

CURRICULUM VITAE

Dr. John F. MacGregor

University Professor

Dofasco Professor of Process Automation & Information Technology

Dept. of Chemical Engineering

McMaster University

Hamilton, Ontario, Canada

BIRTH PLACE Ontario, Canada

DATE OF BIRTH October 25, 1943

CITIZENSHIP Canadian

DEGREES OBTAINED

<i>Designation</i>	<i>Field of Study</i>	<i>Date</i>	<i>Institution/Country</i>
B.Eng.	Chemical Engineering	1965	McMaster University, Canada
M.S.	Chemical Engineering	1967	Univ. of Wisconsin, U.S.A.
M.S.	Statistics	1967	Univ. of Wisconsin, U.S.A.
Ph.D.	Statistics	1972	Univ. of Wisconsin, U.S.A.

EMPLOYMENT HISTORY

Monsanto Company, Petrochemicals Division, Texas City, TX

1967-1969: Engineering Specialist

McMaster University, Dept. of Chemical Engineering, Hamilton, Ontario

1972-1977 Assistant Professor

1977-1981 Associate Professor

1981-Present Professor

1982-Present Associate Director, McMaster Institute for Polymer Production
Technology

1988-1991 Chair, Dept. of Chemical Engineering

1999-present Dofasco Professor of Process Automation and Information Technology

2003-present University Professor

AWARDS AND HONOURS

1. Elected **Fellow of the American Statistical Association, 1993** “by virtue of signal contributions to the field of statistics”.
2. Recipient of the **1993 W.G. Hunter Award** from the Statistics Division of the American Society for Quality Control “for excellence in statistics as a communicator, a consultant, an educator, an innovator, an integrator of statistics with other disciplines and an implementer who obtains meaningful results”.
3. **The Engineering Medal** (Research and Development Category) 1993 from the Association of Professional Engineers of the Province of Ontario “in recognition of valuable contributions made while furthering the technical advancement of the engineering profession and its application to the public welfare”.
4. Recipient of the first **President’s Award for Excellence in Graduate Student Supervision** awarded by McMaster University, 1996
5. **1997 Computing in Chemical Engineering Award** from the American Institute of Chemical Engineers “for outstanding contributions to the fundamentals and practical application of methods for polymerization reactor modeling, advanced process control and statistical monitoring, and for distinguished service to our profession through advanced courses, the development of consortia and conference contributions”.
6. **1997 Bell Canada Forum Award** from the Corporate Higher Education Forum “in recognition of outstanding cooperative research of major significance”.
7. **1997 Shewhart Medal** from the American Society for Quality. Awarded annually to “the individual deemed to have made the most outstanding contribution to the science and techniques of quality control or who has demonstrated leadership in the field of modern quality control”.
8. **Century of Achievement Award** (2000) from the Canadian Society for Chemical Engineering as “one of the top 20 achievers in Chemical Engineering in the 20-th Century” in Canada.
9. **2001 Herman Wold Medal** from the Swedish Chemical Society. Awarded every 2 years to an individual who has made outstanding contributions to the field of Chemometrics.
10. The inaugural **W. G. Fisher Award** (2001) from the Systems & Control Division of the Canadian Society for Chemical Engineering for “lifelong contribution and commitment to both scholarship and practice in systems and control engineering at the national as well as the international level”.
11. **2002 Kalev Pugi Award** (jointly with T.E. Marlin) from the Society of Chemical Industry for “outstanding work in bringing together the McMaster Advanced Control Consortium (MACC) as a model research and development project with Canadian and international industry”.
12. **2002 Shewell Award** from the Amer. Soc. Quality and Amer. Statistical Soc. for best paper presented at the 2001 Fall Technical Conference
13. Inducted into the **Canadian Academy of Engineering**, 2002
14. Inducted into **McMaster Alumni Gallery**, 2003
15. Awarded title of **University Professor**, McMaster University, 2003

16. **NSERC Synergy Award 2003** (with Dr. T. Kourti and industrial partners Dofasco and Tembec))
17. **2005 Dr. Guido Carlo Stella Award** from the World Batch Forum for having “demonstrated technical excellence and inspired others in the process industry”

PUBLICATIONS

(a) Refereed Journal Publications

169. Flores-Cerrillo, J. and J.F. MacGregor, “Iterative Learning Control for Batch Product Quality using PLS Models”, Submitted to Ind. & Eng. Chem. Res., In Press, 2005.
165. Liu, J.J. and J.F. MacGregor, “Estimation and Monitoring of the Aesthetic Quality of Manufactures Stone Countertops”, Machine Vision & Applications, In Press, 2005.
164. Liu, J.J. and J.F. MacGregor, “Modelling and Optimization of Product Appearance: Application to Injection Molded Plastic Panels”, Ind. & Eng. Chem. Res., In Press, 2005.
164. Kim, Y.M., K. Kostanski and J.F. MacGregor, “Kinetic studies of cationic photopolymerizations cycloaliphatic epoxide, triethyleneglycol methylvinyl ether and cyclohexene oxide”, Polymer Eng. Sci., In Press, 2005.
163. Liu, J.J., M. Bharati, K.G. Dunn and J.F. MacGregor, “Automatic Masking in Multivariate Image Analysis using Support Vector Machines”, Chemometrics & Intell. Lab. Systems, In Press, 2005.
162. MacGregor, J.F., H. Yu, S. Garcia-Munoz and J. Flores-Cerrillo, “Data-base Latent Variable Methods for Process Analysis, Monitoring and Control”, Computers & Chem. Eng., 29, 1217-1223, 2005.
161. Flores-Cerillo, J. and J.F. MacGregor, “Latent variable MPC for Trajectory Tracking in Batch Processes”, J. Process Control, In Press, 2005,
160. Muteki, K., J.F. MacGregor and T. Ueda, “Estimation of Missing Data using Latent Variable Methods with Auxiliary Information”, Chemometrics & Intell. Lab. Systems, In Press, 2005.
159. Yoon, S. and J.F. MacGregor, “Principal Component Analysis of Multiscale Data for Process Monitoring and Fault Diagnosis”, Amer. Inst. Chem Eng. J., 50, 2891-2903, 2004
158. Kim, Y.M., L.K. Kostanski, J.F. MacGregor and A.E. Hamielec, “Thermal and Real-time FTIR Spectroscopic Analysis of the Photopolymerization of Diepoxide-Vinyl Ether Mixtures”, J. Thermal Analysis and Calorimetry, 78, 153-164, 2004.
157. Liu, J.J., J.F. MacGregor, C. Duchesne, and G. Bartolacci, “Flotation Froth Monitoring using Multi-resolutional Multivariate Image Analysis”, Minerals Engineering, 18, 65-76, 2005.
156. Nelson, P.R.C., J.F. Macgregor and P.A. Taylor, “The Impact of Missing Data on PCA and PLS Prediction and Monitoring Applications”, Chemometrics & Intell. Lab. Systems, In Press, 2005.

155. Yu, H. and J.F. MacGregor, "Post processing methods (PLS-CCA): Simple alternatives to preprocessing methods (OSC-PLS)", Chemometrics & Intell. Lab. Systems, 73, 199-205, 2004.
154. Kim, Y.M., J.F. MacGregor and K. Kostanski, "Principal component analysis of evolving FT-IR spectra for cationic photo-initiated copolymerization of multi-functional monomers", Chemometrics & Intelligent Lab. Systems, 75, 77-90, 2005.
153. Garcia-Munoz, S., T. Kourti and J.F. MacGregor, "Model predictive monitoring for batch processes", Ind. & Eng. Chem. Res., 43, 5929-5941, 2004
152. Flores-Cerrillo, J. and J.F. MacGregor, "Multivariate analysis and monitoring of batch processes using batch-to-batch information", Amer. Inst. Chem. Eng. J., 50, 1219-1228, 2004.
151. Bharati, M., J. Liu and J.F. MacGregor "Image Texture Analysis: Methods and Comparisons", Chemometrics & Intell. Lab. Systems, 72, 57-71, 2004.
150. Bharati, M., J.F. MacGregor, M. Champagne, "Using near-infrared multivariate image regression techniques to predict pulp properties", TAPPI Journal, 3, No. 4, 1-7, 2004.
149. Yacoub, F. and J.F. MacGregor, "Product optimization and control in the latent variable space of nonlinear PLS models", Chemometrics & Intell. Lab. Syst., 70, 63-74, 2004.
148. Yu, H. and J.F. MacGregor, "Monitoring flames in an industrial boiler using multivariate image analysis", Amer. Inst. Chem. Eng. J., 50, 1474-1483, 2004.
147. Flores-Cerrillo, J. and J.F. MacGregor, "Control of batch product quality by trajectory manipulation using latent variable models", J. Process Control, 14, 539-553, 2004.
146. Duchesne, C. and J.F. MacGregor, "Establishing multivariate specification regions for incoming materials", J. Quality Technology, 36, No. 1, 78-94, 2004.
145. Bharati M., J.F. MacGregor and W. Tropper, "Softwood lumber grading through on-line multivariate image analysis", Ind. & Eng. Chem. Res., 42, 5345-5353, 2003.
144. Kim, Y.M., L.K. Kostanski and J.F. MacGregor, "Photopolymerization of 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexane carboxylate and tri (ethylene glycol) methyl vinyl ether", Polymer, 44, 5103-5109, 2003.
143. Garcia-Munoz, S., T. Kourti and J.F. MacGregor, A.G.. Mateos and G. Murphy, "Trouble-shooting of an industrial batch process using multivariate methods", Ind. & Eng. Chem. Res., 42, 3592-3601, 2003
142. Yu, H., J.F. MacGregor, G. Haarsma, and W. Bourg, "Digital imaging for on-line monitoring and control of industrial snack food processes", Ind. & Eng. Chem. Res., 42, 3036-3044, 2003
141. Yu, H. and J.F. MacGregor, "Multivariate image analysis and regression for prediction of coating content and distribution in the production of snack foods", Chem. & Intell. Lab. Syst., 67, 125-144, 2003
140. Flores-Cerillo, J. and J. F. MacGregor, "Within-batch and batch-to-batch inferential adaptive control of semi-batch reactors: A Partial Least Squares approach", Ind. & Eng. Chem. Res., 42, 3334-3345, 2003.

139. Duchesne, C., T. Kourti and J.F. MacGregor, "Multivariate monitoring of start-ups and grade transitions", AIChe. J., 48, 2890-2901, 2002.
138. Yacoub, F. and J.F. MacGregor, "Analysis and optimization of a polyurethane reaction injection molding (RIM) process using multivariate projection methods", Chem. & Intell. Lab. Syst., 65, 17-33, 2002
137. Svensson, O., T. Kourti and J.F. MacGregor, "A Comparison of Orthogonal Signal Correction Algorithms and Characteristics", J. Chemometrics, 16, 176-188, 2001
136. Flores-Cerillo, J. and MacGregor, J.F. "Control of Particle Size Distributions in Emulsion Polymerization using Mid-Course Correction Policies", Ind. & Eng. Chem. Res., 41, 1805-1814, 2001
135. A. Burnham, R. Viveros, J.F. MacGregor, "Interpretation of Regression Coefficients in Multivariable Latent Variable Regression Models", J. Chemometrics, 15, 265-284, 2001.
134. S. Yoon and J.F. MacGregor, "Fault Diagnosis with Multivariate Statistical Models. Part 1: Using Steady-State Fault Signatures", J. Process Control, 11, 387-400, 2001
133. Y. Yabuki, T. Nagasawa and J.F. MacGregor, "An Industrial Experience with Product Quality Control in Semi-Batch Processes", Computers & Chem. Eng., 24, 585-590, 2000.
132. C.M. Jaeckle and J.F. MacGregor, "Product Transfer Between Plants Using Historical Data: Latent Variable Methods", Amer. Inst. Chem. Eng. J., 46, 1989-1997, 2000
131. C. Duchesne and J.F. MacGregor, "Jackknife and Bootstrap Methods in the Identification of Dynamic Models", J. Process Control, Accepted, March, 2000.
130. S. Yoon and J.F. MacGregor, "Relationships between Statistical and Causal Model-Based Approaches to Fault Detection and Isolation", Amer. Inst. Chem. Eng. J., 46, 1813-1824, 2000.
129. C. Duchesne and J.F. MacGregor, "Multivariate Analysis and Optimization of Process Variable Trajectories for Batch Processes", Chemometrics & Intell. Lab. Syst., 51, 125-137, 2000.
128. R. Shi and J.F. MacGregor, "Modelling of Dynamic Systems using Latent Variable and Subspace Methods", Chemometrics & Intell. Lab. Sys., 14, 1-17, 2000.
126. C.M. Jaeckle and J.F. MacGregor, "Industrial Applications of Product Design Through the Inversion of Latent Variable Models", Chemometrics & Intell. Lab. Sys., 50, 199-210, 2000.
125. A. Esmaili, J.F. MacGregor, P.A. Taylor, "Direct and Two-Step Methods for Closed-Loop Identification: A Comparison of Asymptotic and Finite Data Set Performance", J. Process Control, 10, 525-527, 2000.
124. J. Westerhuis, T. Kourti, J.F. MacGregor, "Comparing Alternative Approaches for Multivariate Statistical Analysis of Batch Process Data", J. Chemometrics, 13, 1-17, 1999.
123. A. Burnham, R. Viveros, J.F. MacGregor, "Latent variable Multivariate Regression Modelling", Chemometrics & Intell. Lab. Sys., 48, 167-180, 1999.
122. A. Burnham, R. Viveros, J.F. MacGregor, "A Statistical Framework for

- Multivariate Latent variable Regression. Methods based on a Restricted Maximum Likelihood Analysis”, J. Chemometrics, 13, 49-65, 1999.
121. M.H. Bharati and J.F. MacGregor, “Multivariate Image Analysis for Real-Time Process Monitoring and Control”, Ind. & Eng. Chem. Res., 37, 4715-4724, 1998.
 120. J. Westerhuis, T. Kourti, and J.F. MacGregor, “On the use of Multi-block and Hierarchical PCA and PLS Models”, J. Chemometrics, 12, 301-321, 1998.
 119. T.L. Clarke-Pringle and J.F. MacGregor, “Product Quality Control in Reduced Dimensional Spaces”, Ind. Eng. Chem. Res., 37, 3992-4002, 1998
 118. T.L. Clarke-Pringle and J.F. MacGregor, “Optimization of Molecular Weight Distribution Using Batch-to-Batch Adjustments”, Ind. Eng. Chem. Res., 37, 3660-3669, 1998.
 117. A. Kassidas, J.F. MacGregor and P.A. Taylor, “Fault Diagnosis in Continuous Dynamic Processes using Speech Recognition Methods”, J. Process Control, 8, 1998.
 116. A. Kassidas, J.F. MacGregor and P.A. Taylor, “Synchronization of Batch Trajectories using Dynamic Time Warping”, Amer. Inst. Chem. Eng. J., 44, 864-873, 1998.
 115. C.M. Jaeckle and J.F. MacGregor, “Product Design through Multivariate Statistical Analysis of Process Data”, Amer. Inst. Chem. Eng. J., 44, 1105-1118, 1998.
 114. S. Rannar, J.F. MacGregor and S. Wold, “Adaptive Batch Monitoring using Hierarchical PCA”, Chemometrics & Intell. Lab. Syst., 35, 45-65, 1999.
 113. T. Clarke-Pringle and J.F. MacGregor, 1997. "Non-linear Adaptive Temperature Control of Multi-Product, Semi-Batch Polymerization Reactors", Computers & Chem. Eng., 21, No. 12, 1395-1409
 112. J.F. MacGregor, 1997, “Using On-Line Process Data to Improve Quality. Challenges for Statisticians”, International Statistical Rev., 65, 309-323
 111. B.S. Dayal and J.F. MacGregor, 1997, “Multi-Output Process Identification”, J. Process Control, 7, 269-282.
 110. Y. Yabuki, and J.F. MacGregor, 1997, “Product Quality Control in Semi-Batch Reactors using Mid-Course Correction Policies”, Ind. Eng. Chem. Res., 36, 1268-1275.
 109. B.S. Dayal and J.F. MacGregor, 1997, “Improved PLS Algorithms”, J. Chemometrics, 11, 73-85.
 108. B.S. Dayal and J.F. MacGregor, 1997, “Recursive Exponentially Weighted PLS and its Applications to Adaptive Control and Prediction”, J. Process Control, 7, 169-179.
 107. B.S. Dayal and J.F. MacGregor, 1996, “Identification of Finite Impulse Response Models: Methods and Robustness Issues”, Ind. Eng. Chem. Res., 35, 4078-4090.
 106. T.J. Harris, F. Boudreau and J.F. MacGregor, 1996. "Performance Assessment of Multivariable Controllers", Automatica, 32, 1519-1531
 105. T. Kourti and J.F. MacGregor, 1996. "Multivariate Statistical Process Control Methods for Monitoring and Diagnosing Process and Product Performance", J. Qual. Tech., 28, 409-428
 104. P. Nelson, P.A. Taylor and J.F. MacGregor, 1996. "Missing Data Methods in PCA and PLS: Score Calculations with Incomplete Observations", J. Chemometrics & Intell. Lab. Syst., 35, 45-65

103. A.J. Burnham, R. Viveros-Aquilera and J.F. MacGregor, 1996. "Objective Function Frameworks for Comparing Latent Variable Methods for Multivariate Regression", J. Chemometrics, 10, 31-46.
102. P. Nomikos and J.F. MacGregor, 1995. "Multi-Way Partial Least Squares in Monitoring Batch Processes", Chemometrics & Intell. Lab. Systems, 30, 97-108.
101. T. Kourti, P. Nomikos and J.F. MacGregor, 1995. "Analysis, Monitoring and Fault Diagnosis of Batch Processes using Multi-Block, Multi-Way PLS", J. Proc. Control, 5 No. 4, 277-284.
100. J.F. MacGregor and T. Kourti, 1995. "Statistical Process Control of Multivariate Processes", Control Eng. Practice, 3, 403-414.
99. T. Kourti and J.F. MacGregor, 1995. "Process Analysis, Monitoring and Diagnosis Using Multivariate Projection Methods", J. Chemometrics and Intell. Lab. Systems, 28, 3-21.
98. P. Nomikos and J.F. MacGregor, 1995. "Multivariate SPC Charts for Batch Processes", Technometrics, 37, 41-59.
97. J.F. MacGregor and D. Fogal, 1995. "Closed-Loop Identification: Role of Noise Model and Prefilters", J. Process Control, 5, No. 3, 163-171.
96. B. Dayal, P.A. Taylor and J.F. MacGregor, 1994. "Nonlinear Internal Model Control Using Neural Networks", Can. J. Chem. Eng., 72, 1066-1079.
95. C.W. Koung and J.F. MacGregor, 1994. "Robust Identification for Multivariable Control: The Design of Experiments", Automatica, 30, No. 10, 1541-1553.
94. P. Nomikos and J.F. MacGregor, 1994. "Monitoring of Batch Processes Using Multi-Way Principal Components Analysis", Amer. Inst. Chem. Eng. J., 40, 1361-1375.
93. J.F. MacGregor, J. Jaeckle, C. Kiparissides and M. Koutoudi, 1994. "Monitoring and Diagnosis of Process Operating Performance by Multi-Block PLS Methods With An Application to Low Density Polyethylene Production", Amer. Inst. Chem. Eng. J., 40, 826-838.
92. J.F. Forbes, T.E. Marlin and J.F. MacGregor, 1994. "Model Adequacy Requirements for Optimizing Plant Operations", Computers in Chem. Eng., 18, 497-510.
91. N. Kettaneh-Wold, J.F. MacGregor, B. Dayal and S. Wold, 1994. "Multivariate Design of Process Experiments", J. Chemometrics and Intell. Lab. Systems, 23, 39-50.
90. J. Kresta, J.F. MacGregor and T.E. Marlin, 1994. Building Inferential Models Using PLS Regression, Computers Chem. Eng., 18, 597-611.
89. C. Kiparissides, G. Verros and J.F. MacGregor, 1993. Mathematical Modelling, Optimization and Quality Control of High Pressure Ethylene Polymerization Reactors, J. Macromolecular Science – Rev. Macromol. Chem. Phys., C33, No. 4, 437-527.
88. P.D. Gossen, J.F. MacGregor and R.H. Pelton, 1993. Composition and Particle Diameter for StyreneMethyl Methacrylate Copolymer Latex Using UV and NIR Spectroscopy, J. Applied Spectroscopy, 47, No. 11, 1852-1870.
87. D. Hodouin, J.F. MacGregor, M. Hou and M. Franklin, 1993. Multivariate Statistical Analysis of Mineral Processing Plant Data, Can. Inst. Mining Bull., 86, No. 975, 23-34.

86. C.W. Koung and J.F. MacGregor, 1993. Design of Identification Experiments for Robust Control - A Geometric Approach for Bivariate Processes, Ind. & Eng. Chem. Research, 32, 1658-1666.
85. P.D. Gossen and J.F. MacGregor, 1993. On-line Particle Diameter for Poly(Vinyl Acetate) Latex Using Specific Turbidity Method, J. Colloid and Interface Science, 160, 24-38.
84. J. F. MacGregor and T.J. Harris, 1993. The Exponentially Weighted Moving Variance, J. Quality Tech., 25, No. 2, 106-118.
83. K.B. McAuley and J.F. MacGregor, 1993. Nonlinear Product Property Control in Industrial Gas Phase Polyethylene Reactors, Amer. Inst. Chem. Eng. J., 39, 855-866.
82. N. Stanfelj, T.E. Marlin and J.F. MacGregor, 1993. Monitoring and Diagnosing Process Control Performance: The Single Loop Case, Ind. & Eng. Chem. Res., 32, No. 2, pp. 301-314.
81. K.B. McAuley and J.F. MacGregor, 1993. Optimal Grade Transitions in Gas Phase Polyethylene Reactors, Amer. Inst. Chem. Eng. J., 38, 1564-1576.
80. B. Skagerberg, J.F. MacGregor and C. Kiparissides, 1992. Multivariate Data Analysis Applied to Low-Density Polyethylene Reactors, Chemometrics and Intelligent Lab. Systems, 14, pp. 341-356.
79. C.W. Koung and J.F. MacGregor, 1992. Robustness of Multivariable Linear Controllers to Process Nonlinearities, Ind. Eng. Chem. Res., 31, 1085-1096.
78. D. Kozub and J.F. MacGregor, 1992. Feedback Control of Polymer Quality in Semi-Batch Copolymerization Reactors, Chem. Eng. Sci., 47, pp. 929-942.
77. D. Kozub and J.F. MacGregor, 1992. State Estimation for Semi-Batch Polymerization Reactors, Chem. Eng. Sci., 47, pp. 1047-1062.
76. R.M. Jones, J.F. MacGregor, K.L. Murphy and E.R. Hall, 1992. A Dynamic Model for the Anaerobic Wastewater Treatment Process, Water Sci. & Tech., 25, pp. 61-71.
75. MacGregor, J.F. and P. Nomikos, 1991. Monitoring Batch Processes, In Batch Processing Systems Engineering, NATO ASI Series F, Vol.143, Editors G.V Reklaitis et al., 241-258.
74. N. Yatawara, B. Abraham and J.F. MacGregor, 1991. A Kalman Filter in the Presence of Outliers, Commun. in Statist-Theory Meth., 20 (5&6), pp. 1803-1820.
73. C.W. Koung and J.F. MacGregor, 1991. Geometric Analysis of the Global Stability of Linear Inverse-Based Controllers for Bivariate Nonlinear Processes, Ind. and Eng. Chem. Res., 30, 1171-1181.
72. K.B. McAuley, and J.F. MacGregor, 1991. On-line Inference of Polymer Properties in an Industrial Polyethylene Reactor, Amer. Inst. Chem. Eng. J., 37, pp. 825-835.
71. L. Gagnon and J.F. MacGregor, 1991. State Estimation for Continuous Emulsion Polymerization, Can. J. Chem. Eng., 69, pp. 648-656.
70. D.F. Nicoli, T. Kourti, P. Gossen, J.S. Wu and J.F. MacGregor, 1991. On-line Latex Particle Size Determination by Dynamic Light Scattering, Design for an Industrial Environment, Amer. Chem. Soc. Symp. Ser., 472, T. Provder, Ed., pp. 86-97.

69. T. Kourti, J.F. MacGregor and A.E. Hamielec, 1991. Turbidimetric Techniques: Capability to Provide the Full Particle Size Distribution, Amer. Chem. Soc. Symp. Ser., 472, T. Provder, Ed., pp. 2-19.
68. T. Kourti and J.F. MacGregor, 1991. Particle Size Determination Using Turbidimetry: Capabilities, Limitations, and Evaluation of On-Line Applications, Amer. Chem. Soc. Symp. Ser., 472, T. Provder, Ed., pp. 34-63.
67. L. Segall, J.F. MacGregor and J.D. Wright, 1991. One Step Optimal Saturation Correction, Automatica, 27, pp. 135-139.
66. J.V. Kresta, J.F. MacGregor and T.E. Marlin, 1991. Multivariate Statistical Monitoring of Process Operating Performance, Can. J. Chem. Eng., 69, pp. 35-47.
65. K.B. McAuley, J.F. MacGregor and A.E. Hamielec, 1990. A Kinetic Model for Industrial Gas-Phase Ethylene Copolymerization, Amer. Inst. Chem. Eng. J., 36, No. 6, pp. 837-849.
64. T.R. Cuadrado, J.F. MacGregor and A.E. Hamielec, 1990. Epoxy-Amine Oligomer Production, J. Appl. Poly. Sci., 40, pp. 867-890.
63. T. Kourti, J.F. MacGregor, A.E. Hamielec, D. Nicoli and V.B. Elings, 1990. On-line Particle Size Determination During Latex Production Using Dynamic Light Scattering, Adv. in Chem. Series, 227, Polymer Characterization, C.D. Craver and T. Provder, Eds., pp. 105-123, Amer. Chem. Soc., Washington, D.C.
62. J.F. MacGregor, 1990. A Different View of the Funnel Experiment, J. Quality Technology, 22, No. 4, pp. 255-259.
61. R.M. Jones, J.F. MacGregor and K.L. Murphy, 1989. State Estimation in Waste Water Engineering: Application to an Anaerobic Process, Environmental Monitoring and Assessment, 12, pp. 271-282.
60. D.J. Kozub, J.F. MacGregor and T.J. Harris, 1989. Optimal IMC Inverses: Design and Robustness Considerations, Chem. Eng. Sci., 44, 2121-2136.
59. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1989. Continuous Emulsion Polymerization: Design and Control of CSTR Trains, Chem. Eng. Sci., 44, 273-281.
58. B.P. Huo, A.E. Hamielec and J.F. MacGregor, 1988. "An Investigation of the Emulsion Terpolymerization of 2-Ethylhexylacrylatevinyl acetateacrylic acid", J. Applied Polym. Sci., 35, 1409-1420.
57. B.P. Huo, J.D. Campbell, A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1988. Effect of impurities on emulsion polymerization: Case II Kinetics, J. Appl. Poly. Sci., 35, 2009-2021.
56. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1988. Effect of impurities on emulsion polymerization: Case I Kinetics, J. Appl. Poly. Sci., 35, 2023-2038.
55. D. Onderwater, J.F. MacGregor and J.D. Wright, 1988. Self Tuning Control of Temperature in a Catalytic Reactor Using Nonlinear Transformations, Can. J. Chem. Eng., 66, 478-484.
54. A.E. Hamielec, J.F. MacGregor and A. Penlidis, 1987. Multi-component Free-Radical Polymerization in Batch, Semi-Batch, and Continuous Reactors, Makromol. Chem., Macromol. Symp., 1011, 521-570.
53. L.G. Bergh and J.F. MacGregor, 1987. Spatial Control of Sheet and Film Forming Processes, Can. J. Chem. Eng., 65, 148-155.

52. L.G. Bergh and J.F. MacGregor, 1987. Constrained Minimum Variance Controllers: Internal Model Structure and Robustness Properties, Ind. Eng. Chem. Res., **26**, 1558-1564.
51. T.J. Harris and J.F. MacGregor, 1987. Design of Discrete Multivariable Linear-Quadratic Controllers Using Transfer Functions, Amer. Inst. Chem. Eng. J., **33**, No. 9, 1481-1495.
50. D.J. Kozub, J.F. MacGregor and J.D. Wright, 1987. Application of LQ and IMC Controllers to a Packed Bed Reactor, Amer. Inst. Chem. Eng. J., **33**, No. 9, 1496-1506.
49. J.A.J. Honig, P.E. Gloor, J.F. MacGregor, and A.E. Hamielec, 1987. A Mathematical Model for the Ziegler-Natta Polymerization of Butadiene, J. Appl. Poly. Sci., **34**, 829-845.
48. S.C. Puthenpura and J.F. MacGregor, 1987. Pole zero placement controllers and self tuning regulators with better set point tracking, Proc. IEE, Part D, **134**, 26-30.
47. S.J. Kelly, J.F. MacGregor and T.W. Hoffman, 1987. Control of a continuous polybutadiene reactor train, Can. J. Chem. Eng., **65**, 852-857.
46. T. Kourti, A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1987. Measuring Particle Size Distribution of Latex Particles in the Submicron Range Using Size Exclusion Chromatography and Turbidity Spectra, ACS Symp. Series 332, T. Provder (editor), Amer. Chem. Soc., Washington, D.C., 242-255.
45. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1986. Mathematical modelling of emulsion polymerization reactors: A population balance approach, J. Coating Tech., **58**, 49-60.
44. L.H. Garcia-Rubio, M.G. Lord, J.F. MacGregor and A.E. Hamielec, 1985. Bulk Copolymerization of Styrene and Acrylonitrile: Experimental Kinetics and Mathematical Modelling, Polymer, **26**, pp. 2001-2013.
43. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1985. A Theoretical and Experimental Investigation of the Batch Emulsion Polymerization of Vinyl Acetate, Polymer Process Eng., **3**, pp. 185-218.
42. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1985. Dynamic Modelling of Emulsion Polymerization Reactors, Amer. Inst. Chem. Eng. J., **31**, pp. 881-889.
41. T.O. Broadhead, A.E. Hamielec and J.F. MacGregor, 1985. Dynamic Modelling of Batch, Semi-Batch and Continuous Production of Styrene-Butadiene Copolymers by Emulsions Polymerization, Die Makromol. Chemie., Suppl **1011**, pp. 105-128.
40. J. Kanetakis, F.Y.C. Wong, A.E. Hamielec and J.F. MacGregor, 1985. Steady-State Modelling of a Latex Reactor Train for the Production of Styrene-Butadiene Rubber, Chem. Eng. Commun., **35**, pp. 123-140.
39. N.L. Segall, J.F. MacGregor and J.D. Wright, 1984. Collocation Methods for Solving Packed Bed Reactor Models with Radial Gradients, Can. J. Chem. Eng., **62**, pp. 808-817.
38. A. Penlidis, A.E. Hamielec and J.F. MacGregor, 1984. Dynamic Modelling of the Continuous Emulsion Polymerization of Vinyl Chloride, J. Vinyl Techn., **6**, p. 134.

37. J.F. MacGregor, T.J. Harris and J.D. Wright, 1984. Duality Between the Control of Processes Subject to Randomly Occurring Deterministic Disturbances and ARIMA Stochastic Disturbances, Technometrics, 26, No. 4, pp. 389-397.
36. J.F. MacGregor, A. Penlidis and A.E. Hamielec, 1984. Control of Polymerization Reactors A Review. Polymer Process Engineering, 2, pp. 179-206.
35. A. Jutan, J.D. Wright and J.F. MacGregor, 1984. "Multivariable Computer Control of a Butane Hydrogenolysis Reactor: Design and On-Line Implementation of a Stochastic Controller Using an Identified Multivariate Noise Model, Amer. Inst. Chem. Eng. J., 30, pp. 220-226.
34. R. McFarlane, P.A. Taylor, T.W. Hoffman and J.F. MacGregor, 1983. The Control of Fluidized Bed Reactors: Part I Modeling, simulation, and single loop control studies, Ind. & Eng. Chem., Process Des. & Dev., 22, No. 1, pp. 22-31.
33. A. Penlidis, A.E. Hamielec and J.F. MacGregor, 1983. Hydrodynamic and Size Exclusion Chromatography of Particle Suspensions - A Review, J. Liquid Chromatography, 6 (S-2), 179-217.
32. T.J. Harris, J.F. MacGregor and J.D. Wright, 1982. An overview of discrete stochastic controller: Generalized PID algorithms with dead-time compensation, Can. J. Chem. Eng., 60, No. 3, pp. 425-432.
31. L.H. Garcia-Rubio, J.F. MacGregor and A.E. Hamielec, 1982. Modelling and Control of Copolymerization Reactors. Computer Appl. in Applied Polymer Science, ACS Symp. Ser. 197, T. Provder, Ed., pp. 87-116.
30. L.H. Garcia-Rubio, A.E. Hamielec and J.F. MacGregor, 1982. UV Spectrophotometers as Detectors for Size Exclusion Chromatography of StyreneAcrylonitrile Copolymers. Computer Appl. in Applied Polymer Science, ACS Symp. Ser., 197, T. Provder, Ed., pp. 151-184.
29. M. Pollock, J.F. MacGregor and A.E. Hamielec, 1982. Continuous Poly (vinyl Acetate) Emulsion Polymerization Reactors: Dynamic Modelling of M.W. and Particle Size Development and Appl. to Optimal Multiple Reactor Design. Computer Appl. in Applied Polymer Science, ACS Symp. Ser., 197, T. Provder, Ed., pp. 209-222.
28. L.H. Garcia-Rubio, J.F. MacGregor and A.E. Hamielec, 1982. Size Exclusion Chromatography of Copolymers. Advances in Chemistry Series, 203 (Instrument and Physical Characterization of Macromolecules), C.D. Craver (Ed), 311-344.
27. C. Kiparissides, J.F. MacGregor and A.E. Hamielec, 1981. Sub-optimal stochastic control of a continuous latex reactor. Amer. Inst. Chem. Eng. J., 26, No. 5, pp. 13-20.
26. C. Kiparissides, J.F. MacGregor and A.E. Hamielec, 1980. Characterization of size distribution during continuous emulsion polymerization: Oscillations in vinyl acetate polymerizations. Polymer Colloids II, ed. R.M. Fitch, Plenum Press, N.Y. pp. 555-582.
25. J.F. MacGregor and A.K. Wong, 1980. Multivariate model identification and stochastic control of a chemical reactor. Technometrics, 22, No. 4. pp. 453-464. (Published with discussion).
24. T.J. Harris, J.D. Wright and J.F. MacGregor, 1980. Optimal sensor location with application to a packed bed tubular reactor. Amer. Inst. Chem. Eng. J., 26, No. 5, pp.

23. T.J. Harris, J.F. MacGregor and J.D. Wright, 1980. An application of self-tuning regulators to catalytic reactor control. Technometrics, 22, No. 2, pp. 153-163.
22. C. Kiparissides, J.F. MacGregor and A.E. Hamielec, 1980. Continuous emulsion polymerization for vinyl acetate, Part I: Experimental studies. Can. J. Chem. Eng., 58, No. 1, pp. 48-71.
21. C. Kiparissides, J.F. MacGregor and A.E. Hamielec, 1980. Continuous emulsion polymerization for vinyl acetate, Part II: Parameter estimation and simulation studies. Can. J. Chem. Eng., 58, No. 1, pp. 56-64.
20. C. Kiparissides, J.F. MacGregor and A.E. Hamielec, 1980. Continuous emulsion polymerization for vinyl acetate, Part III: On-line detection of particle properties. Can. J. Chem. Eng., 58, No. 1, pp. 64-71.
19. J.F. MacGregor and P.W. Tidwell, 1980. Modeling and Control of Continuous Industrial Polymerization Reactors, Amer. Chem. Soc. Symp. Ser., 124, pp. 251-268, Computer Appl. to Chem. Eng., R.G. Squires and G.V. Reklaitis, Eds. Amer. Chem. Soc., Washington, D.C.
18. M.J. Pollock, J.F. MacGregor and A.E. Hamielec, 1979. A statistical evaluation of methods of chromatogram interpretation GPC., J. Liquid Chromatography, 2, pp. 895-917.
17. C. Kiparissides, J.F. MacGregor and A.E. Hamielec, 1979. Continuous emulsion polymerization: modelling oscillations in vinyl acetate polymerization. J. Appl. Polymer Sci., vol. 23, pp. 401-418.
16. L.H. Garcia, A.E. Hamielec and J.F. MacGregor, 1979. Bulk polymerization of acrylonitrile: model development. J. Appl. Polymer Sci., vol. 23, pp. 1413-1429.
15. A. Jutan, J.F. MacGregor and J.D. Wright, 1977. Multivariable computer control of a butane hydrogenolysis reactor. Part I: state space reactor modelling. Amer. Inst. Chem. Eng. J., vol. 23, pp. 732-742.
14. A. Jutan, J.F. MacGregor and J.D. Wright, 1977. Multivariable computer control of a butane hydrogenolysis reactor. Part II: data collection, parameter estimation and stochastic disturbance identification. Amer. Inst. Chem. Eng. J., vol. 23, pp. 742-750.
13. A. Jutan, J.D. Wright and J.F. MacGregor, 1977. Multivariable computer control of a butane hydrogenolysis reactor. Part III: on-line linear quadratic stochastic control studies. Amer. Inst. Chem. Eng. J., vol. 23, pp. 751-758.
12. T.L. Sutton and J.F. MacGregor, 1977. The analysis and design of binary vapour-liquid equilibrium experiments. Part I: Parameter estimation and consistency tests. Can. J. Chem. Eng., vol. 55, pp. 602-608.
11. T.L. Sutton and J.F. MacGregor, 1977. The analysis and design of binary vapour-liquid equilibrium experiments. Part II: The design of experiments. Can. J. Chem. Eng., vol. 55, pp. 609-613.
10. J.F. MacGregor and P.W. Tidwell, 1977. Discrete stochastic control with input constraints. Proc. IEE, vol. 124, pp. 732-734.
9. P. Goford, J.F. MacGregor and J.D. Wright, 1977. Predictive stochastic feedforward-feedback control of a heat exchanger-stirred tank system. Int. J. of Control, vol. 26, pp. 463-471.
8. G.E.P. Box and J.F. MacGregor, 1976. Parameter estimation with closed-loop operating data. Technometrics, vol. 18, pp. 366-375.

7. J.F. MacGregor, 1976. Optimal choice of the sampling interval for discrete process control. Technometrics, vol. 18, pp. 151-160.
6. J.F. MacGregor, J.D. Wright and M.H. Huynh, 1975. Optimal tuning of digital PID controllers using dynamic-stochastic models. Ind. Eng. Chem., Proc. Des. Dev., vol. 14, pp. 398-402.
5. M.H. Huynh and J.F. MacGregor, 1975. Identification and discrete stochastic control of a continuous stirred tank process. Can. J. Chem. Eng., vol. 53, pp. 211-216.
4. G.E.P. Box, G.M. Jenkins and J.F. MacGregor, 1974. Some recent advances in forecasting and control, part II. J. Roy. Statis. Soc., Series C, 23, No. 2, pp. 158-179.
3. G.E.P. Box and J.F. MacGregor, 1974. The analysis of closed-loop dynamic-stochastic systems. Technometrics, 16, No. 3, pp. 391-398.
2. J.F. MacGregor, 1973. Optimal discrete stochastic control theory for process application. Can. J. Chem. Eng., 51, No. 4, pp. 468-478.
1. G.E.P. Box, W.G. Hunter, J.F. MacGregor and J. Erjavec, 1973. Some problems associated with the analysis of multiresponse data. Technometrics, 15, No. 1, pp. 33-51.

(c) Other Refereed Contributions

Notes and Communications:

8. Yoon, S. and MacGregor, J.F. (2000) Letter to the editor on "Relationships between statistical and causal model based approaches to fault detection and isolation", Amer. Inst. Chem. Eng. J., 46, 1887-1889.
7. J.F. MacGregor, 1992. Discussion of "Statistical Process Monitoring and Feedback Control - A Discussion", Technometrics, 34, No. 3, pp. 273-275.
6. J.F. MacGregor, 1991. Discussion of "Some Statistical Process Control Methods for Autocorrelated Data", J. Qual. Tech., 23, pp. 198-199.
5. J.F. MacGregor and T.J. Harris, 1990. Discussion of "Exponentially Weighted Moving Average Control Schemes: Properties and Enhancements", Technometrics, Feb. 1990, Vol. 32, No. 1, pp. 23-26.
4. T. Kourti, J.F. MacGregor and A.E. Hamielec, 1987. Minimum Number of Turbidity Measurements Required for the Determination of Particle Size Distributions, J. Colloid and Interfacial Sci., 120, 292-295.
3. J.F. MacGregor, 1978. Can. J. Chem. Eng., 56, 530-531.
2. J.F. MacGregor, 1973. Can. J. Chem. Eng., 51, p. 518.
1. G.E.P. Box and J.F. MacGregor, 1972. Technometrics, 14, 984-985.

Chapters in Books

2. A.E. Hamielec, J.F. MacGregor and A. Penlidis, 1988. Copolymerization, In Comprehensive Polymer Science, G. Allen and J.C. Bevington, Eds., Vol. 3, pp. 17-31, Pergamon Press, N.Y.
1. A.E. Hamielec and J.F. MacGregor, 1981. Latex Reactor Principles Design, Operation and Control, Chapter 9, pp. 319-355. In Emulsion Polymerization II, I. Piirma (editor), Academic Press, N.Y.

Editor of Proceedings

Dynamics and Control of Chemical Reactors, Distillation Columns, and Batch Processes, IFAC Symposium Series, No. 7, J.E. Rijnsdorp, J.F. MacGregor, B.D. Tyreus, T. Takamatsu, Eds., Pergamon Press (1990).

(d) Papers Published in Non-Refereed Journals

3. J.F. MacGregor, 1996. 1995 Youden Address: "Using On-Line Process Data to Improve Quality. Is There a Role for Statisticians? Are They Up to the Challenge?" ASQC Newsletter, 16, No. 2, 6-13. Also published in ASA, Chem. Division Newsletter, 16, No. 2, 6-13.
2. J.F. MacGregor, 1988. "On-line Statistical Process Control", Chem. Eng. Progress, 84, No. 10, 21-31.
1. J.F. MacGregor, 1987. "Interfaces between Process Control and On-Line Statistical Process Control", Computing & Systems Technology (CAST) Division Communications of the AIChE, 10, No. 2, 9-20.

(e) Papers Published in Refereed Conference Proceedings

62. Weaver, E. Takas, J. MacGregor and S. Veldhuis, "Designing the Process – An Introduction to Multivariate Statistical monitoring for rotational Molding", Proc. TOPCON 2004 Conf., Cleveland, OH, June, 2004
61. MacGregor, J.F., "Data-based Latent Variable Methods for Process Analysis, Monitoring and Control, Proc. ESCAPE'2004, Lisbon, May, 2004.
60. Yu, H. and J.F. MacGregor, "Multivariate Image Analysis for Inferential Sensing: A Framework", Proc. IFAC Dycops'7, Cambridge, MA, July, 2004.
59. Flores-Cerillo, J. and J.F. MacGregor, "Model Predictive Control for Batch Processes using Latent variable Methods", Proc. IFAC Dycops'7, Cambridge, MA, July, 2004.
58. Liu, J.J., J.F. MacGregor, C. Duchesne, G. Bartilacci, "Monitoring of Flotation Processes using Multiresolutional Multivariate Image analysis (MR-MIA)" Proc. IFAC Dycops'7, Cambridge, MA, July, 2004.
57. Duchesne, C., T. Kourti, and J.F. MacGregor, "Multivariate Monitoring of Start-ups, Re-starts and Grade transitions using Projection Methods", Proc. Amer. Control Conf., Boston, June, 2003

56. MacGregor, J.F. (2003) "Data based methods for process analysis, monitoring and control", Proc. IFAC SYSID'2003, Semi-plenary paper, Amsterdam, NL
55. Yu, H. and J.F. MacGregor, (2003) "Monitoring Turbulent Non-premixed Flames in an Industrial Boiler Using Multivariate Image Analysis (MIA)", Proc. Safeprocess'2003, Washington, DC.
54. MacGregor, J.F. (2003) "Multivariate statistical approaches to fault detection and isolation", Proc. IFAC Safeprocess'2003, Washington, DC.
53. Yu, H. and J.F. MacGregor, (2003) "Digital imaging for process monitoring and control with industrial applications", Proc. IFAC ADCHEM'2003, Hong Kong
52. Flores-Cerrillo, J. and J.F. MacGregor (2003) "Semi-batch trajectory control in reduced dimensional spaces", Proc. IFAC ADCHEM'2003, Hong Kong
51. Bharati, M., J.F. MacGregor, M. Champagne and M. Barrette, "Using near-infrared multivariate image regression techniques to predict pulp properties", Control Syst. 2002 Conf., Stockholm, June 3-5, 2002.
50. Flores-Cerillo J. and J.F. MacGregor. Inferential-learning control of quality properties in semi-batch reactors, Int. Fed. Aut. Control, Proc. 15-th World Congress, Barcelona, Spain July 21-26, 2002.
49. S. Yoon and J.F. MacGregor, "Unifying PCA and Multi-Scale Approaches to Fault Detection and Isolation", Dycops-6 Proceedings, Cheju, Korea, 2001.
48. S. Yoon and J.F. MacGregor, "Incorporation of External Information into PCA/PLS Models", Chemfas-4 Proceedings, Chejudo, Korea, 2001
47. R. Shi and J.F. MacGregor, "A Unifying Framework for Subspace Identification Methods", Proc. American Control Conference, Maryland, USA, 2001.
46. Bharati, M. and MacGregor, J.F., "Texture Analysis of Images using Principal Component Analysis", Proc. SPIE - Process Imaging for Automatic Control, Boston, MA, Nov. 2000.
45. MacGregor, J.F., Bharati, M. and Yu, H., "Multivariate Image Analysis for Process Monitoring and Control", Proc. SPIE - Process Imaging for Automatic Control, Boston, MA, Nov. 2000.
44. Y. Yabuki, T. Nagasawa and J.F. MacGregor, "An Industrial Experience with Product Quality Control in Semi-Batch Processes", PSE Conf. Proc, July, 2000.
43. S. Yoon and J.F. MacGregor, "Relationships between Statistical and Causal Model-Based Approaches to Fault Detection and Isolation", Proc. IFAC ADCHEM'2000, PP 189-193, Pisa, Italy, June 2000.
42. T. Clarke-Pringle and J.F. MacGregor, "Reduced Dimension Control: An Overview of Approaches for Product Quality Control", Proc. IFAC ADCHEM'2000, PP 189-193, Pisa, Italy, June 2000.
41. L.K. Kostanski and J.F. MacGregor, "Physico-Chemical Changes During Re-Activation of Different Types of Vulcanized Rubber" Paper #134, Amer. Chem. Soc. Conf. - Rubber Division, Orlando, FL, Sept, 1999.
40. J.F. MacGregor and T. Kourti, "Multivariate Statistical Treatment of Historical Data for Productivity and Quality Improvements", Proc. Foundations of Computer Aided Process Operations (FOCAPO), Snowbird, Utah, July, 1998
39. A. Kassidas, J.F. MacGregor and P.A. Taylor, "Fault Diagnosis in Continuous Dynamic Processes using Speech Recognition Methods", Proc. ADCHEM'97 (Int. Fed. Aut. Control), Banff, June 9-11, 1997

38. C. Jaeckle and J.F. MacGregor, 1996, "Product Design Through Multivariate Statistical Analysis of Process Data", Proc. ESCAPE-6, Comp. & Chem. Eng., 20, Suppl. B, pp. S1047-S1042
37. T.Kourti, J. Lee and J.F. MacGregor, 1996, "Experiences with Industrial Applications of Projection Methods or Multivariate Statistical Process Control", Proc. ESCAPE-6, Comp. & Chem. Eng., 20, Suppl. A, pp. S745-S750
36. Kosanovich, K.A., M.J. Piovoso, K.S. Dahl, J.F. MacGregor and P. Nomikos "Multi-way PCA Applied to an Industrial Batch Process", Proc. Amer. Control Conf., 1995.
35. J.F. MacGregor, 1994. "Statistical Process Control of Multivariate Processes", Int. Fed. Aut. Control "ADCHEM '94" Conf., Kyoto, Japan, May 1994.
34. T. Kourti and J.F. MacGregor, 1994. "Multivariate Statistical Process Control of Batch Processes Using PCA and PLS", Int. Fed. Aut. Control "ADCHEM '94" Conf., Kyoto, Japan, May 1994.
33. J.F. MacGregor, P. Nomikos and T. Kourti, 1994. "Multivariate SPC Methods for Monitoring and Diagnosing of Process Performance", Process Systems Eng. Conf. PSE '94, Kyonju, Korea, June 1994.
32. J.F. MacGregor and P. Nomikos, 1992. Monitoring Batch Processes, NATO-ASI Workshop on Batch Processes, Springer-Verlag, Berlin, In Press (To appear, March 1994).
31. F. Forbes, T.E. Marlin and J.F. MacGregor, 1992. Model Accuracy Requirements for Economic Optimizing Model Predictive Controllers - The Linear Programming Case, Proc. Amer. Control Conf., Chicago, June 1992, 1576-1581, IEEE, Piscataway, NJ.
30. A. Cinar, T.E. Marlin and J.F. MacGregor, 1992. Automated Monitoring and Assessment of Controller Performance, Proc. IFAC Symp. on On-line Fault Detection and Supervision in the Chemical Industries, Delaware, April 1992, pp. 44-48, Pergamon Press, NY.
29. K.B. McAuley and J.F. MacGregor, 1992. "Nonlinear Control of a Fluidized Bed Polyethylene Reactor", Proc. IFAC Conf. DYCORDER'92, April 1992, Pergamon Press, NY.
28. N. Stanfelj, T.E. Marlin and J.F. MacGregor, 1991. Monitoring and Diagnosing Process Control Performance: The Single Loop Case, Proc. Amer. Control Conf., Boston, MA, pp. 2886-2892.
27. J.F. MacGregor, B. Skagerberg and C. Kiparissides, 1991. Multivariate Statistical Process Control and Property Inference Applied to Low Density Polyethylene Reactors, IFAC Symp. ADCHEM'91, pp. 131-138, Toulouse, France, Oct. 1991 Pergamon Press.
26. J.F. MacGregor, T. Kourti and J.V. Kresta, 1991. Multivariate Identification: A Study of Several Methods. IFAC Symp. ADCHEM'91, pp. 369-376, Toulouse, France, Oct., 1991, Pergamon Press.
25. J.F. MacGregor, T.E. Marlin, J.V. Kresta and B. Skagerberg, 1991. Multivariate Statistical Methods in Process Analysis and Control, AIChE Symp., Chem. Proc. Control IV, South Padre Island, Texas, Feb., 1991, pp. 79-99, Y. Arkun and W.H. Ray, Eds., Amer. Inst. Chem. Eng., New York.

24. J.F. MacGregor, T.E. Marlin and J.V. Kresta, 1991. Some Comments on Neural Networks and Other Empirical Modelling Methods, AIChE Symp., CPC-IV, South Padre Island, Texas, Feb., 1991, pp. 665-672, Y. Arkun and W.H. Ray, Eds., Amer. Inst. Chem. Eng., New York.
23. A. Urainec, S. Haykin and J.F. MacGregor, 1989. A Neural Network Nonlinear Predictor, Proc. IEEE Int. Conf. on Neural Networks, Washington, D.C., June 1989.
22. D.J. Kozub and J.F. MacGregor, 1989. State Estimation and Nonlinear Control of Batch Polymerization Reactors, Proc. Int. Fed. Aut. Control Symposium DYCORD+'89, Maastricht, Netherlands, Pergamon Press, pp. 291-298.
21. J. Roffel, T.W. Hoffman and J.F. MacGregor, 1989. The Design and Implementation of a Multivariable Internal Model Controller for a Continuous Polybutadiene Polymerization Train, Proc. Int. Fed. Aut. Control Symposium DYCORD+'89, Maastricht, Netherlands, Pergamon Press, pp. 9-16.
20. T. Kourti, J.F. MacGregor and A.E. Hamielec, 1988. Submicron Particle Size Distribution Using Light Scattering and Particle Chromatography. Evaluation of the Techniques and Their Application to On-Line Measurements. Int. Symp. on Production and Processing of Fine Particles - Fine Particles '88, Montreal, Aug. 1988.
19. L. Segall, J.F. MacGregor and J.D. Wright, 1987. One-Step Optimal Correction for Input Saturation in Discrete Model-Based Controllers. Proc. Int. Fed. Aut. Cont., World Congress, Munich, 1987, pp. 388-394, Pergamon Press, NY.
18. A.E. Hamielec, J.F. MacGregor, S. Webb and T. Sychaj, 1986. Thermal and chemical initiated copolymerization of styreneacrylic acid at high temperatures and conversions in a continuous stirred tank reactor, Proc. 2nd Berlin Inter. Workshop on Poly. Reaction Eng., K.H. Reichert, Ed., Berlin, 1986, pp. 185-200, Hanser, Publ., Berlin.
17. PD. Gossen, T. Kourti, A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1986. On line particle size and conversion determination in continuous latex reactor trains, Proc. IFAC Symp. PRP 6, Akron, Ohio, Oct. 1986, Pergamon Press, pp. 71-76.
16. J.F. MacGregor, 1986. On line reactor energy balances in Kalman filtering, Proc. IFAC Symp. PRP 6, Akron, Ohio, Oct. 1986, Pergamon Press, 27-31.
15. J.F. MacGregor, 1986. Control of polymerization reactors, Proc. IFAC Symp. DYCORD 86, Bournemouth, U.K., Dec. 1986, Pergamon Press, pp. 21-36.
14. J.F. MacGregor, D. Kozub, A. Penlidis and A.E. Hamielec, 1986. State estimation for polymerization reactors, Proc. IFAC Symp. DYCORD 86, Bournemouth, U.K., Dec. 1986, Pergamon Press, pp. 147-152.
13. D.J. Kozub, J.F. MacGregor and J.D. Wright, 1986. Multivariable control of a catalytic tubular reactor using both Wiener Hopf controller design and Internal Model controller design approaches, Proc. IFAC Symp. DYCORD 86, Bournemouth, U.K., Dec. 1986, Pergamon Press, pp. 285-294.
12. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1985. Continuous emulsion polymerization reactor control, Proceedings of the American Control Conference, Boston, MA, June 1985, pp. ___.

11. A. Penlidis, J.F. MacGregor and A.E. Hamielec, 1985. On-line computer control of a continuous latex reactor train. Proceedings of 7th IFACIFIPIMACS Symposium on Digital Computer Application to Process Control, Vienna, Austria, September 1985.
10. R.F. Sikora, W.L. Bialkowski, J.F. MacGregor and P.A. Taylor, 1984. A self-tuning strategy for moisture control in papermaking, Proceedings of Amer. Cont. Conf., San Francisco, June 1984, pp. ___
9. A.E. Hamielec and J.F. MacGregor, 1983. Modelling Copolymerizations - Control of Chain Microstructure, Long Chain Branching, Crosslinking and Molecular Weight Distribution. Polymer Reaction Engineering - Berlin International Workshop, K.H. Reichert and W. Geisler editors, pp. 21-71, Hanser Publishers, Munich.
8. J.F. MacGregor, A.E. Hamielec and A. Penlidis, 1983. Computer control of polymer reactors, IFAC Proceeding, PRP-5, Antwerp, Belgium, Oct. 1983.
7. J.F. MacGregor, A.E. Hamielec, A. Penlidis and M. Pollock, 1983. Control of continuous emulsion polymerization reactors. IFAC Proceedings, 5-th Int. Conf. on Instrumentation and Automation in Paper, Rubber, Plastics and Polymerization Industries (PRP-5), Antwerp, Belgium, Oct., 1983.
6. A. Jutan, J.D. Wright and J.F. MacGregor, 1980. Multivariable computer control of a butane hydrogenolysis reactor. Part IV: Design and implementation of a stochastic controller using an identified multivariate noise model. Proc. Joint Aut. Control Conf. (San Francisco, CA, 1980) Section TP5 (8 pages).
5. T.J. Harris, J.D. Wright and J.F. MacGregor, 1979. Optimal sensor location with application to a packed bed tubular reactor. Proc. Joint Aut. Control Conf., (Denver, CO, June 1979).
4. T.J. Harris, J.F. MacGregor and J.D. Wright, 1978. An Application of self-tuning regulators to catalytic reactor control. Proc. Joint Aut. Control Conf. (Philadelphia, PA, 1978), pp.
3. J.D. Wright, J.F. MacGregor, A. Jutan, J.P. Tremblay and A. Wong, 1977. Inferential control of an exothermic packed bed tubular reactor. Proc., Joint Aut. Control Conf. (San Francisco, CA, 1977), pp. 1516-1522.
2. A. Jutan, J.F. MacGregor and J.D. Wright, 1977. Multivariable stochastic control of a pilot plant packed bed tubular reactor. Proc. 5th IFACIFIP Int. Conf. Digital Comp. Appl. Process Control (The Hague, Netherlands, 1977), pp. 623-630.
1. G.E.P. Box and J.F. MacGregor, 1975. Proc. IFAC World Congress, pp. ___, Boston, Aug. 1975,