CURRICULUM VITAE

Dr. Syafiie
Department of Chemical and Environmental Engineering,
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Education
1. Dr., System Engineering and Automatic Control, 2007, Universidad de Valladolid, Spain.
2. DEA. System Engineering and Automatic Control, 2004, Universidad de Valladolid, Spain
3. B. S. Chemical Engineering, 1998, Universitas Syiah Kuala, Banda Aceh, Indonesia.

Areas of Interest
1. Control Theory and Application
2. Biomedical Engineering
3. Smart Sensor

Professional Qualification/ Membership/ Affiliation
1. Member, Institute of Electrical and Electronics Engineers (IEEE)
2. Member, International Society of Automation (ISA)
3. Member, IChemE
4. Member, PPAUPM
5. President, International Association of Acehnese Scholar (IAAS), 2010-2015

Appointments

Position	Duration
1. Post Doctoral Researcher, Department of Systems Engineering and Automatic Control, University of Valladolid,Spain,	October, 2008 - February 2009.
2. Post Doctoral Researcher, Department of Electrical energy, Systems and Automation (EeSA), Ghent University,Belgium,	February 2008 - September 2008.
3. Post Doctoral Researcher, Department of Systems Engineering and Automatic Control, University of Valladolid, Spain.	January, 2007 - January, 2008
4. Doctoral Researcher, Department of Systems Engineering and Automatic Control, University of Valladolid,Spain,.	October 2002 – December 2007
5. Visiting Researcher, Instituto de Dessarrollo y Desio Fund. Arcien-Conicet, Santa Fe, Argentina	March - April, 2006.

Publications

Journals (30 recent journals)
1. M. H. S. Ismail, S. Dalang, **S. Syafiie**, S. Izhar, A study on zeolite performance at different type of ponds in palm oil mill effluent (POME) treatment, *Journal of Water Resource and Protection*, 5, 18-27, 2013.
2. **S. Syafiie**, F. Tadeo, M. Villafin, A. A. Alonso, Learning Controllers for Thermal Sterilization of Canned Foods, *ISA transaction*, Vol. 50, No. 1, pp. 82–90, 2011
3. **S. Syafiie**, F. Tadeo, E. Martinez and T. Alvarez, Model-Free Control Based on Reinforcement Learning of an Oxidation Process for Wastewater Treatment, *Applied Soft Computing*, Vol. 11, No. 1, pp. 73 – 82, 2011.

4. **S. Syafiie**, F. Tadeo, L. Palacin, and C. Prada, Modelling of the Pretreatment Section for Dynamic Simulation of Water Production using Reverse Osmosis, *International Journal of Management Science and Engineering Management*, Vol. 5, No. 1, pp. 24 – 29, 2010.
5. J. Niño, R. De Keyser, **S. Syafiie**, C. Ionescu, M. Struys , EPSAC Controlled Anesthesia with Online Gain Adaptation, *International Journal of Adaptive Control and Signal Processing*, Vol.23, pp.455 - 471, 2009.
6. Copoț C., De Keyser R., **Syafiie S.**, Orjuela Vargas S., Van Langenhove L. and Lazăr C., (2009): Automatic carpet wear classification based on support vector machine and haralick descriptors, *Buletinul Institutului Politehnic din Iași*, Automatic Control and Computer Science Section, Tome LV (LIX), Fasc. 4.
7. **S. Syafiie**, F. Tadeo and E. Martinez, Model-Free Learning Control of Neutralization Process Using Reinforcement Learning, *Engineering Applications of Artificial Intelligence*, Vol. 20, No. 6, September 2007, Pages 767-782.
8. **S. Syafiie**, F. Tadeo, and E. Martinez, Learning to Control pH Processes at Multiple Time Scales: Performance Assessment in a Laboratory Plant. *Chemical Product and Process Modeling*, vol. 2, no. 1, 2007, articles no 7.
9. M. J. Fuente, C. Robles, O. Casado, **S. Syafiie** and F. Tadeo, Fuzzy Control of a Neutralization Process, *Engineering Applications of Articial Intelligence*, Vol. 19,2006, pp. 905-914.
10. A.L. Ahmad, W.A. Harris, **Syafiie**, and B.S. Ooi, Removal of dye from wastewater of textile industry using membrane technology, *Journal Teknologi*, 36(F), 2002, pp. 31-44.

Conference Proceedings (30 recent Conference Proceedings)

1. **S. Syafiie** and Chia Yaw Kwan, A Comparative Study of MPC using Active-Set and Interior Point Methods for Controlling Nonlinear pH Process, Proceedings of the International Conference on Soft Computing & Computational Mathematics (ICSCCM 2013), Kuala Lumpur July 2013.
2. J.J. Chang and **S. Syafiie**, Optimal positive control for the regulation of propofol during general anesthesia, 2nd Regional Conference on Applied and Engineering Mathematics (RCAEM-II), Penang 2012.
3. **S. Syafiie**, P. K. Chong, J. J. Chang, Isoflurane Inhalation regulated using positive system, Proceedings of Australian control conference 2011, Melbourne, Australia.
4. **S. Syafiie,** M. Ait Rami, F. Tadeo, Positive infusion of propofol drug during induction, Industrial Engineering and Engineering Management, Macau 2010.
5. A. W. Hermansson, **S. Syafiie,** S. B. Mohd Noor, Multiple model predictive control of nonlinear pH neutralization system, Industrial Engineering and Engineering Management, Macau 2010.
6. L. G. Palacin, C. de Prada, **S. Syafiie**, J. Salazar, and F. Tadeo, Improving the efficiency of small water production facilities, Proceeding of the European Energy Conference, 20-23 April 2010, Barcelona, Spain
7. C. Copot, **S. Syafiie,** S. Vargas, R. de Keyser, L. Van Langenhove, C. Lazar, Carpet Wear Classification based on Support Vector Machine Pattern Recognition Approach, IEEE 5th International Conference on Intelligent Computer Communication and Processing, 2009. ICCP 2009.
8. **S. Syafiie**, F. Tadeo, and E. Martinez, Q(λ) learning technique for pH control, Industrial Engineering and Engineering Management, Hong Kong 2009.
9. **S. Syafiie** and F. Tadeo, Improving the Two-Degree-of-Freedom and Robustness Properties of QFT Controllers, European Control Conference 2009.
10. Sergio Alejandro Orjuela Vargas, Cosmin Copot, Ewout Vansteenkiste, **Syafiie Syafiie**, Wilfried Philips, Lieva Van Langenhove, Robin de Keyser, Carpet Wear Classification using Coocurrence Matrices and Support Vector Machine, SAFE 2008/ProRISC 2008, Veldhoven, The Netherlands.
11. **S. Syafiie**, F. Tadeo, L. Palacin, C. de Prada, J. Salazar, Modelling for Dynamic Simulation of Pretreatment in Reverse Osmosis Plants, IEEM 2008, Singapore.
12. Sergio Alejandro Orjuela Vargas, Cosmin Copot, Ewout Vansteenkiste, **Syafiie Syafiie**, Wilfried Philips, Carpet Wear Classification Using Coocurrence Matrices and Support Vector Machine, XIII Simposio de Tratamiento de Seales, Imagenes y Vision Articial (STSIVA) 2008, Bucaramanga, Columbia.
13. L. Palacin, **S. Syafiie**, C. Prada and F. Tadeo, Library for Dynamic Simulation of Reverse Osmosis Plants, 20th European Modeling and Simulation Symposium, September 17-19, 2008, Briatico, Italy.
14. **S. Syafiie**, Fernando Tadeo, Luis Palacin, Cesar de Prada, Modelling of Membranes for Simulation and Control of Reverse Osmosis in Desalination Plants, UKACC Control'08, Manchester, UK, 2 - 4 September 2008.

15. **S. Syafiie**, J. Niño, C. Ionescu, R. de Keyser, NMPC for Propofol Drug Dosing During Anesthesia Induction, Workshop on Nonlinear Model Predictive Control, September, 5 - 9, 2008, Pavia, Italy.
16. **S. Syafiie**, Garcia M., Vilas C., Alonso A., Martinez E., Tadeo F., Intelligent Control Based on Reinforcement Learning of Batch Thermal Sterilization of Canned Foods, proceeding of 17th IFAC World Congress 2008, Seoul, South Korea.
17. **S. Syafiie**, F. Tadeo and E. Martinez, Look up Table for Level Control of Two Tanks System, International Workshop on Practical Applications of Agents and Multiagent Systems 2007 October 2007, Salamanca, Spain.
18. **S. Syafiie**, F. Tadeo, and E. Martinez, Coordinated Control of Wastewater Oxidation Processes under Constrained Incremental Control, in proceeding of European Control Conference 2007, Kos, Greece 2 - 5 July, 2007.
19. **S. Syafiie**, F. Tadeo, and E. Martinez, Model-Free Learning Control for Processes with Constrained Incremental Control, Proceedings of IEEE International Conference on Control Applications, International Symposium on Computer-Aided Control Systems Design, International Symposium on Intelligent Control (CCA/CACSD/ISIC), Munich, Germany, October 2006, pp. 826-831.
20. **S. Syafiie**, F. Tadeo and E. Martinez, Model-Free Learning Control for Phenol Wastewater Treatment Plant using Fenton's Reagent, Proceeding of Asian Control Conference, Bali, Indonesia, July 2006.
21. **S. Syafiie**, F. Tadeo, and E. Martinez (2006c), Agents Coordination to Control Oxidation Process, Proceeding of 5th International Workshop on Practical Applications of Agents and Multiagent Systems, October 2006, Segovia, Spain, pp. 105-114.
22. **S. Syafiie**, F. Tadeo and E. Martinez, Learning to Control pH Processes at Multiple Time Scales: Experimental Application Assessment, Proceeding of Asian Pacific Confederation of Chemical Engineering, Kuala Lumpur, Malaysia, August 2006.
23. **S. Syafiie**, F. Tadeo and E. Martinez, Macro-Actions in Model-Free Intelligent Control with Application to pH Control, 44th IEEE Conference on Decision and Control and European Control Conference 2005, Seville, Spain 12th-15th December 2005.
24. **S. Syafiie**, F. Tadeo and E. Martinez, Model-Free Intelligent Control with Gain Adaptation Applied to pH Control, 4th International Workshop on Practical Application of Agents and Multiagent Systems, 20th-21st October 2005, Leon, Spain.
25. **S. Syafiie**, F. Tadeo and E. Martinez, Model-Free Intelligent Control using Reinforcement Learning and Temporal Abstraction-applied to pH Control, IFAC World Congress, July 2005, Prague, Czech.
26. **S. Syafiie**, F. Tadeo and E. Martinez, Softmax and ε-Greedy Policies Applied To Process Control, IFAC Workshop on Adaptive and Learning Systems (ALCOSP04), August 2004, Yokohama, Japan.
27. **S. Syafiie**, F. Tadeo and E. Martinez, Learning Control Applied to pH Plant, 7th International Symposium on Dynamics and Control of Process System (DYCOPS), July 2004, Boston, USA.
28. **S. Syafiie**, F. Tadeo and E. Martinez, Learning Control Application to Nonlinear Process Control, World Automation Conference (WAC), June 2004, Seville, Spain.
29. Annur Suhadi, **Syafiie**, and Marwan, Stiff Problem Solution using Adams Method in Simulation of Packed Reactive Distillation Column, Proceeding of International Seminar in Numerical Analysis in Engineering, 2000, Medan, Indonesia.
30. **Syafiie**, Annur Suhadi, Syaubari, and Marwan, Numerical Solution of Electrokinetics Mass Transfer Model for Hemoglobin Recovery in an Ionic PolyCarbonate Membrane, Proceeding of International Seminar in Numerical Analysis in Engineering, 2000, Medan, Indonesia.

Chapter in Books (If any)

1. Maryam Valizadeh, **S. Syafiie**, and I. S. Ahamad, Multi Objective Particle Swarm Optimization for Optimal Planning of Biodiesel Supply Chain in Malaysia, in T. Herawan, R. Ghazali, and M. M. Deris, Advanced Soft Computing and Data Mining, Springer, 2014
2. Jing Jing Chang, **S. Syafiie**, Raja Kamil Raja Ahmat, and Thian Aun Lim, ANFIS based Model for Bispectral Index Prediction, in T. Herawan, R. Ghazali, and M. M. Deris, Advanced Soft Computing and Data Mining, Springer, 2014
3. **S. Syafiie**, J. Niño, C. Ionescu, and R. de Keyser, NMPC for Propofol Drug Dosing During Anesthesia Induction, in *Assessment and Future Directions of Nonlinear Model Predictive Control*, pp: 501 - 510, Springler Verlag, 2009.

4. **S. Syafiie**, F. Tadeo and E. Martinez, Model-Free Learning Control of Chemical Processes in Cornelius Weber, Mark Elshaw and Norbert Michael Mayer (editor), *Reinforcement Learning: Theory and Applications*, Advanced Robotic Systems (ARS) publisher, Vienna Austria, 2008.

Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Kinetic and thermodynamic assessment of subcritical water extraction of decanal and dodecanal from Polygonum minus Huds for food flavor and fragrance industries	92,000	2013-2015	FRGS
2.	Safe, reliable and efficient controller design for general anesthesia based on multivariable characteristic gathering from clinical data	50,000	2012-2015	ERGS
3.	Optimal closed-loop control of propofol infusion during induction phase in general Anesthesia	32.000	2010-2012	FRGS
4.	Robust Control using Quantitative Feedback Theory (QFT) for controlling pH neutralization process	50.000	2010-2012	RUGS

Professional Services/Consultation

No	Year	Title	Authority	Amount
1.	2014	Matlab GUI design for Process Control Systems	Solution Engineering Sdn Bhd	RM15,000
2.	2013	Process Control of Steam Condensation Unit Using Matlab	Solution Engineering Sdn Bhd	RM5,000

Student Supervision

PhD (Main Supervisor)

No.	Name	Title	Status
1.	Aymann William Hermanson (GS24634)	Robust and Stability Study of MultiModel Model Predictive Control	Ongoing
2.	Chang Jing Jing (GS31390)	Multivariable Control Design for General Anesthesia	Ongoing

MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Cosmin Copot	Automatic carpet wear classification based on support vector machine	Graduated
2.	Mohsen Safakar (GS30926)	CFD Analysis of Chlorine Gas Dispersion in Indoor Storage: Temperature and Wind Velocities Effect Studies	Ongoing
3.	Maryam Valizadeh (GS32011)	Optimal Planning of Biodiesel Supply Chain in Malaysia	Ongoing
4.	Nurul Hafiza binti Othman (GS39088)	Thermodynamic and Kinetic Study of Polygonum Minus Huds extraction using subcritical water	Ongoing
5.	Nur Liyana bt Abdul Ghani (GS39479)	Continuous state-action space of Reinforcement Learning applied for wastewater treatment	Ongoing

MS without Thesis (Main Supervisor)

No.	Name	Title	Status
1.	Ramin Khezri	Fuzzy Control of CSTR in Biodiesel Production	Graduated
2.	Petrus Julini Anak Goel (GS36481)	Printed Circuit Board (PCB) CNC Tool Failure Analysis	Ongoing
3.	Amirreza Moghadar Haghani (GS33274)	Fuzzy Logic-Based assessment of system availability: A case study for cogeneration System	Ongoing
4.	Ahmad Fauzi Sagap (GS35259)	Reliability and Maintainability Study of Liquefied Natural Gas Carrier (LNGC)	Ongoing