

**QM: GIORGIO QUAZZA MEDAL**  
**(Created 1979)**

<b>CONGRESS SITE, YEAR</b>	<b>WINNER</b>	<b>COUNTRY</b>
<b>KYOTO, 1981</b>	<b>JOHN F. COALES</b>	<b>UK</b>
<b>BUDAPEST, 1984</b>	<b>YAKOV Z. TSYPKIN</b>	<b>SU</b>
<b>MUNICH, 1987</b>	<b>KARL J. ÅSTRÖM</b>	<b>SE</b>
<b>TALLIN, 1990</b>	<b>PETAR KOKOTOVIC</b>	<b>US</b>
<b>SYDNEY, 1993</b>	<b>EDWARD J. DAVISON</b>	<b>CA</b>
<b>SAN FRANCISCO, 1996</b>	<b>ALBERTO ISIDORI</b>	<b>IT</b>
<b>BEIJING, 1999</b>	<b>BRIAN D.O. ANDERSON</b>	<b>AU</b>
<b>BARCELONA, 2002</b>	<b>LENNART LJUNG</b>	<b>SE</b>
<b>PRAGUE 2005</b>	<b>TAMER BASAR</b>	<b>US</b>

**NM: NATHANIEL B. NICHOLS MEDAL**  
**(Created 1996)**

<b>CONGRESS SITE, YEAR</b>	<b>WINNER</b>	<b>COUNTRY</b>
<b>SAN FRANCISCO, 1996</b>	<b>JÜRGEN ACKERMANN</b>	<b>DE</b>
<b>BEIJING, 1999</b>	<b>GUNTHER STEIN</b>	<b>US</b>
<b>BARCELONA, 2002</b>	<b>CARL NETT</b>	<b>US</b>
<b>PRAGUE, 2005</b>	<b>WILLIAM F. POWERS</b>	<b>US</b>

## IAA: INDUSTRIAL ACHIEVEMENT AWARD (Created 2000)

CONGRESS SITE, YEAR	WINNER	COUNTRY
<b>BARCELONA, 2002</b>	<b>Development and Establishment Team for Hot Rolling Technology</b> from <b>Kawasaki Steel Corporation</b> <b>and Toshiba GE Automation Systems Corporation</b> headed by <b>Yasuo Ichii, Shoji Murayama and Takahiro Yamasaki</b> for the project <b>Application of Advanced Process Control Technologies to Endless Hot Strip Rolling</b>	<b>JP</b>
<b>PRAGUE, 2005</b>	<b>Serge BOVERIE</b>	<b>FR</b>

**TBP: HAROLD CHESTNUT TEXTBOOK PRIZE**  
**(Created 1986, renamed in 2002)**

CONGRESS SITE, YEAR	WINNER	COUNTRY
<b>MUNICH, 1987</b>	<b>G. GOODWIN, K.H. SIN:</b> Adaptive Filtering, Prediction and Control, Prentice Hall, 1984	<b>AU</b>
<b>TALLIN, 1990</b>	<b>G.F. FRANKLIN, J.D. POWELL, E. EMAMI-NAEINI:</b> Feedback Control of Dynamic Systems, Addison Wesley, 1986	<b>US</b>
<b>SYDNEY, 1993</b>	<b>K.J. ÅSTRÖM, B. WITTENMARK:</b> Computer Controlled Systems, Theory and Design, Prentice Hall, 1984	<b>SE</b>
<b>SAN FRANCISCO, 1996</b>	<b>J.M. MACIEJOWSKI:</b> Multivariable Feedback Design, Addison-Wesley, 1989	<b>UK</b>
<b>BEIJING, 1999</b>	<b>C.G. CASSANDRAS:</b> Discrete event systems: modeling and performance analysis, R.D. Irwin, Inc. And Aksen Associates, Inc., Boston, MA, 1993.	<b>US</b>
<b>BARCELONA, 2002</b>	<b>HASSAN K. KHALIL:</b> Nonlinear Systems (Prentice Hall, 1996 and 2002)	<b>US</b>
<b>PRAGUE, 2005</b>	<b>G. GOODWIN, S. GRAEBE, M. SALGADO</b> Control Systems Design (Prentice Hall, 2001)	<b>AU/AT/CL</b>

**APP: APPLICATION PAPER PRIZE (Created 1986)**

<b>CONGRESS SITE, YEAR</b>	<b>WINNER</b>	<b>COUNTRY</b>
<b>MUNICH, 1987</b>	Not Awarded Candidates for APP were published in Newsletters, 6, 1987	
<b>TALLIN, 1990</b>	<b>S.M. MEERKOV, F. TOP:</b> Asymptotically Reliable Serial Lines: Analysis, Synthesis and a Case Study	<b>US</b>
<b>SYDNEY, 1993</b>	<b>M. NAKAMOTO, K. SHIMIZU, H. FUKUDA:</b> Multivariable Control for a Combined Cycle Power Plant	<b>JP</b>
<b>SAN FRANCISCO, 1996</b>	<b>J.M. SEEM:</b> A New Pattern Recognition Adaptive Controller	<b>US</b>
<b>BEIJING, 1999</b>	<b>J.F. MAGNI, C. DOLL, C. CHIAPPA, B. FRAPARD, B. GIROUART:</b> Mixed mu Analysis for Flexible Systems (I and II).	<b>FR</b>
<b>BARCELONA, 2002</b>	<b>JOACHIM HORN, JOACHIM BAMBERGER, PETER MICHAU AND STEPHAN PINDL:</b> Flatness-Based Clutch Control for Automated Manual Transmissions	<b>DE</b>
<b>PRAGUE, 2005</b>	<b>ANDREA BALLUCHI, LUCA BENVENUTI, ALBERTO SANGIOVANNI-VINCENTELLI, GABRIELE SERRA, CLAUDIO LEMMA</b> Actual Engaged Gear Identification: A Hybrid Observer Approach	<b>IT</b>
	<b>STAFFAN HAUGWITZ, PER HAGANDER</b> Process Control of an Open Plate Reactor	<b>SE</b>

**YAP: YOUNG AUTHOR PRIZE (Created 1986)**

<b>CONGRESS SITE, YEAR</b>	<b>WINNER</b>	<b>COUNTRY</b>
<b>MUNICH, 1987</b>	<b>H. KASAHARA, H. FUJII, M. IWATA:</b> Parallel Processing of Robot Simulation	<b>JP</b>
<b>TALLIN, 1990</b>	<b>R. KULHAVY:</b> Differential Geometry of Recursive Nonlinear Estimation	<b>CZ</b>
<b>SYDNEY, 1993</b>	<b>L. GUO:</b> The Logarithm Law of Self Tuning Regulators	<b>CN</b>
<b>SAN FRANCISCO, 1996</b>	<b>L. PAO:</b> Input Shaping Design for Flexible Systems with Multiple Actuators	<b>US</b>
<b>BEIJING, 1999</b>	<b>Y. HONG:</b> H-infinity control, stabilization and input-output stability of nonlinear systems based on homogeneous techniques	<b>US</b>
<b>BARCELONA, 2002</b>	<b>DANIEL LIBERZON:</b> Stabilization by Quantized State or Output Feedback: A Hybrid Control Approach	<b>US</b>
<b>PRAGUE, 2005</b>	<b>LEI ZHANG, DIMITRIOS HRISTU-VARSAKELIS:</b> Stabilization of Networked Control Systems: Designing Effective Communication Sequences	<b>US</b>
	<b>SATORU SAKAI, KENJI FUJIMOTO:</b> Dynamic Output Feedback Stabilization of a Class of Nonholonomic Hamiltonian Systems	<b>JP</b>

# AUT PP: AUTOMATICA PAPER PRIZE

## (Created 1979)

(1. SURVEY; 2. THEORY/METHODOLOGY ORIENTED; 3. APPLICATION)

CONGRESS SITE, YEAR	WINNERS	COUNTRY
KYOTO, 1981	<ol style="list-style-type: none"> <li>1. <b>T. SÖDERSTRÖM, L. LJUNG, I. GUSTAVSSON:</b> A Theoretical Analysis of Recursive Identification Methods, 14, 231-244, 1978</li> <li>2. <b>J. RISSANEN:</b> Modeling by Shortest Data Description, 14, 465-471, 1978</li> <li>3. <b>G.K. LAUSTERER, W.H. RAY, H.R. MARTENS:</b> Real Time Distributed Parameter State Estimation Applied to a Two Dimensional Heated Ingot, 14, 335-344, 1978</li> </ol>	<p>SE</p> <p>CA</p> <p>DE, US</p>
BUDAPEST, 1984	<ol style="list-style-type: none"> <li>1. <b>K.J. ÅSTRÖM:</b> Theory and Applications of Adaptive Control - A Survey, 19, 5, 471-486, 1983</li> <li>2. <b>H. KIMURA:</b> Perfect and Subperfect Regulation in Linear Multivariable Control Systems, 18, 2, 125-145, 1982 <b>R. ROUHANI, R.K. MEHRA:</b> Model Algorithmic Control (MAC); Basic Theoretical Properties, 18, 4, 401-414, 1982</li> <li>3. <b>T. SHIRAIWA, Y. SAKAMOTO, S. KOBAYASHI, S. ANEZAKI, H. KATO, A. KUWABARA:</b> Automatic Control of Casting Speed in Ingot Casting, 17, 4, 613-618, 1981</li> </ol>	<p>SE</p> <p>JP</p> <p>US</p> <p>JP</p>
MUNICH, 1987	<ol style="list-style-type: none"> <li>1. <b>W. LEINHARD:</b> Microcomputer Control of High Dynamic Performance AC-Drives - A Survey, 22, 1, 1-19, 1986</li> <li>2. <b>D.W. CLARKE:</b> Self-Tuning Control of Nonminimum-Phase Systems, 20,5,501-517, 1984 <b>J.C. WILLEMS:</b> From Time Series to Linear Systems, Part 1: Finite Dimensional Linear Time Invariant Systems, 22,5, 561-580, 1986; Part 2: Exact Modeling, 22, 6, 675-694, 1986; Part 3: Approximate Modeling, 1, 87-115, 1987</li> <li>3. <b>O.L.R. JACOBS, R.E.S. BULLINGHAM, P. LAMMER, H.J. MCDUAY, G.O. SULLIVAN, M.P. REASBECK:</b> Modeling, Estimation and Control in the Relief of Post-Operative Pain, 21, 4, 349-360, 1985</li> </ol>	<p>UK</p> <p>NL</p> <p>UK</p>
TALLIN, 1990	<ol style="list-style-type: none"> <li>1. <b>V. KUCERA, P. ZAGALAK:</b> Fundamental Theorem of State Feedback for Singular Perturbations, 24, 5, 653-658, 1988</li> <li>2. <b>B.R. BARMISH, Z. SHI:</b> Robust stability of Perturbed Systems with Time Delays, 25, 3, 371-381, 1989</li> <li>3. <b>I. HOSHINA, Y. MAEKAWA, T. FUJIMOTO, H. KIMURA, H. KIMURA:</b> Observer-Based Multivariable Control of the Aluminum Cold Tandem Mill, 24, 6, 741-754, 1988</li> </ol>	<p>CZ</p> <p>US</p> <p>JP</p>
SYDNEY, 1993	<ol style="list-style-type: none"> <li>1. <b>L. LJUNG, S. GUNNARSSON:</b> Adaptation and Tracking in System Identification - A Survey, 26,1, 7-21, 1990</li> <li>2. <b>B.R. BARMISH, R. TEMPO:</b> The Robust Root Locus, 26, 2, 283-292, 1990</li> <li>3. <b>C.I. BYRNES, A. ISIDORI:</b> On the Attitude Stabilization of Rigid Spacecraft, 27, 1, 87-95, 1991</li> </ol>	<p>SE</p> <p>US, IT</p> <p>US, IT</p>
SAN FRANCISCO, 1996	<ol style="list-style-type: none"> <li>1. <b>R. DAVID, H. ALLA:</b> Petri Nets for Modeling of Dynamic Systems - A Survey, 30, 2, 175-202, 1994</li> <li>2. <b>P. VAN OVERSCHEE, B. DE MOOR:</b> N4SID: Subspace Algorithms for the Identification of Combined Deterministic-Stochastic Systems, 30, 1, 75-94, 1994</li> <li>3. <b>A. J. SORENSON, O. EGELAND:</b> Design of Ride Control System for Surface Effect Ships Using Dissipative Control, 31, 2, 183-200, 1995</li> </ol>	<p>FR</p> <p>BE</p> <p>NO</p>

<b>BEIJING, 1999</b>	<ol style="list-style-type: none"> <li>1. <b>B.D.O. ANDERSON:</b> From Youla-Kucera to Identification, Adaptation and Nonlinear Control, 34, 12,1485-1506, 1998.</li> <li>2. <b>N. LEONARD:</b> Stability of Bottom-Heavy Underwater Vehicles, 33, 3, 331-346, 1997.</li> <li>3. <b>A. SEEM:</b> A New Pattern Recognition Adaptive Controller with Applications to HVAC Systems, 34, 8, 969-982, 1998.</li> </ol>	<p><b>AU</b></p> <p><b>US</b></p> <p><b>US</b></p>
<b>BARCELONA, 2002</b>	<ol style="list-style-type: none"> <li>1. <b>F. BLANCHINI:</b> Set Invariance in Control, 35, 11, 1747-1767, 1999.</li> <li>2. <b>M. VIDYASAGAR:</b> Randomized Algorithms for Robust Controller Synthesis Using Statistical learning Theory, 37, 10, 1515-1528, 2001.</li> <li>3. <b>T.I. FOSSEN:</b> Nonlinear Passive Weather Optimal Positioning Control (WOPC) System for Ships and Rigs: Experimental Results, 37, 5, 701-715, 2001.</li> </ol>	<p><b>IT</b></p> <p><b>IN</b></p> <p><b>NO</b></p>
<b>PRAGUE, 2005</b>	<ol style="list-style-type: none"> <li>1. <b>J.P. RICHARD:</b> Time Delay Systems: An overview of some recent advances and open problems</li> <li>2. <b>J.P. HESPANHA and A.S. MORSE:</b> Switching Between Stabilizing Controllers</li> <li>3. <b>C. BONIVENTO, A. ISIDORI, L. MARCONI and A. PAOLI:</b> Implicit Fault-tolerant Control: Application to Induction Motors</li> </ol>	<p><b>FR</b></p> <p><b>US</b></p> <p><b>IT</b></p>



**CEP PP: CONTROL ENGINEERING PRACTICE PAPER PRIZE**  
(Created 1993)

(1. SURVEY; 2. THEORY/METHODOLOGY ORIENTED; 3. APPLICATION)

CONGRESS SITE, YEAR	WINNERS	COUNTRY
SAN FRANCISCO, 1996	N.G. WALKER, G.F. WYATT-MAIR: Sensor Signal Validation using Analytical Redundancy for an Aluminum Cold Rolling Mill, 3,6, 753-760	US
BEIJING, 1999	1. P. BIDAN, L.K. KOUADIO, M. VALENTIN and G. MONTSENY: Electrical assistance for SI engine idle-speed control, 6, 7, 829-836, 1998.	FR
	2. J.H. MORTENSEN, T. MOELBAK, P. ANDERSEN and T.S. PEDERSEN: Optimization of boiler control to improve the load-following capability of power-plant units, 6, 12, 1531-1539, 1998.	DK
	3. M. WU, M. NAKANO and J.H. SHE: A distributed expert control system for a hydrometallurgical zinc process, 6, 12, 1435-1446, 1998.	JP
BARCELONA, 2002	1. H. SEKI, M. OGAWA, S. OYAMA, K. KAMATSU, M. OHSHIMA AND W. YANG: Industrial Application of a Nonlinear Model Predictive Control to Polymerization Reactors, 9, 8, 819-828, 2001.	JP
	2. A.J. SMERLAS, D.J. WALKER, I. POSTLETHWAITE, M.E. STRANGE, J. HOWITT, A.W. GUBBLES: Evaluation H-infinite Controllers on the NRC Bell 205 fly-by-wire helicopter, 9, 1, 1-10, 2001.	UK
	3. M. JÄRVENSIVU, K. SAARI, S.-L. JÄMSÄ-JOUNELA: Intelligent Control System of an Industrial Lime Kiln Process, 9, 6, 589-606, 2001.	FI
PRAGUE, 2005	1. S. JOE QIN and THOMAS A. BADGWELL: A survey of industrial model predictive control technology, 11, 7, 733-764, 2003	US
	2. C. A. BODE, B. S. KO, and T. F. EDGAR: Run-to-run control and performance monitoring of overlay in semiconductor manufacturing, 12, 7, 893-900, 2004	US
	3. OLIVER SAWODNY, HARALD ASCHEMANN, and STEPHAN LAHRES: An automated gantry crane as a large workspace robot, 10, 12, 1323-1338, 2002	DE

**JPC PP: JOURNAL OF PROCESS CONTROL PAPER PRIZE**  
**(Created 2002)**

(1. SURVEY; 2. THEORY/METHODOLOGY; 3. APPLICATION)

<b>CONGRESS SITE, YEAR</b>	<b>WINNERS</b>	<b>COUNTRY</b>
<b>PRAGUE, 2005</b>	<p><b>1. R. K. PEARSON:</b> A survey of industrial model predictive control technology, 13, 1, 1-26, 2003</p> <p><b>2. N. F. THORNHILL, BIAO HUANG, H. ZHANG:</b> Detection of multiple oscillations in control loops, 13, 1, 91-100, 2003</p> <p><b>3. N. PETIT, P. ROUCHON, J.-M. BOUEILH, F. GUÉRIN, P. PINVIDIC:</b> Control of an industrial polymerization reactor using flatness, 12, 659-665, 2002</p>	<p><b>CH</b></p> <p><b>UK, CA</b></p> <p><b>FR</b></p>

EAAI PP:

## ENGINEERING APPLICATIONS OF AI PAPER PRIZE

(Created 2002)

(1. THEORY; 2. SYMBOLIC AI; 3. SUB-SYMBOLIC AI)

(2.

CONGRESS SITE, YEAR	WINNER	COUNTRY
PRAGUE, 2005	<b>1. YIXIN DIAO AND KEVIN M. PASSINO:</b> Immunity-based hybrid learning methods for approximator structure and parameter adjustment, 15, 6, 587-600, 2002	US
	<b>2. MANO RAM MAURYA, RAGHUNATHAN RENGASWAMY and VENKAT VENKATASUBRAMANIAN:</b> Application of signed digraphs-based analysis for fault diagnosis of chemical process flowsheets, 17, 5, 501-518, 2003	US
	<b>3. E. MUHL, P. CHARPENTIER and F. CHAXEL:</b> Optimization of physical flows in an automotive manufacturing plant: some experiments and issues, 16, 4, 293-305, 2004	FR