

Curriculum Vitae

Luis A. Ricardez-Sandoval, PhD, P.Eng.

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 Associate Professor
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Education

Degree	Name of discipline	Institution (Country)	Date completed
Doctorate	Chemical Engineering	University of Waterloo (Canada)	08-2008
Master's	Chemical Engineering	Instituto Tecnologico de Celaya (Mexico)	01-2000
Bachelor's	Chemical Engineering	Instituto Tecnologico de Orizaba (Mexico)	12-1997

Employment history

Position	Organization (Country)	Department/ Area	Period
Associate Professor	University of Waterloo (Canada)	Chemical Engineering	01/2011-to date
Sessional Lecturer (Definite-term)	University of Waterloo (Canada)	Chemical Engineering	01/2009-12/2010
Sessional Lecturer	University of Waterloo (Canada)	Chemical Engineering	09/2008-12/2008
Process Systems Engineer	Instituto Mexicano del Petroleo (Mexico)	Process Engineer	06/2001-07/2004
Operations Administrator	Mabe Quantum (Mexico)	Manufacturing	09/2000-05/2001
Junior Balance Supervisor	Avon Cosmetics (Mexico)	Manufacturing	01/2000-08/2000
Engineering Assistant	Corrugados Tehuacan (Mexico)	Production	01/1996-03/1997

Recognitions and Awards

Article on the cover of Industrial & Engineering Chemistry Research American Chemical Society (ACS)	2017
Canada Research Chair, Tier II Natural Sciences and Engineering Research Council of Canada (NSERC)	2017
Engineering Research Excellence Award (Assistant Professor Category) University of Waterloo, Canada	2015

Best Poster-Presentation Award	2015
International Symposium of Advanced Control of Chemical Processes (ADCHEM), Whistler, Canada	
Outstanding Performance Award	2015
University of Waterloo, Canada	
Early Researchers Award (ERA)	2015
Ministry of Research and Innovation, Government of Ontario, Canada	
Teaching Excellence Award in Engineering	2014
Faculty of Engineering, University of Waterloo, Canada	
Most-cited published article in Computers & Chemical Engineering	2012
Elsevier, Computers & Chemical Engineering Journal.	

Professional Activities

Associate Editor , Canadian Journal of Chemical Engineering	2017 to date
Member , American Institute of Chemical Engineers (AIChE)	2014 to date
Member , Professional Engineers Ontario (PEO)	2010 to date
Member , Canadian Society for Chemical Engineering (CSCHE)	2008 to date

Research Funding Currently Held

Applicant(s)	Title, Funding Source, Program	Years of Tenure
L. Ricardez-Sandoval (PI)	Optimal design, scheduling and control of chemical processes and emerging energy systems for sustainable and flexible operations under uncertainty. NSERC's Discovery program	2018-2023
L. Ricardez-Sandoval (PI)	Optimal design, scheduling and control of chemical processes and emerging energy systems for sustainable and flexible operations under uncertainty. NSERC's Discovery Accelerator Supplement (DAS)	2018-2021
L. Ricardez-Sandoval (PI)	Canada Research Chair in Multiscale modelling and process systems. NSERC's Chair program.	2017-2022
L. Ricardez-Sandoval (PI)	Optimal design of full-scale CO ₂ capture technologies for clean power generation. Ministry of Research and Innovation (Ontario): Early Researchers Award (ERA).	2015-2019
L. Ricardez-Sandoval (PI); R. Fukasawa (Co-PI)	Development of an integrated scheduling algorithm for operations management in the analytical services sector. NSERC's Collaborative and Research Development Grant (CRD).	2014-2017
L. Ricardez-Sandoval (PI) and another PI	A high-performance computing system for the simulation of multi-scale systems. Canada Foundation (CFI) for Innovation and Ontario Research Fund (ORF)	2012-to date
L. Ricardez-Sandoval	Start-up grant for new faculty in Chemical Engineering, University of Waterloo.	2011-to date

Graduate Supervision

Level	On-going supervision		Supervision completed		Total
	Supervised	Co-supervised	Supervised	Co-supervised	
Undergraduate			29	16	45
MASc	7	4	5	7	23
PhD	4	2	2	3	11
PDF			1	1	2
Other			1	5	6

Productivity Record

Item	No.
Refereed Journal Articles (Submitted)	3
Refereed Journal Articles (Published/Accepted)	80
Refereed Conference Proceedings (Paper Published)	25
Refereed Conference Proceedings (Abstract Published)	30
Refereed Book Chapters	3
Monographs (Books) Authored	1
Invited Talks/Research Seminars	10
Workshops Delivered	1
Total No. of citations (Google Scholar, May 2018)	1,622
h-Index (May, 2018)	24
i10-Index (May, 2018)	47

Selected Journal Articles (2016-to date)

R Koller, L Ricardez-Sandoval, L Biegler, Stochastic Back-off Algorithm for Simultaneous Design, Control and Scheduling of Multi-product Systems under Uncertainty, AIChE Journal, Accepted (2018)

G Kimaev, L Ricardez-Sandoval, Multilevel Monte Carlo applied to chemical engineering systems subject to uncertainty, AIChE Journal 64 (5), 1651-1661 (2018)

M López-Alvarez, A Flores-Tlacuahuac, L Ricardez-Sandoval, C Rivera-Solorio, Optimal Start-Up Policies for a Solar Thermal Power Plant, Industrial & Engineering Chemistry Research 57 (3), 1026-1038 (2018)

D Lee, J Li, M Gyu Park, M Ho Seo, W Ahn, I Stadelmann, L Ricardez-Sandoval, Z Chen, Self-Assembly of Spinel Nanocrystals into Mesoporous Spheres as Bifunctionally Active Oxygen Reduction and Evolution Electrocatalysts, ChemSusChem 10 (10), 2258-2266 (2017)

D Chaffart, L Ricardez-Sandoval, Robust dynamic optimization in heterogeneous multiscale catalytic flow reactors using polynomial chaos expansion, Journal of Process Control 60, 128-140 (2017)

M Sahraei, M Duchesne, R Hughes, L Ricardez-Sandoval, Dynamic reduced order modeling of an entrained-flow slagging gasifier using a new recirculation ratio correlation, Fuel 196, 520-531 (2017)

S Lagzi, D Lee, R Fukasawa, L Ricardez-Sandoval, A computational study of continuous and discrete time formulations for a class of short-term scheduling problems for multipurpose plants, *Industrial & Engineering Chemistry Research* 56 (31), 8940-8953 (2017) (**Article on the cover of the journal's issue**)

Z He, L Ricardez-Sandoval, Dynamic modelling of a commercial-scale CO₂ capture plant integrated with a natural gas combined cycle (NGCC) power plant, *International Journal of Greenhouse Gas Control* 55, 23-35 (2016)

J Gaspar, L Ricardez-Sandoval, J Jørgensen, P Fosbøl, Controllability and flexibility analysis of CO₂ post-combustion capture using piperazine and MEA, *International Journal of Greenhouse Gas Control* 51, 276-289 (2016)

Z He, M Sahraei, LA Ricardez-Sandoval, Flexible operation and simultaneous scheduling and control of a CO₂ capture plant using model predictive control, *International Journal of Greenhouse Gas Control* 48, 300-311 (2016)

S Rasoulia, L Ricardez-Sandoval, Stochastic nonlinear model predictive control applied to a thin film deposition process under uncertainty, *Chemical Engineering Science* 140, 90-103 (2016)