

Isabelle Queinnec - Liste complète des publications (Décembre 2009)

Ouvrages (Edition)

- [E1] I. Queinnec, S. Tarbouriech, G. Garcia and S.I. Niculescu (Eds.). Biology and control theory: current challenges. *Lecture Notes in Control and Information Sciences*, Springer Verlag, vol.357, 2007.

Ouvrages (Contribution)

- [O1] I. Queinnec et O. Bernard. Modèles dynamiques de procédés biochimiques. Propriétés des modèles. In *Automatique des bioprocédés*, Hermes, Chapitre 2, pp.23-52, 2001.
- [O2] S. Tarbouriech, I. Queinnec et G. Garcia. Anti-windup strategy for systems subject to actuator and sensor saturations. In *Advanced strategies in control systems with input and output constraints, Lecture Notes in Control and Information Sciences*, Springer Verlag, vol.346, pp.175-206, 2007.
- [O3] F. Gouaisbaut, I. Queinnec et S. Tarbouriech. Stability of load balancing control. In *Applications of time-delay systems, Lecture Notes in Control and Information Sciences*, Springer Verlag, vol.352, pp.77-95, 2007.
- [O4] I. Queinnec, S. Tarbouriech et G. Garcia. Analysis and control of dynamical biological systems in presence of limitations. In *Biology and control theory: current challenges, Lecture Notes in Control and Information Sciences*, Springer Verlag, vol.357, pp. 317-338, 2007.

Revue scientifique avec comité de lecture

- [R1] I. Queinnec, B. Dahhou et Y. Sévely. Theoretical and experimental results in optimization of fedbatch fermentation process, *Journal of Systems Engineering*, vol.1, pp.31-40, 1991.
- [R2] I. Queinnec, B. Dahhou, G. Roux, G. Goma et J.B. Pouchel. Estimation and control of a continuous alcoholic fermentation process, *Journal of Fermentation and Bioengineering*, vol.72, no.4, pp.285-290, 1991.
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- [R6] B. Dahhou, I. Queinnec, F.Y. Zeng, J.B. Pouchel et G. Goma. FPC-ICAD : an intelligent CAD for fermentation process control, *Bioprocess Engineering*, vol.7, pp.157-163, 1992. 1st European Control Conference (ECC), Grenoble (France), 2-5 Juillet 1991, pp.86-91.

- [R7] I. Queinnec, B. Dahhou et M. M'Saad. On adaptive control of fed-batch fermentation processes, *Int. J. of Adaptive Control and Signal Processing*, vol.6, no.6, pp.521-536, 1992. 1st European Control Conference (ECC), Grenoble (France), 2-5 Juillet 1991, pp.1636-1641.
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- [R9] G. Roux, B. Dahhou, K. Najim et I. Queinnec. Adaptive linear quadratic gaussian (LQG) control of a bioreactor, *J. of Chemical Technology and Biotechnology*, vol.53, no.2, pp.133-141, 1992. 1st European Control Conference (ECC), Grenoble (France), 2-5 Juillet 1991, pp.2134-2139.
- [R10] B. Dahhou, K. Najim, G. Roux et I. Queinnec. Robust pole placement of a fermentor, *J. of Bioprocess Engineering*, vol.8, pp.73-78, 1992.
- [R11] J.P. Steyer, I. Queinnec et D. Simoes. Biotech : a real time application of artificial intelligence for fermentation processes, *Control Engineering Practice*, vol.1, no.2, pp.315-321, 1993. IFAC-AIRTC, Delft (The Netherlands), 16-18 Juin 1992, pp.353-358.
- [R12] I. Queinnec et B. Dahhou. Optimization and control of a fedbatch fermentation process, *Optimal Control, Applications and Methods*, vol.15, no.3, pp. 175-191, 1994.
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- [R14] A.L. Santerre, I. Queinnec, C. Destruhaut, J.B. Pourciel et P.J. Blanc. On-line evaluation of fermentation broth colour, *Biotechnology Techniques*, vol.8, no.5, pp.319-324, 1994.
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- [R16] G. Roux, B. Dahhou et I. Queinnec. Modelling and estimation aspects of long-range predictive control of nonlinear process, *Control Engineering Practice*, vol.4, no.1, pp.55-66, 1996.
- [R17] V. Guillou, I. Queinnec, J.L. Uribelarrea et A. Pareilleux. On-line sensitive lightness measurement of cell-mass in *Saccharomyces Cerevisiae* culture, *Biotechnology Techniques*, vol.10, no.1, pp.19-24, 1996.
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- [R20] I. Queinnec, J. Harmand, J.P. Steyer et N. Bernet. Mathematical analysis of a nitrification process. *Recent Research Developments in Fermentation and Bioengineering*, vol.1, pp.153-163, 1998.

- [R21] D. Léonard, C. Ben Youssef, C. Destruhaut, N. Lindley et I. Queinnec. Phenol degradation by *Ralstonia eutropha* : colorimetric determination of 2-hydroxymuconate semialdehyde accumulation to control feed strategy in fed-batch fermentations. *Biotechnol. and Bioengineering*, vol.65, no.4, pp.407-415, 1999.
- [R22] S. Bourrel, D. Dochain, J.P. Babary et I. Queinnec. Modelling, identification and control of a denitrifying biofilter, *J. Process Control*, vol.10, pp.73-91, 2000.
- [R23] S. Tarbouriech, I. Queinnec et C. Pittet. Output-reference tracking problem for discrete-time systems with input saturations. *IEE Proceedings Control Theory and Applications*, vol.47, no.4, pp.447-455, 2000.
- [R24] H.X. De Araújo, I. Queinnec et S. Tarbouriech. Robust control of linear uncertain systems subject to state and actuator limitations. *APII-JESA*, vol.35, no.1-2, pp.69-84, 2001.
- [R25] I. Queinnec et D. Dochain. Modelling and simulation of the steady state of secondary settlers in wastewater treatment plants. *Water Science and Technology*, vol.43, no.7, pp.39-46, 2001.
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- [R27] J. Haag, A. Vande Wouwer et I. Queinnec. Macroscopic modelling and identification of a Biogas production process. *Chemical Engineering Sciences*, vol.58, n.19, pp.4307-4316, 2003.
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- [R30] S. Tarbouriech, I. Queinnec et G. Garcia. Stability region enlargement through anti-windup strategy for linear systems with dynamics restricted actuator. *Int. Journal of Systems Science*, vol.37, no.2, pp 79-90, 2006 (papier invité) .
- [R31] I. Simeonov et I. Queinnec. Linearizing control of the anaerobic digestion with addition of acetate. *Control Engineering practice*, vol.14, pp.799-810, 2006.
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- [R35] E. Castelan, S. Tarbouriech, J.M. Gomes da Silva Jr. et I. Queinnec. L2-stabilization of continuous-time linear systems with saturating actuators. *International Journal of Robust and Nonlinear Control*, vol.16, no.18, pp.935-944, 2006.
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- [R38] R. David, A. Vande Wouwer, J.-L. Vassel et I. Queinnec. Robust control of the activated sludge process. *Biotechnology Progress*, vol.25, no.3, pp.701-708, 2009.
- [R39] I. Queinnec et C.S. Gómez-Quintero. Reduced modelling and state observation of an activated sludge process. *Biotechnology Progress*, vol.25, no.3, pp.654-666, 2009.
- [R40] C. Dressaire, C. Gitton, P. Loubière, V. Monnet, I. Queinnec et M. Coccagn-Bousquet. mRNA and protein relation with growth rate in *Lactococcus lactis*: modelling of translation efficiency and protein stability, *PLoS Computational Biology*, vol.5, no.12, 2009.
- [R41] C. Olalla Martinez, R. Leyva-Grasa, A. El Aroudi, P. Garcés et I. Queinnec. LMI Robust Control Design for Boost PWM Converters. A paraître dans *IET-Power Electronics*.
- [R42] C. Olalla Martinez, R. Leyva-Grasa, Abdelali El Aroudi et I. Queinnec. Robust LQR control for PWM converters: an LMI approach. A paraître dans *IEEE Trans on Industrial Electronics*.

Publications dans des congrès avec actes

A.1 Congrès internationaux avec comité de selection - session invitée

- [IC1] B. Dahhou, G. Roux et I. Queinnec. Robust adaptive predictive control of biotechnological processes : experimental results, *4th IFAC International Symposium ACASP92*, Grenoble (France), 1-3 Juillet, pp.549-554, 1992.
- [IC2] I. Queinnec, D. Léonard et C. Ben Youssef. State observation for fedbatch control of phenol degradation by *Ralstonia eutropha*, *4th European Control Conference (ECC)*, Karlsruhe (Allemagne), 31 Août-3 Septembre, 1999.
- [IC3] J. Harmand, D. Patureau, C. Armaing, I. Queinnec et J.P. Steyer. Kinetic modeling of aerobic denitrification by *Microvirgula aerodenitrificans*, *3rd Mathematical Modelling Symposium (MATHMOD)*, Vienne (Autriche), 2-4 Février, 2000.
- [IC4] I. Queinnec, D. Léonard et G. Denou. State observation of phenol degradation by *Ralstonia eutropha* based on dissolved oxygen measurement. *IFAC Int. Symp. ADCHEM*, Pise (Italie), 14-16 Juin, pp.473-478, 2000.

- [IC5] S. Tarbouriech, I. Queinnec et C. Pittet. Output-reference tracking problem for discrete-time systems with input saturations and constant references. *8th IEEE Mediteranean Conference on Control and Systems*, Patras (Grèce), 17-19 Juillet, 2000.
- [IC6] S. Tarbouriech, G. Garcia et I. Queinnec. Stabilization of linear time-delay systems with anti-stable eigenvalues under amplitude and rate saturation. *3rd IFAC Workshop on Time Delay Systems (TDS'2001)*, Santa Fe (USA), 8-10 Décembre 2001.
- [IC7] A. Vande Wouwer, C. Renotte, I. Queinnec, M. Remy et P. Bogaerts. Distributed parameter modeling of a fixed-bed biofilter with experimental validation. *10th IEEE Mediteranean Conference on Control and Automation (MED'2002)*, Lisbonne (Portugal), 9-12 Juillet, 2002.
- [IC8] I. Queinnec et M. Spérandio. Simultaneous estimation of nitrification/denitrification kinetics and influent nitrogen load using ORP and DO dynamics. *5th European Control Conference (ECC)*, Cambridge (Grande-Bretagne), 1-4 Septembre, 2003.
- [IC9] J.I. Torres Zuniga, C. Vilas, A. Vande Wouwer et I. Queinnec. Non-linear distributed parameter observer applied to a denitrification reactor. *6th Vienna International Conference on Mathematical Modelling (MATHMOD)*, Vienna (Autriche), 11-13 février 2009.
- [IC10] S. Tarbouriech, I. Queinnec et M. Turner. Anti-windup design with rate and magnitude actuator and sensor saturations. *European Control Conference (ECC2009)*, Budapest (Hongrie), 23-26 août 2009.

A.2 Congrès internationaux avec comité de selection

- [C1] I. Queinnec et J.B. Pourciel. Real time control of a biotechnological process, *39th ISMM Int. Conf. on Mini and Microcomputers and their Applications*, Zurich (Suisse), 26-29 Juin, pp.273-276, 1989.
- [C2] M. Samaan, B. Dahhou, I. Queinnec et M. M'Saad. Experimental results in adaptive control of biotechnological processes, *American Control Conference (ACC)*, San Diego (USA), 23-25 Mai, pp.2679-2683, 1990.
- [C3] B. Dahhou, I. Queinnec et J.P. Babary. Modelling and control of fedbatch fermentation processes. *IMACS Int. Symp. on Math. and Intelligent Models in Systems Simulation (MIM-S2'90)*, Bruxelles (Belgique), 3-7 Septembre, 1990.
- [C4] I. Queinnec, B. Dahhou et G. Roux. Choice of a performant controller for fedbatch fermentation process monitoring, *IFAC International Symposium ADCHEM91*, Toulouse (France), 14-16 Octobre, pp.113-117, 1991.
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- [C7] I. Queinnec, G. Roux et B. Dahhou. Multivariable adaptive predictive control of alcoholic fermentation process, *2nd European Control Conference (ECC)*, Groningen (Hollande), 28 Juin - 1 Juillet, pp.1736-1740, 1993.

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- [C14] H.X. De Araújo, S. Tarbouriech et I. Queinnec. H_2 guaranteed cost control for uncertain systems under state and control constraints, *2nd IFAC Symposium on Robust Control Design (ROCOND'97)*, Budapest (Hongrie), 25-27 Juin, 1997.
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- [C21] C. Gómez-Quintero, I. Queinnec et J.P. Babary. A reduced nonlinear model of an activated sludge process. *IFAC Int. Symp. ADCHEM*, Pise (Italie), 14-16 Juin, pp.1037-1042, 2000.

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- [C24] I. Simeonov, I. Queinnec, C. Gómez-Quintero et J.P. Babary. Modelling and linearizing control of the anaerobic digestion of organic wastes with addition of a stimulating substance. *2nd IFAC Workshop DECOM-TT 2001*, Ohrid (Macédoine), 21-23 Mai, pp.257-26, 2001.
- [C25] J. Haag, I. Queinnec et A. Vande Wouwer. Modelling and identification of a methanisation process in waste treatment. *8th International Conference on Computer Applications in Biotechnology (CAB'8)*, Québec (Canada), 24-27 Juin, pp.269-274, 2001.
- [C26] I. Simeonov, D. Galabova et I. Queinnec. Investigations and mathematical modelling of the anaerobic digestion of organic wastes with addition of electron acceptors. *9th World Congress Anaerobic Digestion 2001*, Antwerpen (Belgique), 2-6 Septembre, pp.381-383, 2001.
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- [C28] V. Lubenova, I. Simeonov et I. Queinnec. Two-step parameter and state estimation of the anaerobic digestion. *15th Triennial World Congress of the IFAC*, Barcelone (Espagne), 21-26 Juillet, 2002.
- [C29] C. Gómez-Quintero et I. Queinnec. Robust estimation for an uncertain linear model of an activated sludge process. *IEEE International Conference on Control Applications and International Symposium on Computer Aided Control Systems Design (CCA/CACSD'2002)*, Glasgow (GB), 18-20 Septembre, pp. 972-977, 2002.
- [C30] S. Tarbouriech, J.M. Gomes da Silva Jr., I. Queinnec et G. Garcia. Improving the stability region of saturated linear systems controlled by dynamic delayed output feedback through anti-windup strategy. *IFAC Workshop on Time-Delay Systems (TDS'03)*, INRIA-Rocquencourt (France), 8-10 Septembre, 2003.
- [C31] E.B. Castelan, I. Queinnec et S. Tarbouriech. Delay-independent robust stability conditions of neutral linear time-delay systems. *IFAC Workshop on Time-Delay Systems (TDS'03)*, INRIA-Rocquencourt (France), 8-10 Septembre, 2003.
- [C32] J. Haag, A. Vande Wouwer, E. Paul et I. Queinnec. Experimental modeling of a biofilter for combined adsorption and nitrification. *IFAC Symposium on Computer Applications in Biotechnology (CAB9)*, Nancy (France), 28-31 Mars, 2004.
- [C33] C. Gómez-Quintero, I. Queinnec et M. Spérandio. A reduced linear model of an activated sludge process. *IFAC Symposium on Computer Applications in Biotechnology (CAB9)*, Nancy (France), 28-31 Mars, 2004.
- [C34] I. Queinnec, J. Harmand et S. Tarbouriech. Analysis and control of a wastewater equalization system. *IFAC Symposium on Computer Applications in Biotechnology (CAB9)*, Nancy (France), 28-31 Mars, 2004.

- [C35] R. Leyva-Grasa, I. Queinnec, S. Tarbouriech, C. Alonso et L. Martinez-Salamero. Large-signal stability in high-order switching converters. *American Control Conference (ACC)*, Boston (USA), 30 Juin- 2 Juillet, pp.59-64, 2004.
- [C36] E.B. Castelan, I. Queinnec, S. Tarbouriech et J.M. Gomes da Silva Jr. LMI approach for L2-control of linear systems with saturating actuators *IFAC Symposium on nonlinear control systems (NOLCOS04)*, Stuttgart (Allemagne), 1-3 septembre 2004.
- [C37] E.B. Castelan, S. Tarbouriech et I. Queinnec. Stability and stabilization of a class of non-linear systems with saturating actuators. *16th IFAC World Congress*, Prague (République Tchèque), 3-8 juillet 2005.
- [C38] I. Queinnec, J.-C. Ochoa, E. Paul et A. Vande Wouwer. Dynamic modelling of a biofilter used for nitrification of drinking water at low influent ammonia concentrations. *IFAC Symposium on Advanced Control of Chemical Process (ADCHEM06)*, Gramadó (Brésil), 2-5 Avril 2006.
- [C39] I. Queinnec, S. Tarbouriech et G. Garcia. Anti-windup design for aircraft flight control. *IEEE International Conference on Control Applications*, Munich (Allemagne), 4-6 Octobre, pp.2541-2546, 2006.
- [C40] V.F. Montagner, P.L.D. Peres, S. Tarbouriech et I. Queinnec. Improved estimation of stability regions for uncertain linear systems with saturating actuators: an LMI-based approach. *45th IEEE Conference on Decision and Control (CDC'2006)*, San Diego (USA), 13-15 Décembre, pp.5429-5434, 2006.
- [C41] C. Olalla Martinez, R. Leyva-Grasa, A. El Aroudi et I. Queinnec. Quantitative feedback contribution to design of voltage regulator modules. *IEEE International Symposium on Industrial Electronics (ISIE'2007)*, Vigo (Espagne), 4-7 Juin, pp.907-912, 2007.
- [C42] V.F. Montagner, C.L.F. Oliveira, P.L.D. Peres, S. Tarbouriech et I. Queinnec. Gain-scheduled controllers for linear parameter-varying systems with saturating actuators: LMI-based design. *American Control Conference*, New York (USA), 11-13 Juillet, pp.6067-6072, 2007.
- [C43] R. David, A. Vande Wouwer, J.-L. Vassel et I. Queinnec. Model reduction and robust control of the Activated Sludge Process. *European Control Conference*, Kos (Grèce), 2-5 juillet, 2007.
- [C44] C. Olalla Martinez, R. Leyva-Grasa, A. El. Aroudi et I. Queinnec. LMI control applied to non-minimum phase switched power converters. *IEEE International Symposium on Industrial Electronics (ISIE'2008)*, Cambridge (UK), 30 Juin - 2 juillet, 2008.
- [C45] S. Tarbouriech, I. Queinnec, T.R. Calliero et P.L.D. Peres. Control design for bilinear systems with a guaranteed region of stability: an LMI-based approach. *IEEEmed 2009*, Tessaloniki (Grèce), 24-26 juin 2009.

A.3 Congrès nationaux avec comité de selection

- [CN1] S. Tarbouriech, G. Garcia et I. Queinnec. Stabilisation de systèmes linéaires à retard avec prise en compte des saturations en vitesse et en position des actionneurs. *Conf. Internationale Francophone d'Automatique (CIFA)*, Lille (France), pp.190-195, 5-8 Juillet, 2000.

- [CN2] J. Harmand et I. Queinnec. Commande H2 par retour de sortie d'un procédé cascade de production d'Acides Gras Volatils. *2ième Conférence Internationale Francophone d'Automatique (CIFA'2002)*, Nantes (France), 8-10 Juillet, pp.205-210, 2002.
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