki. Rule-Based Industrial Neural Control. University of Patras, GREECE

[O. Kosmidou, D. Zimeris & B.G. Mertzios. On the Robustness Aspects of Fuzzy Logic Controllers. Democritus University of Thrace, GREECE](#)

[S. Tzafestas, A. Triantafyllakis & G. Rizos. A New Heuristic Approach for Scheduling Dependent Tasks on Identical Machines to Minimize the Makespan. National University of Athens, GREECE](#)

Session W3-1 (2:15-3:45) : Filtering & Signal Processing Room: Macedonia

Chairman: A.N. Venetsanopoulos, U of Toronto Co-Chairman: S. Fioretti, U di Ancona

[M. Zervakis & A.N. Venetsanopoulos. To be announced. University of Toronto, CANADA](#)

[S. Fioretti & L. Jetto. Low A-Priori Information Signal Modeling for Optimal Smoothing and Differentiation. Universita di Ancona, ITALY](#)

[M.G. Kazantzakis & E. Angelidis. A Mathematical Programming Method for Designing FIR Digital Filters with Nonuniform Frequency Samples. Hellenic Navy Research Center, GREECE](#)

[P. Marino, R. Setola, F. Vasca & L. Glielmo. Kalman filtering in synchronous Frame for Parameter Estimation of Field Oriented Controlled Induction Machine. Universita di Napoli "Federico II, ITALY](#)

G. Magoulas, A. Stathaki & R. E. King. A Learning Digital Laguerre Filter. University of Patras, GREECE

[E. Angelidis & M.G. Kazantzakis. A Parallel LU-Decomposition Algorithm for Modeling Discrete Signals by Polynomial or Exponential Interpolation. Hellenic Navy Research Center, GREECE](#)

Session W3-2 (2:15-3:45): Control Room: Vergina

Chairman: R. E. King, U of Patras Co-Chairman: N.T. Koussoulas, U of Patras

[S.S. Tsalidis & N.A. Aspragathos. Study of joint dynamic models used in computed-torque control of manipulators. University of Patras, GREECE](#)

F. Skiadas & N.T. Koussoulas. Properties of the Utopian Multiobjective Regulator. University of Patras, GREECE

[E.G. Stamatoukos & P.P. Groumpos. The block arrow structure \(BAS\) regulator versus the perturbation approach regulator. A comparison study. University of Patras, GREECE](#)

[G.S. Stavropoulos & P.P. Groumpos. A comparison study on the decentralized discrete stochastic estimation problem. University of Patras, GREECE](#)

A.V. Pagalos & P.P. Groumpos. The effect of interconnections on the BAS regulator of large scale systems and the BAS regulator of N identical subsystems. University of Patras, GREECE

[C.A. Barbargires & C.A. Karybakas. Dead-Beat Response of SISO systems to Parabolic Inputs with Optimum Step and Ramp Responses. Aristotle University of Thessaloniki, GREECE](#)

[N.T. Koussoulas & J. Vakalis. Approximations for Chaotic Systems via Stochastic Linear Systems -](#)

