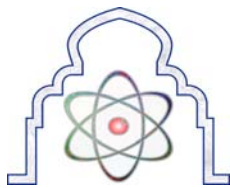


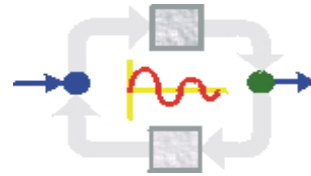


www.icgst.com

ACSE



www.icgst.com



ICGST International Conference on Automatic Control and Systems Engineering (ACSE-05)

19-21 December 2005, CICC,
Cairo, Egypt

© ICGST / ACSE 2005
All rights reserved
www.icgst.com

ACSE-05 Conference Proceedings
19-21 December 2005,
CICC, Cairo, Egypt
ISBN: 21967/2005
© ICGST 2005

List of Contents



- Addison Ros-Bolvar (1) and Germain Garcia (2), "[Robust Fault Detection Based-On \$H_2\$ - \$H_\infty\$ Control for Discrete-Time Linear Systems](#)", (1) [Universidad de los Andes](#), Facultad de Ingenierıa, Departamento de Control, Merida 5101, Venezuela, (2) [LAAS-CNRS](#), 7 Avenue du Colonel Roche, 31077, Toulouse Cedex 4, France, [P1110511001](#), (P. 7-12)



- Addison Ros-Bolvar and Solben Godoyx, "[Multivariable Anti-Windup Controller Design using \(\$H_2/H_\infty\$ \) Multiobjectives](#)", [Universidad de los Andes](#), Facultad de Ingenierıa Departamento de Control, xPostgrado de Control, Merida 5101, Venezuela, [P1110520102](#), (P. 28-34)



- T. Reisinger, "[Hybrid Position/Force-Control for Implementing Skill Primitives](#)", Institute for Control Engineering, [Technical University Braunschweig](#), Hans-Sommer-Strae 66, 38106 Braunschweig, Germany. [P1110527102](#), (P.191-196)



- Gamal A. Elnashar, "[Multi-Input Multi-Output Fuzzy Model Reference Learning Controller \(MIMOFMRLC\) for a Multivariable Nonlinear Servomechanisms of a Free Gyro Stabilized Mirror System](#)", [Egyptian Armed Forces](#), [P1110523121](#), (P.212-221)



- D. Choe and Y. Lee and S. Cho, "[Nonlinear Pitch Autopilot Design with Local Linear System Analysis](#)", [Agency for Defence Development](#) 3-1-3, P.O.Box 35-3, Daejeon City, 305-600, Korea, [P1110524101](#), (P. 140-146)



- Alenany and O. Abdelrahman and I. Ziedan, "[Simple Tuning Rules of PID Controllers for Integrator/Dead Time Processes](#)", Department of Computers and Systems, Faculty of Engineering, [Zagazig University](#), Zagazig, Egypt. [P1110504001](#), (P. 1-6)



- U. Ledzewicz (1) and H. Schuttler (2), "[Optimal Control for a System Modelling Tumor Anti-Angiogenesis](#)", (1) Dept. of Mathematics and Statistics, [Southern Illinois University at Edwardsville](#), Edwardsville, Illinois, 62026-1653, (2) Dept. of Electrical and Systems Engineering, [Washington University](#), St. Louis, Missouri, 63130-4899, USA [P1110523133](#), (P. 147-152)



- Michael C. Fu, "[Sensitivity Analysis for Stochastic Activity Networks](#)", Smith School of Business and Institute for Systems Research, [University of Maryland](#), College Park, MD 20742 USA, [P1110523111](#), (P. 63-68)



- E. Petlenkov, E. Rustern, "[Linear Dynamic Systems with Static Actuator Nonlinearities Identification for Control](#)", Department of Computer Control, [Tallinn University of technology](#), Ehitajate St. 5, 19086 Tallinn, Estonia, [P1110523119](#), (P. 41-46)



- Calin Ciufudean (1) and Camelia Petrescu (2) and Daniel Popescu (3), "[Scheduling Diagnosability of Flexible Manufacturing System](#)", (1) tefan cel Mare" [University of Suceava](#), Faculty of Electrical Engineering, 9 University Str., Suceava, RO-720225, Romania, (2) Electrical Engineering Co, 313 Splaiul Unirii Bvd., Bucharest, Romania, (3) [Technical University of Constructions](#), 66 P.Protopopescu Bvd., Bucharest, Romania, [P1110519003](#), (P.222-227)



- Alireza Doodman Tipi and Ali Khaki Seddigh and Hassan Mohammadi Abdar, "[Design of first order stable controller to achieve defined characteristics](#)", [K. N. Toosi University of technology](#) – Tehran, Iran, [P1110524124](#), (P. 79-84)



- Alireza Doodman Tipi and Ali Khaki Seddigh and Hassan Mohammadi Abdar, "Controller Stability in Closed Loop Systems", [K. N. Toosi University of technology](#) – Tehran, Iran, [P1110524125](#), (P.208-211)



- H. Rockel and U. Konigorski, "Time and Frequency Domain Pole Placement in Parametric Iterative Learning Control", [Institut für Elektrische Informationstechnik](#), [Clausthal University of Technology](#), [P1110523123](#), (P.153-160)



- Jae-Woong Kim, Hee-Soo Bae, Seung-Whan Jang, "A [Laser Vision Sensor System for Tracking the I-Butt Weld Joints](#)", [School of Mechanical Engineering](#), [Yeungnam University](#), Kyongsan Kyongbuk 712-749, Korea, , 214-1 Daedong, Kyongsan, Korea, [P1110524109](#), (P. 102-106)



- [E. M. Shaban](#) and C. .J. Taylor, "[Proportional-Integral-Plus control of a class of nonlinear systems using exact and partial linearisation by feedback](#)", Engineering Department, [Lancaster University](#), UK. [P1110527104](#), (P.177-184)



- P. J. Deore and B. M. Patre, "[Near-Optimal Robust Controller for Two-Time-Scale Discrete Interval Systems](#)", SGGS Institute of Engineering and Technology, Vishnupuri, Nanded 431606, India. [P1110527103](#), (P.185-190)



- Carmen Cojocaru-Filipiuc, C.G. Haba, A. Crețu, "[Brushless D.C. Motor with Phase and Width Control of Conduction Signals](#)", Faculty of Electrical Engineering, "Gh.Asachi", [Technical University of Iasi](#), Bd. D.Mangeron Nr.53, Iași, Romania. [P1110528101](#), (P. 173-176)



- V. Bahrin and C.G. Haba, "[The Speed Control System Of The DC Motor With Passive Adaptive Controller And Torque Estimator](#)", [Technical University of Iasi](#), Faculty of Electrical Engineering Bd.D.Mangeron Nr.53, 700050 Iasi, Romania. [P1110523105](#), (P. 23-27)



- S. A. Salman and A. G. Sreenatha, "[NONLINEAR IDENTIFICATION OF UNMANNED AIRCRAFT VEHICLE](#)", [Australian Defence force Academy](#), Northcott Drive, Canberra ACT 2600, AUSTRALIA, [P1110523116](#), (P. 60-62)



- Jin-Dae Kim and Ho Suk Shim and Chan-Bai Shin and Jeh-Won Lee, "[Compensation of Robot Off-Line Programming Using Image Based Visual Servoing Method with Virtual Stereo Camera Data](#)", Yoojin MS Co., Ulsan Technical College, [Yeungnam University](#), 214-1 Daedong, Kyongsan, Korea, [P1110524110](#), (P. 96-101)



- L. Cherfi and H. Abou-Kandil and H. Bourles, "[Iterative Method for General Algebraic Riccati Equation](#)", Laboratoire SATIE (UMR, CNRS, 8029), [Ecole Normale Supérieure de Cachan](#), France, [P1110524123](#), (P. 85-88)



- S. B. Alabi (1) and O. Taiwo (2), "[INTERNAL MODEL CONTROL OF UNCERTAIN SYSTEMS: AN IMPROVED APPROACH](#)", (1) Department of Chemical/Petroleum Engineering, Faculty of Engineering, [University of Uyo](#), Uyo, Nigeria (2) Department of Chemical Engineering, Faculty of Technology, Obafemi [Awolowo University](#), Ile Ife, Nigeria, [P1110523122](#), (P.161-166)



- A. Vivas and V. Mosquera and J. Flrez, "[Predictive functional control of a PUMA robot](#)", Department of Electronic, Instrumentation and Control, [University of Cauca](#), Calle 5 No. 4-70, Popayán, Colombia, [P1110523120](#), (P.35-40)



- Öcal, Ö., Söylemez, M. T., Bir, A., "[Robust Pole Assignment using Coefficient Diagram Method](#)", Department of The Computer Engineering, [Kadir Has University](#), Department of Electrical Engineering, [Istanbul Technical University](#), Istanbul, Turkey. [P1110527101](#), (P.197-202)



- D. H. Shin (1) and H. G. Lee (2) and H. S. Kim (2), "[Wafer Positioning Control of Clean Tube System](#)", (1) Dept. of Mech. and Info. Eng, [University of Seoul](#), (2) [Korea Institute of Industrial Technology](#), Chonan-si, Chungnam, Korea, [P1110526103](#), (P.203-207)



- B. M. Patre and P. J. Deore, "[A Two-Degrees-of-Freedom Design Methodology for Interval Process Plants](#)", S.G.G.S. [Institute of Engineering and Technology, Vishnupuri](#), Nanded - 431 606, India, [P1110524106](#), (P.112- 116)



- T. Bouabana-Tebibel (1) and M. Belmesk (2), "[From UML activity diagrams to Object Petri Nets](#)", (1) National Institute of Computer Science BP 68 M Oued-Smar 16270 Algiers, ALGERIA, (2) [Edouard MontPetit College](#), Longueuil, Canada, [P1110524120](#), (P. 89-95)



- Jacek Wesołowski, "[Analysis of Selected Static Non-Linearities for Wiener Model by Means of Non-parametric Method of Template Identification Nets](#)", Institute of Industry Automation, Section of Control System Theories and Simulation Techniques, [Technical University of Szczecin](#), ul. 26 Kwietnia 10, 71-126 Szczecin, Poland, [P1110523107](#), (P. 13-18)



- Jacek Wesołowski, "[Topological Aspect of Non-parametric Template Identification Nets Method](#)", Institute of Industry Automation, Section of Control System Theories and Simulation Techniques, [Technical University of Szczecin](#), ul. 26 Kwietnia 10, 71-126 Szczecin, Poland, [P1110523109](#), (P.69-74)



- [Amr Pertew](#), [Horacio Marquez](#), and [Qing Zhao](#), "[Stabilization of Nonlinear Lipschitz systems: an H_infinity approach](#)", Electrical and Computer Engineering department, [University of Alberta](#), Edmonton, Canada, [P1110524104](#), (P. 124-133)



- Ibrahim Abd-Elsalam (1) Wafaa el-Haweet (1) and [Amr Pertew](#) (2), "[fault-tolerant kinematic controller design for underactuated robot manipulators](#)", Computer Science and Automatic Control Department, University of Alexandria, Egypt, (2) Electrical & Computer engineering department, [University of Alberta](#), Canada, [P1110524105](#), (P. 117-123)



- Malak A. Samaan and Mohammad Abdelrahman, "[Satellite Attitude Determination Utilizing Measurement Sensor Data and Kalman Filtering](#)", Researchers, Space Sciences Division, National Authority for Remote Sensing and Space Sciences, Cairo, Egypt, [P1110523117](#), (P. 53-59)



- Mohammad Abdelrahman and Malak A. Samaan, "[NEW ALGORITHM FOR GYROLESS SPACECRAFT ANGULAR RATE ESTIMATION AND ITS APPLICATION](#)", Space Sciences Division, National Authority for Remote Sensing and Space Sciences Cairo, Egypt, [P1110523118](#), (P.47-52)



- A. Khajeh-Zadeh (1) and M. Rashidi-Nejad (2,3) and H. Farahmand (3) and M. Shojaee (1), "[Adaptive Prediction of Non-stationary Signals Using Wavelet Networks](#)", (1) Design and Engineering Department of North Electric Distribution Company Kerman, Iran, (2) Electrical Eng. Dept. of Bahonar University of Kerman, Iran, (3) International Research center for Science & Technology Kerman, Iran. [P1110523106](#) (P.19-22)



- Ahmed BELHANI (1) and Khaled BELARBI (2) and Fateh MEHAZEM (3), "[DESIGN OF MULTIVARIABLE BACKSTEPPING CONTROLLER USING GENETIC ALGORITHM](#)", (1, 3) OUM EL BOUAGHI University, (2) Constantine University, Algeria [P1110524102](#), (P.134-139)



- Huailin Shu* Youguo Pi**, "[Decoupled Temperature Control System Based on PID Neural Network](#)", *Department of Information and Control Engineering, [Guangzhou University](#), 510091, P.R. China, ** Institute of Automation Control, Huanan University of Science and Technology, 510000, P.R. China, [P1110524108](#), (P.107-111)



- Ardeshir Karami mohammadi, "[Vehicle Active Suspension Control, Using A Variable Structure Model Reference Adaptive Controller](#)", Department of Mechanical Engineering, Shahrood University of technology, Shahrood, Iran. [P1110535101](#), (P.167-172)

ACSE-05 Committee

- Prof. Dr. Ossama Y. Abul-Haggag, Dept. of Electrical Power and Machines Engineering, Faculty of Engineering, Cairo University, Egypt.
- Prof. Dr. Horacio J. Marquez, Department of Electrical & Computer Engineering, University of Alberta, Canada.
- A/Professor Jagannathan Sarangapani, Dept. of Electrical & Computer Engineering, University of Missouri-Rolla, USA.
- Dr. Eng. Ashraf Nasr, Eng. Dept., NCRRT, EAEA, Cairo, Egypt.

ICGST General Editor: Dr. rer. nat. [Ashraf Aboshosha](#)

ACSE Steering Committee

Prof. Dr.

- P. ARATO, Dept. of Control Engineering and Information Technology, University of Technology, Budapest, Hungary.
 - T. Chen, Department of Electrical & Computer Engineering, University of Alberta, Canada.
 - B. H. Chowdhury, Department of Electrical and Computer Engineering, School of Engineering, University of Missouri-Rolla, USA
 - M. M. Dessouky, Daniel J. Epstein Department of Industrial and Systems Engineering, University of Southern California, USA.
 - D. Gillet, Laboratoire d'Automatique, Swiss Federal Institute of Technology
 - G. Halikias, City University, School of Engineering and Mathematical Sciences, UK
 - Ch. Hadjicostis, Department of Electrical and Computer Engineering, University of Illinois Urbana-Champaign, USA
 - P. Ioannou [1, 2], Director of Center for Advanced Transportation Technologies, University of Southern California, Book
 - A. JIMENEZ, Departamento de Automatica, Ingenieria Electronica e Informatica Industrial , Madrid, Spain.
 - R. Katebi, Industrial Control Centre, EEE Department, University of Strathclyde
 - D. Subbaram Naidu, Department of Electrical Engineering, Idaho State University, USA. - Books
 - H. J. Marquez, Department of Electrical & Computer Engineering, University of Alberta, Canada. - Books
 - I. V. MIROSHNIK, Lab. Cybernetics & Control Systems, St. Petersburg State Institute of Fine Mechanics and Optics, Russia. - Books
 - R. Martinez-Guerra, CINVESTAV-IPN Department of automatic control, Mexico.
 - B. Pasik-Duncan, Department of Mathematics, University of Kansas, Books
 - K. M. Sacha, Institute of Control and Computation Engineering, Warsaw University of Technology, Poland
 - J. Sarangapani, Dept of Electrical & Computer Engineering, University of Missouri-Rolla, USA. Books
 - M. P. Schoen, College of Engineering, Idaho State University, USA.
 - S. Spurgeon, Department of Engineering, University of Leicester
 - G. Zaccour, Group for Research on Decision Analysis (GERAD), HEC Montreal, Canada.
 - A. Zolotas, Department of electronic and electrical engineering, Loughborough University, UK
-