

REFERENCES BIBLIOGRAPHIQUES

- [ABB, 92] M. Abbad, J. A. Filar, T. R. Bielecki, Algorithms for Singularly Perturbed Limiting Average Markov Control Problems, *IEEE Transactions on Automatic Control*, vol. 37, no. 9, pp. 1421-1425, September 1992.
- [AKE, 86] R. Akella, P. R. Kumar, Optimal Control of Production Rate in a Failure Prone Manufacturing System, *IEEE Transactions on Automatic Control*, vol. 31, no. 2, Fevrier 1986.
- [ALT, 93] E. Altman, V. Gaitsgory, Stability and Singular Perturbations in Constrained Markov Decision Problems, *IEEE Transactions on Automatic Control*, vol. 38, no. 6, pp. 971-975, June 1993.
- [AVR, 79] B. Avramovic, Subspace iteration approach to the scale separation, *Proc of IEEE Decision and Control*, pp 689-687, 1979.
- [BAI, 70] N. T. J. Bailey, *The Elements of Stochastic Processes*, Wiley, New York, 1970.
- [BAR, 82] S. Barnett, R. E. Scraton, Location of Matrix Eigenvalues in the Complex Plane *IEEE Transactions on Automatic Control*, vol. 27, no. 4, pp. 966-967, Août 1982.
- [BAU, 68] F. L. Bauer, Fields of Values and Gershgorin Disks, *Numerische Mathematik*, no.12, pp. 91-95, 1968.
- [BEL, 57] R. Bellman, A Markovian Decision Process, *Journal of Mathematics and Mechanics*, vol. 6, pp. 679-684, 1957.
- [BEN, 82] Q. Bennis, *Analyse et Commande des Systèmes à Double Echelle de Temps, Version Continue et Discrète*, Thèse de Doctorat, Automatique, Université Paul Sabatier de Toulouse, 1982.
- [BER, 79] A. Berman and R. J. Plemmons, *Nonnegative matrices in the mathematical science*, Academic Press, New York, 1979.
- [BIE, 89] T. Bielecki, L. Stettner, On Ergodic Control Problems for Singularly Perturbed Markov Processes, *Applied Mathematics and Optimisation*, no. 20, pp 131-161, 1989.
- [BIK, 93] M. U. Bikdash, A. H. Nafyfeh, E. M. Cliff, Singular Perturbation of the Time-Optimal Soft-Constrained Cheap-Control Problem, *IEEE Transactions on Automatic Control*, vol. 38, no. 3, pp. 466-469, Mars 1993.
- [BOR, 74] P. Borne, J.-C. Gentina, Definition of Matricial Transformation Permitting the Discretisation of a set of Differential Equations, *Proc of IFIP Symposium*, pp. 452-455, 1974.
- [BOR, 90] P. Borne, G. Dauphin-Tanguy, J. P. Richard, F. Rotella, F. Zambetakis, Modélisation et Identification des Processus, Collection "*Méthodes et Techniques de l'Ingénieur*", vol. 1, Ed. Technip, 1990.
- [BOR, 92] P. Borne, G. Dauphin-Tanguy, J. P. Richard, F. Rotella, F. Zambetakis, Modélisation et Identification des Processus, Collection "*Méthodes et Techniques de l'Ingénieur*", vol. 2, Ed. Technip, 1992.
- [BOR, 93] P. Borne, G. Dauphin-Tanguy, J. P. Richard, F. Rotella, F. Zambetakis, Analyse et Régulation des Processus Industriels, Collection "*Méthodes et Techniques de l'Ingénieur*", vol. 4, Ed. Technip, 1993.
- [BOUA, 90] A. Bouayad, *Etude Comparative des Méthodes d'Analyse de Systèmes à Echelles de Temps Multiples*, Thèse de doctorat, Lille, 1990.
- [BOUD, 69] R. Boudarel, J. Delmas, P. Guichet, *Commande Optimale des Processus*, Dunod, Paris, 1969.

- [BOUK, 91] R. Boukhlal, *Etude Comparative en Discret, de Différentes Modélisations sous Formes Singulièrement Perturbées. Application à la Commande Optimale*, Thèse 3-ème cycle, Casablanca, 1991.
- [BRU, 74] C. Bruni, G. Dipillo, G. Koch, Bilinear systems : an appealing class of "nearly linear" systems in theory and applications, *IEEE Transactions on Automatic Control*, vol. AC-19, no 4, pp.334, 1974.
- [CAS, 89] C. G. Cassandras, S. G. Strickland, Observable Augmented Systems for Sensitivity Analysis of Markov and Semi-Markov Processes, *IEEE Transactions on Automatic Control*, vol. 34, no. 10, pp. 1026-1037, October 1989.
- [CHA, 71] M. Chambat, Localisation de Valeurs Propres Region de Gudov, *Revue Française d'Informatique et de Recherche Opérationnelle (R.I.R.O.)*, 5^e année, no. R-3, pp. 82-88, 1971.
- [CHE, 90] B. S. Chen, C. L. Lin, On the Stability Bounds of Singularly Perturbed Systems, *IEEE Transactions on Automatic Control*, vol. 35, no. 11, Novembre 1990.
- [CHO, 76] J. H. Chow, P. V. Kokotovic, Eigenvalue Placement in Two-Time-Scale Systems, *Proceedings IFAC Symposium on Large Scale Systems*, pp. 321-326, 1976.
- [CHO, 78] J. H. Chow, P. V. Kokotovic, Two-Time-Scale Feedback Design of a Class of Nonlinear Systems, *IEEE Transactions on Automatic Control*, vol. AC-23, no.3, pp. 438-443, 1976.
- [CHR, 74] P. Chretienne, R. Faure, *Processus stochastiques leurs graphes, leurs usages*, Gauthier-Villars, Paris, vol. 2, 1974.
- [CIA, 82] P. G. Ciarlet, *Introduction à l'analyse numérique matricielle et à l'optimisation*, Masson, 1982.
- [CLY, 90] J. R. Clymer, *System Analysis Using Simulation and Markov Models*, Prentice Hall, Englewood Cliffs, New Jersey, 1990.
- [COR-a, 94] A. Corlat, Modelling of Systems Reliability by Means of Semi-Markov Processes, *Proceedings of the IMACS Symposium on Mathematical Modelling*, vol. 5, pp. 867-869, Vienna, Austria, February 1994.
- [COR-b, 94] A. Corlat, N. Andronaty, Y. Rogozhin, Probability Models of Reliability of Information-Computer Systems with Hierarchical Structure, *Proceedings of the IMACS Symposium on Mathematical Modelling*, vol. 5, pp. 863-866, Vienna, Austria, February 1994.
- [CORS, 93] M. Corless, F. Garofalo, L. Glielmo, New Results on Composite Control of Singularly Perturbed Uncertain Linear Systems, *Automatica*, vol. 29, no. 2, pp. 387-400, 1993.
- [COU, 77] P. J. Courtois, *Decomposability. Queuing and Computer System Applications*, Academic Press, New York, 1977.
- [CRE, 92] N. Cressie, S. Lele, New Models for Markov Random Fields, *Journal of Applied Probability*, vol. 29, pp. 877-884, 1992.
- [DEN, 76] J. E. Dennis, JR., J. F. Traub, R. P. Weber, The Algebraic Theory of Matrix Polynomials, *SIAM Journal of Numerical Analysis*, vol. 13, no. 6, pp. 831-845, Decembre 1976.
- [DAU, 82] G. Dauphin-Tanguy, P. Borne, Présentation d'une Méthode Géométrique Permettant de Séparer les Diverses Dynamiques d'Evolution d'un Système de Grande Taille, *Congrès AMSE*, Paris, 1982.
- [DAU, 83] G. Dauphin-Tanguy, M. Lebrun, P. Borne, Interprétation de la notion de système

- réci-proque par les bond-graphs pour les processus multi-échelles de temps, *Congrès IASTED A.I.* 83, Lille, pp. 137-144, 1983.
- [DEL, 78] F. Delebecque, J. P. Quadrat, Contribution of Stochastic Control Singular Perturbation Averaging and Team Theories to an Example of Large-Scale Systems : Management of Hydropower Production, *IEEE Transactions on Automatic Control*, vol. 23, no. 2, pp. 209-222, April 1978.
- [DEL, 81] F. Delebecque, J. P. Quadrat, *Optimal Control of Markov Chains Admitting Strong and Weak Interactions*, *Automatica*, vol. 17, no. 2, pp. 281-296, 1981.
- [DEL, 83] F. Delebecque, A Reduction Process for Perturbed Markov Chains, *SIAM Journal of Applied Mathematics*, vol. 43, no. 2, pp. 325-350, April 1983.
- [DER, 70] C. Derman, *Finite State Markovian Decision Processes*, Academic Press, New York, 1970.
- [DOB, 94] R. P. Dobrow, J. A. Fill, The Move-to-Front Rule for Self-Organizing Lists with Markov Dependent Requests, *Proceedings of 14th. Congress of IMACS - Computational and Applied Mathematics*, Atlanta, USA, pp. 122-125, Juillet 1994.
- [EDF, 92] Electricité de France Production Transport, *Caractéristiques des centrales du groupe d'exploitation hydraulique Jura Morvan*, Besançon, 1992.
- [ELL, 91] R. J. Elliott, Finite Dimensional Filters Related to Markov Chains, *Proceedings of a Workshop Held in Laurence Kansas*, pp. 142-159, Sept. 26-28, 1991.
- [ELM, 84] A. El Moudni, G. Dauphin-Tanguy, P. Borne, Sur une nouvelle méthode de séparation des dynamiques d'un système discret à double échelle de temps, *Congrès A.M.S.*, Nice, pp 92-97, 1984.
- [ELM, 85] A. El Moudni, *Contribution à la modélisation et à l'analyse des systèmes discrets à échelle de temps multiples. Application à la commande optimale*, Thèse ès sciences physiques, Lille, 1985.
- [ENG, 79] A. Engel, *l'Enseignement des Probabilités et de la Statistique*, vol. 2, Editions Cedic, Paris, 1979.
- [FAN, 62] K. Fan, Topological Proofs for Certain Theorems on Matrices with Non-Negative Elements, *Monatshefte für Mathematik*, vol 62/3, pp. 219-237, 1962
- [FAU, 74] R. Faure, J-L. Laurière, *Fiabilité et Renouvellement des Equipements*, Gauthier-Villars, Paris, 1974.
- [FER, 91] E. Fernandez-Gaucherand, A. Arapostathis and S. I. Markus, Stochastic Theory and Adaptive Control, *Proceedings of a Workshop Held in Laurence Kansas*, pp. 161-171, Sept. 26-28, 1991.
- [FIE, 62] M. Fielder, V. Pták, On matrices with non-positive off-diagonal elements and positive principal minors, *Journal Tchecoslovaque de Mathématique*, vol 12 (87), Prague, pp. 382-400, 1962.
- [FOS, 93] A.J. Fossard et D. Normand-Cyrot, *Systèmes non linéaires. Commande*, Masson, 1993.
- [GOL, 94] J. Golec, A Method of Weak Convergence for Stochastic Singularly Systems, *Proceedings of 14th. Congress of IMACS - Computational and Applied Mathematics*, Atlanta, USA, pp. 191-192, Juillet 1994.
- [GOP, 91] S. Gopal, K. Majidzadeh, Application of Markov Decision Process to Level-of Service-Based Maintenance Systems, *Transportation Research Record*, vol. 1304, pp. 12-18, 1991.
- [GOPK, 94] V. Gopalakrishna, N. Viswanadham, K. R. Pattipati, Sensitivity Analysis of Failure-

- Prone Flexible Manufacturing Systems, *Proceedings of IEEE Robotics and Automation*, pp. 181-186, San Diego, California, USA, 1994.
- [GRU, 73] Lj. T. Grujic et D. D. Silyak, On stability of discrete composite systems, *IEEE Transaction on Automatic Control*, vol AC 18 No 5, pp 522-524, 1973.
- [GRU, 77] Lj. T. Grujic, Quasy-singular perturbation of time-discrete systems, *Proc. American Control Conference*, San Francisco, pp 857-862, 1977.
- [GRU, 92] Lj. T. Grujic, A. A. Martynyuk, M. Ribbens-Pavella, *Lecture Notes in Control and Information Sciences*. Large Scale Systems Stability unter Structural and Singular Perturbations, Springer-Verlag, Berlin, 1992.
- [HEI, 91] A. C. Heinricher, R. H. Stockbridge, Optimal Control and Replacement with State-Dependent Failure Rate, *Proceedings of a Workshop Held in Laurence Kansas*, pp. 240-247, Sept. 26-28, 1991.
- [HEL, 94] U. Helmke, J. B. Moore, *Optimisation and Dynamical Systems*, Springer-Verlag, Berlin, 1994.
- [HIS, 88] Hisashi, H. Kando, T. Wasumi and U. Hiroyuki, Singular perturbation modelling of large-scale systems with multi-time-scale property, *International Journal of Control*, vol. 48, no. 6, pp. 2361-2387, 1988.
- [HO, 83] Y. C. Ho, X. Cao, C. Cassandras, Infinitesimal and Finite Perturbation Analysis for Queuing Networks, *Automatica*, vol. 19, no. 4, pp. 439-445, 1983.
- [HU, 93] J-Q. Hu, D. Xiang, The Queuing Equivalence to a Manufacturing System with Failures, *IEEE Transactions on Automatic Control*, vol. 38, no. 3, pp. 499-502, March 1993.
- [ISI, 92] A. Isidori, S. S. Sastry, P. V. Kokotovic, C. I. Byrnes, Y.-Y. Wang, S.-J. SHI, Z.-J. Zhang, Singularly Perturbed Zero Dynamics of Nonlinear Systems, *IEEE Transactions on Automatic Control*, vol. 37, no. 10, Octobre 1992.
- [JAV, 80] S. H. Javid, Nested Optimisation of Weakly Coupled Markov Chains, *Proceedings of the 18th Annual Allerton Conference on Communication, Control and Computing*, University of Illinois, USA, pp. 880-890, 1980.
- [JIA, 88] Y. Jiang, M. Saito, K. C. Sinha, Bridge Performance Prediction Model Using the Markov Chain, *Transportation Research Record*, vol. 1180, pp. 25-32, 1988.
- [KAR, 69] S. Karlin, *Initiation aux Processus Aléatoires*, Dunod, Paris, 1969.
- [KHA 87] H. K. Khalil, Output feedback control of linear two-time-scale systems, *IEEE Transactions on Automatic Control*, vol. AC-32, pp. 784-792, 1987.
- [KOK-a, 75] P. V. Kokotovic, A Riccati Equation for Block-diagonalisation of Ill-conditioned Systems, *IEEE Transactions on Automatic Control*, vol. 20, no. 1, pp. 812-814, 1975.
- [KOK, 75] P. V. Kokotovic, A. H. Haddad, Controlability and Time-Optimal Control of Systems with Slow and Fast Modes, *IEEE Transactions on Automatic Control*, vol. 20, no. 1, pp. 111-113, 1975.
- [KOK, 76] P. V. Kokotovic, R. E. O'Malley, P. Sannuti, Singular Perturbation and Order Reduction on Control Theory. An Overview, *Automatica*, vol. 12, pp. 123-132, 1976.
- [KOK, 86] P. V. Kokotovic, H. K. Khalil, J. O'Reilly, *Singular Perturbation Methods in Control : Analysis and Design*, Academic Press, New York, 1986.
- [KU-a, 71] H. J. Kushner, A. J. Kleinman, Accelerated Procedures for the Solution of Discrete Markov Control Problems, *IEEE Transactions on Automatic Control*, vol. AC-16, no. 2, pp. 147-152, April 1971.

- [KU-b, 71] H. J. Kushner, A. J. Kleinman, Mathematical Programming and the Control of Markov Chains, *International Journal of Control*, vol. 13, no.5, pp. 801-820, 1971.
- [KUS, 74] H. J. Kushner, C-H. Chen, Decompositions of Systems Governed by Markov Chains, *IEEE Transactions on Automatic Control*, vol. 19, no. 5, Oct. 1974.
- [LEG, 93] J. F. Le Gall, A Class of Path-Valued Markov Processes and its Application to Superprocesses, *Probability Theory and Related Fields*, vol. 95, no. 1, pp. 25-47, 1993.
- [LIG, 87] J-C. Ligeron, R. Gormand, *Approche de la Fiabilité des Systèmes Mécaniques, Enjeux*, no. 81, July 1987.
- [LUN, 94] R. B. Lund, R. L. Tweedie, Exact Convergence of Stochastically Ordered Markov Chains, *Proceedings of 14th. Congress of IMACS - Computational and Applied Mathematics*, Atlanta, USA, pp. 320-324, Juillet 1994.
- [MAH, 82] M. S. Mahmud, Order Reduction and Control of Discrete Systems, *IEEE Proc.*, vol 129, PT. D. no. 4, Juillet, 1982.
- [MAK, 93] A. M. Makovski, A. Shwartz, On Constrained Optimisation of the Klimov Network and Related Markov Decision Processes, *IEEE Transactions on Automatic Control*, vol. 38, no. 2, pp. 354-359, February 1993.
- [MAL, 94] R. Mallubhatla, K. R. Pattipati, N. Viswanadham, Moment Recursion of the Cumulative Performance of Production Systems Using Discrete-Time Markov Reward Models, *Proceedings of IEEE Robotics and Automation*, pp. 187-192, San Diego, California, USA, 1994.
- [MAR, 88] R. Marino, P. V. Kokotović, A geometric approach to nonlinear singular perturbed control systems, *Automatica*, vol.24, No 1, pp. 31-41, 1988.
- [MEY, 93] S. P. Meyn, R. L. Tweedie, *Markov Chains and Stochastic Stability*, Springer-Verlag, Londre, 1993.
- [MOH, 73] R. R. Mohler, *Bilinear control processes*, Academic press, 1973.
- [MOH, 80] R. R. Mohler, W. J. Kolodziej, An overview of bilinear systems : theory and application, *IEEE-CMC-10*, no 10, pp. 683, 1980.
- [MOR, 84] O. Moreigne, *Contribution à la modélisation et à la synthèse des systèmes à échelles de temps multiples*, Thèse de doctorat ès Sciences, Lille, 1984.
- [NIE, 92] E. Niel, A. Jutar, Contribution à la Formalisation de la Sécurité Opérationnelle, *Revue d'Automatique et Productique Appliquées*, vol. 5, no. 2, pp. 57-64, 1992.
- [O'MA, 71] R. E. O'Malley, Boundary layer methods for non linear initial value problems, *SIAM Review*, vol. 13, pp.425-434, 1971.
- [O'MA, 82] R. E. O'Malley, L. R. Anderson, *Time scale decoupling and order reduction for linear time-varying systems*, *Optimal control application and methods*, vol. 3, pp. 139, 1982.
- [PAL, 66] R. Pallu de la Barrière, *Cours d'Automatique Théorique*, Dunod, Paris, 1966.
- [PAR, 52] M. M. Parodi, *Mémorial des sciences mathématiques : sur quelques propriétés des valeurs caractéristiques des matrices carrées*, Gauthiers-Villars, 1952.
- [PHI, 92] B. Philippe, Y. Saad, W. J. Stewart, Numerical Methods in Markov Chain Modeling, *Operations Research*, vol. 40, no. 6, pp. 1156-1179, 1992.
- [PHP-a, 80] R. G. Phillips, Reduced Order Modelling and Control of Two-Time-Scale Discrete Systems, *International Journal of Control*, vol. 31, no. 4, pp. 765-780, 1980.
- [PHP-b, 81] R. G. Phillips, *Decomposition of Time Scales in Linear Systems and Markovian*

- Decision Processes*, Ph. D., Graduate College of the University of Illinois at Urbane-Champaign, Illinois, USA, 1981.
- [PHP-c, 81] R. G. Phillips, P. V. Kokotovic, A Singular Perturbation Approach to Modeling and Control of Markov Chains, *IEEE Transactions on Automatic Control*, vol. 26, no. 5, pp.1087-1094, October 1981.
- [QUA, 80] J. P. Quadrat, M. Viot, Product Form and Optimal Local Feedback for a Multiindex Markov Chain, *Proceedings of the 18th Annual Allerton Conference on Communication, Control and Computing*, University of Illinois, USA, pp. 870-880, 1980.
- [RAC-a, 94] D. Racocceanu, A. EL Moudni, M. Ferney, S. Zerhouni, A Singular Perturbation Approach to Modeling and Resolution of Markov Chains, *SAMS*, vol. 15, pp. 83-101, 1994.
- [RAC-b, 94] D. Racocceanu, A. EL Moudni, M. Ferney, S. Zerhouni, A Markov chains singular perturbation resolution, *Proceedings of 1. Mathmod Vienna*, Vienne, vol 2, pp. 289-292, February 1994.
- [RAC-c, 94] D. Racocceanu, A. EL Moudni, M. Ferney, S. Zerhouni, Use of an Homographic Transformation Jointly to the Singular Perturbation for the Resolution of Markov Chains. Application to the Operational Safety Study, *Proceedings of 1994 IEEE International Conference on Robotics and Automation*, San Diego, pp. 3544-3549, May 1994.
- [RAC-a, 95] D. Racocceanu, A. EL Moudni, M. Ferney, S. Zerhouni, On a New Method of Markov Chain Reduction, *Mathematical Modelling of Systems*, vol. 1, no. 3, pp. 83-101, 1995.
- [RAC-b, 95] D. Racocceanu, A. EL Moudni, M. Ferney, S. Zerhouni, A nearby optimal control of Markov chains using discrete singular perturbations in the case of first order polynomial control. Terminal problem, *Proceedings of IMACS-SAS'95 Conference*, Berlin, pp. 199-229, June 1995.
- [RAJ, 89] P. K. Rajagopalan and D. S. Naidu, A singular perturbation method for discrete control systems, *Internationale Journal of Control*, vol. 32, no. 5, pp.925-936, 1989.
- [ROH, 88] J. R. Rohlicek, A. S. Willsky, Multiple Time Scale Decomposition of Discrete Time Markov Chains, *System and Control Letters*, vol. 11, pp. 309-314, 1988.
- [ROS, 83] ROSEAUX, *Exercices et Problèmes Résolus de Recherche Opérationnelle*, vol. 2, Masson, Paris, 1983.
- [ROSS, 83] S. M. Ross, *Introduction to Stochastic Dynamic Programming*, Academic Press, New York, 1983.
- [ROT, 85] F. Rotella, G. Dauphin-Tanguy, P. Borne, Determination and separation of dynamics for multi-time scale bilinear systems, *1st European Workshop on Parallel Processing*, Manchester, 1985.
- [ROT, 86] F. Rotella, *Matrices - Notions élémentaires*, cours Ecole Centrale de Lille, 1986.
- [ROT, 87] F. Rotella, *Méthodes algébriques et analytiques pour la simplification et la commande de systèmes bilinéaires à deux dynamiques*, Thèse es Sciences phisiques, Lille, 1987.
- [SAB, 85] A. Saberi, H. Khalil, Stabilisation and Regulation of Nonlinear Singularly Perturbed Systems - Composite Control, *IEEE Transactions on Automatic Control*, vol. 30, no. 8, pp. 739-745, Août 1985.
- [SAM, 87] M. Samuelides, J. L. Pac, *Cours de Probabilités*, Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, Toulouse, 1987.

- [SAU, 80] C. H. Sauer, K. M. Chandy, *Approximate Solutions of Queuing Models*, Computer, pp. 25-32, April 1980.
- [SCHA, 78] R. Schassberger, Insensitivity of Steady-State Distributions of Generalised Semi-Markov Processes with Speeds, *Advanced in Applied Probability*, vol. 10, pp. 836-851, 1978.
- [SCHE, 93] W. T. Scherer, R. J. Plummer, Markov Approximations for Large-Scale Augmented Vector State Space, *Proceedings of IEEE International Conference of Systems, Man and Cybernetics*, pp. 203-208, Touquet, France, October 1993.
- [SCHW, 68] P. J. Schweitzer, Perturbation Theory and Finite Markov Chains, *Journal of Applied Probability*, no. 5, pp. 401-413, 1968.
- [SCHW, 86] P. J. Schweitzer, Perturbation Series Expansion for Nearly Completely-Decomposable Markov Chains, *Teletraffic Analysis and Computer Performance Evaluation*, pp. 319-328, 1986.
- [SET, 91] S. P. Sethi, M. Taksar, Q. Zhang, Hierarchical Investment and Production Decision in Stochastic Manufacturing Systems, *Proceedings of a Workshop Held in Laurence Kansas*, pp. 426-435, Sept. 26-28, 1991.
- [SHA, 88] A. Sharifnia, Production Control of a Manufacturing System with Multiple Machine States, *IEEE Transactions on Automatic Control*, vol. 33, no. 7, pp. 620-625, July 1988.
- [SHI, 91] N. Shimkin, A. Shwartz, Guaranteed Performance Regions for Multi-User Markov Model, *Proceedings of a Workshop Held in Laurence Kansas*, pp. 436-449, Sept. 26-28, 1991.
- [SIN, 83] M. G. Singh, M. F. Hassan, New Approach to Failure detection in Large-Scale Systems, *IEEE Proceedings*, vol. 130, no.5, pp. 243-249, September 1983.
- [STE, 78] W. J. Stewart, A Comparison of Numerical Techniques in Markov Modeling, *Communications of the ACM*, vol. 21, no. 2, pp. 144-151, February 1978.
- [STO, 80] J. Stoer and R. Bulirsch, *Introduction to numerical analysis*, Berlin, Springer- Verlag, 1980.
- [SUS, 76] H. J. Sussman, Semi group representations bilinear approximation of input-output maps and generalized inputs, *Mathematical System Theory*, Springer-Verlag, 1976.
- [SYR, 83] G. P. Syrcos, P. Sannuti, Singular Perturbation Modelling of Continuous and Discrete Physical Systems, *IEEE Transactions on Automatic Control*, vol. 37, no. 5, pp. 1007-1022, 1983.
- [TIK, 52] A. Tikhonov, Systems of differential equations containing a small parameter multiplying the derivative, *Mat. Sb.*, vol. 31, No. 73, pp.575-586, 1952.
- [VAR, 78] P. Varaiya, Optimal and Suboptimal Stationary Controls for Markov Chains, *IEEE Transactions on Automatic Control*, vol. 23, no. 3, pp. 388-394, June 1978.
- [VAR, 62] R. S. Varga, *Matrix Iterative Analysis*, Prentice-Hall, New Jersey, USA, 1962.
- [WAN, 88] Y.-Y. Wang, S.-J. SHI, Z.-J. Zhang, A Descriptor-System Approach to Singular Perturbation of Linear Regulators, *IEEE Transactions on Automatic Control*, vol. 33, no. 4, Avril 1988.
- [WHI, 63] D. J. White, Dynamic Programming, Markov Chains, and the Method of Successive Approximations, *Journal of Mathematical Analysis and Applications*, no. 6, pp. 373-376, 1963.
- [WHI, 85] D. J. White, Real Applications of Markov Decision Processes, *Interfaces*, vol. 15, no.

- 6, pp. 73-83, November-December 1985.
- [WHI, 88] D. J. White, Further Real Applications of Markov Decision Processes, *Interfaces*, vol. 18, no. 5, pp. 55-61, September-October 1988.
- [WHI, 89] C. C. White, D. J. White, Markov Decision Processes, *European Journal of Operational Research*, vol. 39, pp. 1-16, 1989.
- [WIL, 85] C. Williams, Obtaining Minimal Gershgorin Discs by Scaling the States, *International Journal of Control*, vol. 42, no. 5, pp. 1155-1173, 1985.
- [WU, 94] Y. Wu, Multilevel Stochastic Systems and Simulation, *Proceedings of 14th. Congress of IMACS - Computational and Applied Mathematics*, Atlanta, USA, pp. 493-498, Juillet 1994.
- [YAZ, 91] E. Yaz, Robustness of Discrete-Time Systems for Unstructured Stochastic Perturbations, *IEEE Transactions on Automatic Control*, vol. 36, no. 7, Juillet 1991.
- [ZHA, 94] K. Zhang, Robust Production Planning of Stochastic Manufacturing Systems, *Proceedings of 14th. Congress of IMACS - Computational and Applied Mathematics*, Atlanta, USA, pp. 510-513 Juillet 1994.