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EDUCATION

2004	CARNEGIE MELLON UNIVERSITY PhD in Chemical Engineering	PITTSBURGH, PA
1997	LONDON SCHOOL OF ECONOMICS M.Sc. in Operational Research	LONDON, UK
1996	NATIONAL TECHNICAL UNIVERSITY OF ATHENS Diploma in Chemical Engineering	ATHENS, GREECE

PROFESSIONAL EXPERIENCE

08/04 – date	UNIVERSITY OF WISCONSIN DEPARTMENT OF CHEMICAL AND BIOLOGICAL ENGINEERING Paul E. Elfers Professor Vilas Distinguished Achievement Professor Professor Associate Professor Assistant Professor	MADISON, WI 1/2017 – date 06/2015 – date 09/2014 – date 09/2010 – 08/2014 08/2004 – 08/2010
	GREAT LAKES BIOENERGY RESEARCH CENTER Aim 1 Leader Management Team Member	2017 – 2017 –

SELECT AWARDS AND HONORS

Paul E. Elfers Professor	2017 – date
<i>Production and Operations Management Society Applied Research Challenge Award</i>	2016
2016 <i>Covestro Lecture</i> , Department of Chemical Engineering, Carnegie Mellon University	2016
Vilas Distinguished Achievement Professor	2015
2013 Outstanding Young Researcher Award – CAST Division of AIChE	2013
2012 and 2014 Best Paper Award, <i>Computes and Chemical Engineering</i>	2013
Vilas Associate, University of Wisconsin – Madison	2013-2015
2008 W. David Smith Jr. Graduate Student Paper Award – CAST Division of AIChE	2008
National Science Foundation CAREER Award	2006-2011
Inaugural Olaf A. Hougen Fellowship	2004-2007
Alexander S. Onassis Public Benefit Foundation Graduate Fellowship	1999-2001
Fulbright Graduate Fellowship (declined)	1999

TEACHING

- Senior level *Process Design*.
- Senior level *Process Dynamics and Control*.
- Core graduate course: *Intermediate Problems in Chemical Engineering*.
- Graduate elective course: *Advanced Chemical Process Synthesis and Optimization*.

SELECT PROFESSIONAL ACTIVITIES

1. PROFESSIONAL COMMITTEES:

- *Computing and Systems Technology* (CAST) division of the *American Institute of Chemical Engineers*, Chair.
- Optimization Theme, Wisconsin Institute for Discovery, Advisory Board Member, 2014 – date
- CAST division of American Institute of Chemical Engineers (AIChE), Director (2011 – 2014).

2. JOURNAL SERVICE:

- *Computers and Chemical Engineering*, Editorial Advisory Board, 2017 – date.
- *AIChE Journal*, Consulting Editors Board, 2017 – date.
- *Energy Technology*, International Advisory Board member, 2017 – date.
- *BioEnergy Research*, Guest Editor.

3. CONFERENCE ORGANIZATION:

- *Foundations of Computer-aided Process Operations 2017*: Chair.
- *Pan American Advanced Studies: Process Modeling and Optimization for Energy and Sustainability*, 2011: Chair.
- *AIChE 2009 Annual Meeting*: Area 10C Program Coordinator.

4. PROPOSAL REVIEWER:

US National Science Foundation; American Chemical Society – Petroleum Research Fund; National Sciences and Engineering Research Council of Canada; Hellenic Ministry of Education; Dutch Technology Foundation STW; Swiss National Science Foundation; North Central Sun Grant Center; The Royal Society, UK.

RESEARCH MENTORING

Former PhD Students: Charles Sung (2009), Matthew Colvin (2010), Arul Sundaramoorthy (2011), Carlos Henao (2012), Kaushik Subramanian (2012), Patricia Nason (2013), Sara Velez (2014), Murat Sen (2014), Andres Merchan (2016), Yachao Dong (2017), Michael Risbeck (2018), Wenzhao Wu (2018).

Current PhD Students: Dhruv Gupta, Ho Jae Lee, Lingxun Kong, Xinyue Peng, Yifu Chen, Ranjeet Kumar, Venkatachalam Avadiappan, Yaqing Wu, Joonjae Ryu, Arthur Pastore, Eric O' Neil, Garry Taifan.

Former Postdoctoral Scholars: Pradeep Prasad (2005-06), Jiyong Kim (2009-13), Jeehoon Han (2012-14); Srinivas Rangarajan (2013-16), Jeff Herron (2013-15), Kirti Yenkie (2015-17), Bruno Calfa (2015-17), Wangyun Won (2015-17), Gautham M. Ramapriya (2016-18), Rex Ng (2015-18).

Current Postdoctoral Researchers: Kefeng Huang, Peyman Fasahati.

PUBLICATIONS

JOURNAL PAPERS

- [1] Tountas AA, Peng X, Tavasoli AV, Duchesne PN, Dingle TL, Dong Y, Hurtado L, Mohan A, Sun W, Ulmer U, Wang L, Wood TE, Maravelias CT, Sain MM, Ozin GA. Towards Solar Methanol: Past, Present and Future, *Advanced Science*, accepted, (DOI: 10.1002/advs.201801903).
- [2] Risbeck MJ, Maravelias CT, Rawlings JB, Turney RD. Mixed-integer Optimization Methods for Online Scheduling in Large-scale HVAC Systems. *Optimization Letters*, accepted (DOI: 10.1007/s11590-018-01383-9).
- [3] Ng RTL, Fasahati P, Huang K, Maravelias CT. Utilizing Stillage in the Biorefinery: Economic, Technological, and Energetic Analysis. *Applied Energy*, accepted.

- [4] Ryu J, Maravelias CT. Simultaneous Process and Heat Exchanger Network Synthesis Using a Discrete Temperature Grid. *Industrial & Engineering Chemistry Research*, accepted (DOI: 10.1021/acs.iecr.8b04083).
- [5] Lee H, Maravelias CT. Combining the Advantages of Discrete- and Continuous-time Scheduling Models. Part 2: Systematic Methods for Determining Model Parameters. *Computers and Chemical Engineering*, Elsevier, accepted (DOI: 10.1016/j.compchemeng.2018.10.020).
- [6] Peng X, Root TW, Maravelias CT. Optimization-based Process Synthesis under Seasonal and Daily Variability: Application on Concentrating Solar Power Plants. *AIChE Journal*, accepted (DOI: 10.1002/aic.16548).
- [7] Fasahati P, Maravelias CT. Advanced Biofuels of the Future: Atom-economical or energy-economical? *Joule*, 2, 1915-1919, **2018**.
- [8] Wu W, Maravelias CT. Synthesis and Techno-economic Assessment of Microbial-based Processes for Terpenes Production. *Biotechnology for Biofuels*, 11:294, **2018**.
- [9] Maravelias CT. Chemical Production Scheduling. *Reference Module in Chemistry, Molecular Sciences, and Chemical Engineering*, accepted, **2018**.
- [10] Dong Y, Jerome N, Maravelias CT. Reoptimization Framework and Policy Analysis for Maritime Inventory Routing under Uncertainty. *Optimization and Engineering*, accepted, **2018**. (DOI: 10.1007/s11081-018-9383-8).
- [11] Lee H, Maravelias CT. Combining the Advantages of Discrete- and Continuous-Time Scheduling Models: Part 1: Framework and Mathematical Formulations. *Computers & Chemical Engineering*, accepted, **2018**. (DOI: 10.1016/j.compchemeng.2017.12.003).
- [12] Wu W, Long MR, Zhang X, Reed JL, Maravelias CT. A Framework for the Identification of Promising Bio-based Chemicals. *Biotechnology and Bioengineering*, 2328-2340, 115, **2018**.
- [13] Ramapriya GM, Won W, Maravelias CT. A Superstructure-based Approach to Process Synthesis for Complex Reactor Networks. *Chemical Engineering Research and Design*, 589-608, 137, **2018**.
- [14] Wang L, Xia M, Wang H, Huang K, Qian C, Maravelias CT, Ozin GA. Greening Ammonia: Toward the Solar Ammonia Refinery, *Joule*, 2, 1055-1074, **2018**.
- [15] Rawlings JB, Patel NR, Risbeck MJ, Maravelias CT, Wenzel MJ, Turney RD. Economic MPC and Real-time Decision Making with Application to Large-Scale HVAC Energy Systems. *Computers & Chemical Engineering*, 114, 89-98, **2018**.
- [16] Kong L, Maravelias CT. An Optimization-based Approach for Simultaneous Chemical Process and Heat Exchanges Network Synthesis. *Industrial & Engineering Chemistry Research*, 57, 6330-6343, **2018**.
- [17] Krishna SH, Huang K, Barnett KJ, He J, De Bruyn M, Weckhuysen BM, Maravelias CT, Dumesic JA, Huber GW. Oxygenated Commodity Chemicals from Chemo-catalytic Conversion of Biomass Derived Heterocycles. *AIChE J.*, 64(6), 1910-1922, **2018**.
- [18] Ng RTL, Patchin S, Wu W, Sheth N, Maravelias CT. An optimization-based Web Application for Synthesis and Analysis of Biomass-to-fuels Strategies. *Biofuels, Bioproducts & Biorefining*, 12 (2), 170-176, **2018**.
- [19] Martagan T, Krishnamurthy A, Leland P, Maravelias CT. Performance Guarantees and Optimal Purification Decisions for Engineered Proteins. *Operations Research*, 6 (1), 18-41, **2018**.
- [20] Huang K, Miller JB, Huber GW, Dumesic JA, Maravelias CT. A General Framework for the Evaluation of Direct Nonoxidative Methane Conversion Strategies. *Joule*, 2, 349-365, **2018**.
- [21] Ng RTL, Kurniawan D, Wang H, Mariska B, Wu W, Maravelias CT. Integrated Framework for Designing Spatially Explicit Biofuel Supply Chains. *Applied Energy*, 116-131, 216, **2018**.

- [22] Huang K, Won W, Barnett KJ, Brentzel ZJ, Alonso DM, Huber GW, Dumesic JA, Maravelias CT. Improving Economics of Lignocellulosic Biofuels: An Integrated Strategy for Coproducing 1,5-Pentanediol and Ethanol. *Applied Energy*, 213, 585-594, **2018**.
- [23] Motagamwala AH, Won W, Maravelias CT, Sener C, Martin Alonso D, Maravelias CT, Dumesic JA. Towards Biomass-Derived Renewable Plastics: Production of 2,5-Furandicarboxylic Acid from Fructose, *Science Advances*, 4 (1), eaap9722, **2018**.
- [24] Rangarajan S, Maravelias CT, Mavrikakis M. Sequential Optimization-Based Framework for Robust Modeling and Design of Heterogeneous Catalytic Systems. *Journal of Physical Chemistry C*, 121, 25847-25863, **2017**.
- [25] Kong L, Wu W, Maravelias CT. Simultaneous Utility and Heat Exchanger Area Targeting for Integrated Process Synthesis and Heat Integration. *Industrial & Engineering Chemistry Research*, 56, 11847-11859, **2017**.
- [26] Gupta D, Maravelias CT. A General State-Space Formulation for Online Scheduling. *Processes*, 5(4), 69, **2017**.
- [27] Lee H, Maravelias CT. Discrete-time Mixed-integer Programming Models for Short-term Scheduling in Multipurpose Environments. *Computers and Chemical Engineering*, 107, 171-183, **2017**.
- [28] Ng RTL, Maravelias CT. Economic and Energetic Analysis of Biofuel Supply Chains. *Applied Energy*, 205, 1571-1582, **2017**.
- [29] He J, Huang K, Barnett KJ, Krishna S, Martin Alonso D, Brentzel Z, Burt SP, Walker TW, Banholzer W, Maravelias CT, Hermans I, Dumesic JA, Huber GW. New Catalytic Strategies for alpha-omega Diol Production from Lignocellulosic Biomass. *Faraday Discussions*, 202, 247-267, **2017**.
- [30] Lee H, Maravelias CT. Mixed-integer Programming Models for Simultaneous Batching and Scheduling in Multi-purpose Batch Plants. *Computers and Chemical Engineering*, 106, 621-644, **2017**.
- [31] He J, Liu M, Huang K, Walker TW, Maravelias CT, Dumesic JA, Huber GW. Production of Levoglucosenone and 5-hydroxymethylfurfural from Cellulose in Polar Aprotic Solvent-water Mixtures. *Green Chemistry*, 19, 3642-3653, **2017**.
- [32] Won W, Maravelias CT. Thermal Fractionation and Catalytic Upgrading of Lignocellulosic Biomass to Biofuels: Process Synthesis and Analysis. *Renewable Energy*, 114, 357-366, **2017**.
- [33] Won W, Motagamwala AH, Dumesic JA, Maravelias CT. A co-solvent hydrolysis strategy for the production of biofuels: Process synthesis and techno-economic analysis, *Reaction Chemistry and Engineering*, 2, 397-405, **2017**.
- [34] Huang K, Brentzel ZJ, Barnett KJ, Dumesic JA, Huber GW, Maravelias CT. Conversion of Furfural to 1,5-Pentanediol: Process Synthesis and Analysis. *ACS Sustainable Chemistry & Engineering*, 5, 4699-4706, **2017**.
- [35] Peng X, Root TW, Maravelias CT. Storing Solar Energy with Chemistry: The Role of Thermochemical Storage in Concentrating Solar Power. *Green Chemistry*, 19, 2427-2438, **2017**.
- [36] Martin Alonso D, Hakim S, Zhou S, Won W, Hosseinaei O, Tao J, Garcia-Negron V, Motagamwala AH, Mellmer MA, Huang K, Houtman CJ, Labbé N, Harper DP, Maravelias CT, Runge T, Dumesic JA. Increasing the Revenue from Lignocellulosic Biomass: Maximizing Feedstock Utilization. *Science Advances*, 3 (5), e1603301, **2017**.
- [37] Yenkie KM, Wu W, Maravelias CT. Synthesis and analysis of separation networks for the recovery of intracellular chemicals generated from microbial-based conversions. *Biotechnology for Biofuels*, 10:119, **2017**.
- [38] Risbeck MJ, Maravelias CT, Rawlings JB, Turney RD. A Mixed-Integer Linear Programming Model for Real-Time Cost Optimization of Building Heating, Ventilation, and Air Conditioning Equipment, *Energy and Buildings*, 142, 220-235, **2017**.

- [39] Brentzel ZJ, Barnett KJ, Huang K, Maravelias CT, Dumesic JA, Huber GW. Commodity Chemicals from Biomass: Combining Ring-opening Tautomerization and Hydrogenation Reactions to Produce 1,5-Pentanediol from Furfural, *ChemSusChem*, 10, 1351-1355, **2017**.
- [40] Dong Y, Velez S, Maravelias CT. Changeover Formulations for Discrete-time Mixed-integer Programming Scheduling Models. *European Journal of Operational Research*, 260 (3), 949-963, **2017**.
- [41] Dong Y, Sundaramoorthy A, Pinto JM, Maravelias CT. Solution Methods for Vehicle-based Inventory Routing in the Chemicals Sector. *Computers and Chemical Engineering*, 101, 259-278, **2017**.
- [42] Kong L, Avadiappan V, Huang K, Maravelias CT. Simultaneous Chemical Process Synthesis and Heat Integration with Unclassified Hot/Cold Process Streams. *Computers and Chemical Engineering*, 101, 210-225, **2017**.
- [43] Herron JA, Vann T, Duong N, Resasco DE, Crossley S, Lobban LL, Maravelias CT. A Systems-level Roadmap for Biomass Thermal Fractionation and Catalytic Upgrading Strategies. *Energy Technology*, 5, 130-150, **2017**.
- [44] Wu W, Yenkie K, Maravelias CT. A Superstructure-based Framework for Bioseparation Network Synthesis. *Computers and Chemical Engineering*, 96, 1-17, **2017**.
- [45] Ng RTL, Maravelias CT. Design of Biofuel Supply Chains with Variable Regional Depot and Biorefinery Locations. *Renewable Energy*, 100, 90-102, **2017**.
- [46] Martagan T, Krishnamurthy A, Leland PA, Maravelias CT. Optimal Purification Decisions for Engineer-to-Order Proteins at Aldevron. *Production and Operations Management*, 25(12), 2003-2005, **2016**.
- [47] Gupta D, Maravelias CT, Wassick JM. From Rescheduling to Online Scheduling. *Chemical Engineering Research and Design*, 116, 83-97, **2016**.
- [48] Yenkie KM, Wu W, Clark RL, Pflieger BF, Root TW, Maravelias CT. A Roadmap for the Synthesis of Separation Networks for the Recovery of Bio-based Chemicals: Matching Biological and Process Feasibility, *Biotechnology Advances*, 34, 1362-1383, **2016**.
- [49] Motagamwala AH, Won W, Maravelias CT, Dumesic JA. An Engineered Solvent System for Sugar Production from Lignocellulosic Biomass Using Biomass Derived γ -valerolactone. *Green Chemistry*, 18, 5756-5763, **2016**.
- [50] Herron JA, Maravelias CT. Assessment of Solar-to-Fuels Strategies: Photocatalysis and Electrocatalytic Reduction. *Energy Technology*, 4, 1369-1391, **2016**.
- [51] Merchan AF, Lee H-J, Maravelias CT. Discrete-Time Mixed-integer Programming Models for Solution Methods for Production Scheduling in Multistage Facilities. *Computers & Chemical Engineering*, 94, 387-410, **2016**.
- [52] Gupta D, Maravelias CT. On Deterministic Rescheduling: Major Considerations, Paradoxes, and Remedies. *Computers and Chemical Engineering*, 94, 312-330, **2016**.
- [53] Wu W, Henao CA, Maravelias CT. A Superstructure Representation, Generation, and Modeling Framework for Chemical Process Synthesis. *AIChE J.*, 62 (9), 3199-3214, **2016**.
- [54] Kong L, Sen SM, Henao CA, Dumesic JA, Maravelias CT. A Superstructure-based Framework for Simultaneous Process Synthesis, Heat Integration, and Utility Plant Design. *Computers and Chemical Engineering*, 91, 68-84, **2016**.
- [55] Martagan T, Krishnamurthy A, Maravelias CT. Optimal Condition-Based Harvesting Policies for Biomanufacturing Operations with Failure Risks. *IIE Transactions*, 48(5), 440-461, **2016**.
- [56] Ng RTL, Maravelias CT. Design of Cellulosic Ethanol Supply Chains with Regional Depots. *Industrial and Engineering Chemistry Research*, 55, 3420-3432, **2016**.
- [57] Merchan AF, Maravelias CT. Preprocessing and Tightening Methods for Time-Indexed Mixed-integer Programming Models for Chemical Production Scheduling. *Computers & Chemical Engineering*, 84, 516-535, **2016**.

- [58] Velez S, Merchan AF, Maravelias CT. On the Solution of Large-Scale Mixed-integer Programming Scheduling Models. *Chemical Engineering Science*, 136, 139-157, **2015**.
- [59] Han J-H, Sen SM, Luterbacher JS, Martin Alonso D, Dumesic JA, Maravelias CT. Process Systems Engineering Studies for the Synthesis of Catalytic Biomass-to-Fuels Strategies. *Computers and Chemical Engineering*, 81, 57-69, **2015**.
- [60] Han J-H, Luterbacher JS, Martin Alonso D, Dumesic JA, Maravelias CT. A Lignocellulosic Ethanol Strategy via Nonenzymatic Sugar Production: Process Synthesis and Analysis. *Bioresource Technology*, 182, 258-266, **2015**.
- [61] Herron JA, Kim J, Upadhye AA, Huber GW, Maravelias CT. A Generalized Framework for the Assessment of Solar Fuels Technologies. *Energy and Environmental Science*, 8, 126-157, **2015**.
- [62] Velez S, Maravelias CT. Theoretical Framework for the Formulation of MIP Scheduling Models with Multiple and Nonuniform Discrete-time Grids. *Computers and Chemical Engineering*, 72, 233-254, **2015**.
- [63] Dong Y, Sundaramoorthy A, Pinto JM, Maravelias CT. A MIP Model for Inventory Routing in Industrial Gases Supply Chain. *Industrial & Engineering Chemistry Research*, 53(44), 17214-17225, **2014**.
- [64] Velez S, Maravelias CT. Advances in Mixed-integer Programming Methods for Chemical Production Scheduling. *Annual Review of Chemical and Biomolecular Engineering*, 5, 97-121, **2014**.
- [65] Merchan AF, Maravelias CT. Reformulations of Mixed-integer Programming Continuous-time Models for Chemical Production Scheduling. *Industrial & Engineering Chemistry Research*, 53(24), 10155-10165, **2014**.
- [66] Bond JQ, Upadhye AA, Olcay H, Tompsett GA, Jae J, Xing R, Alonso DM, Wang D, Zhang T, Kumar R, Foster A, Sen SM, Maravelias CT, Malina R, Barrett SRH, Lobo R, Wyman CE, Dumesic JA, Huber GW. Production of Renewable Jet Fuel Range Alkanes and Commodity Chemicals from Integrated Catalytic Processing of Biomass. *Energy and Environmental Science*, 7, 1500-1523, **2014**.
- [67] Nason T, Grabow L, Mavrikakis M, Biegler LT, Maravelias CT. Advanced Solution Methods for Microkinetic Models of Catalytic Reactions: a Methanol Synthesis Case Study. *AIChE J.*, 60(4), 1336-1346, **2014**.
- [68] Subramanian K, Rawlings JB, Maravelias CT. Economic Model Predictive Control for Inventory Management in Supply Chains. *Computers and Chemical Engineering*, 64, 71-80, **2014**.
- [69] Harjunkoski I, Maravelias CT, Bongers P, Castro P, Engell S, Grossmann IE, Hooker J, Mendez C, Sand G, Wassick J. Scope for Industrial Applications of Production Scheduling Models and Solution Methods. *Computers and Chemical Engineering*, 62, 161-193, **2014**.
- [70] Luterbacher JS, Rand JM, Martin Alonso D, Han J, Youngquist JT, Maravelias CT, Pflieger BF, Dumesic JA. Nonenzymatic Sugar Production from Biomass Using Biomass-derived γ -Valerolactone. *Science*, 343, 207, **2014**.
- [71] Han J-H, Sen SM, Alonso D, Dumesic JA, Maravelias CT. A Strategy for the Simultaneous Catalytic Conversion of Hemicellulose and Cellulose from Lignocellulosic Biomass to Liquid Transportation Fuels. *Green Chemistry*, 16, 653-661, **2014**.
- [72] Merchan AF, Velez S, Maravelias CT. Tightening Methods for Continuous-time Mixed-Integer Programming Models for Chemical Production Scheduling. *AIChE J.*, 59(12), 4461-4467, **2013**.
- [73] Caes BR, Van Oosbree TR, Lu F, Ralph J, Maravelias CT, Raines RT. Simulated Moving Bed Chromatography: Separation and Recovery of Sugars and Ionic Liquid from Biomass Hydrolysates. *ChemSusChem*, 6(11), 2083-2089, **2013**.
- [74] Kim J, Miller JA, Maravelias CT, Stechel EB. Comparative Analysis of Environmental Impact of S2P (Sunshine to Petrol) System for Transportation Fuel Production. *Applied Energy*, 111, 1089-1098, **2013**.

- [75] Velez S, Maravelias CT. A Branch-and-Bound Algorithm for the Solution of Chemical Production Scheduling MIP Models Using Parallel Computing. *Computers and Chemical Engineering*, 55, 28-39, **2013**.
- [76] Velez S, Maravelias CT. Multiple and Nonuniform Time Grids in Discrete-Time MIP Models for Chemical Production Scheduling. *Computers and Chemical Engineering*, 53, 70-85, **2013**.
- [77] Velez S, Maravelias CT. Reformulations and Branching Methods for Mixed-integer Programming Chemical Production Scheduling Models. *Industrial & Engineering Chemistry Research*, 52 (10), 3832-3841, **2013**.
- [78] Velez S, Maravelias CT. Mixed-integer Programming Model and Tightening Methods for Scheduling in General Chemical Production Environments. *Industrial and Engineering Chemistry Research*, 52 (9), 3407-3423, **2013**.
- [79] Kim J, Sen SM, Maravelias CT. An Optimization-Based Assessment Framework for Biomass-to-Fuels Conversion Strategies. *Energy and Environmental Science*, 6 (4), 1093-1104, **2013**.
- [80] Subramanian K, Rawlings JB, Maravelias CT, Flores-Cerrillo J, Megan, L. Integration of Control Theory and Scheduling Methods for Supply Chain Management. *Computers and Chemical Engineering*, 51, 4-20, **2013**.
- [81] Velez S, Sundaramoorthy A, Maravelias CT. Valid Inequalities Based on Demand Propagation for Chemical Production Scheduling MIP Models. *AIChE J.*, 59(3), 872-887, **2013**.
- [82] Sen SM, Alonso DM, Wettstein SG, Gurbuz EI, Henao CA, Dumesic JA, Maravelias CT. A Sulfuric Acid Management Strategy for the Production of Liquid Hydrocarbon Fuels via Catalytic Conversion of Biomass-derived Levulinic Acid. *Energy and Environmental Science*, 5(12), 9690-9697, **2012**.
- [83] Sen SM, Gurbuz EI, Wettstein SG, Alonso DM, Dumesic JA, Maravelias CT. Production of Butene Oligomers as Transportation Fuels using Butene for Esterification of Levulinic Acid from Lignocellulosic Biomass: Process Synthesis and Technoeconomic Evaluation. *Green Chemistry*, 14 (12), 3289-3294, **2012**.
- [84] Subramanian K, Maravelias CT, Rawlings JB. A State-space Model for Chemical Production Scheduling. *Computers and Chemical Engineering*, 47, 97-110, **2012**.
- [85] Kim J, Miller JA, Johnson T, Stechel E, Maravelias CT. Fuel Production from CO₂ Using Solar-Thermal Energy: System Level Analysis. *Energy and Environmental Science*, 5 (9), 8417 - 8429, **2012**.
- [86] Sen SM, Binder JB, Raines RT, Maravelias CT. Conversion of Biomass to Sugars via Ionic Liquid Hydrolysis: Process Synthesis and Economic Evaluation. *Biofuels, Bioproducts & Biorefining*, 6(4), 444-452, **2012**.
- [87] Maravelias CT. A General Framework and Modeling Approach Classification for Chemical Production Scheduling. *AIChE J.*, 58 (6), 1812-1828, **2012**.
- [88] Maravelias CT. On the Combinatorial Structure of Discrete-time MIP Formulations for Chemical Production Scheduling. *Computers and Chemical Engineering*, 38, 204-212, **2012**.
- [89] Sen SM, Henao CA, Braden DJ, Dumesic JA, Maravelias CT. Catalytic Conversion of Lignocellulosic Biomass to Fuels: Process Development and Technoeconomic Evaluation. *Chemical Engineering Science*, 67, 57-67, **2012**.
- [90] Kim J, Reed JL, Maravelias CT. Large-scale Bi-level Strain Design Approaches and Mixed-integer Programming Solution Techniques. *PLoS ONE*, 6(9), e24162, **2011**.
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- [92] Colvin M, Maravelias CT. R&D Pipeline Planning: Task Interdependencies and Risk Management. *European Journal of Operational Research*, 215, 616-628, **2011**.
- [93] Braden DJ, Henao CA, Heltzel J, Maravelias CT, Dumesic JA. Production of Liquid Hydrocarbon Fuels by Catalytic Conversion of Biomass-derived Levulinic Acid. *Green Chemistry*, 13, 1755-1765, **2011**.

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- [95] Henao CA, Maravelias CT. Process Superstructure Optimization Using Surrogate Models. *AIChE J.*, 57(5), 1216-1232, **2011**.
- [96] Kopanos G, Puigjaner L, Maravelias CT. Production Planning and Scheduling of Parallel Continuous Processes with Product Family Considerations. *Industrial and Engineering Chemistry Research*, 50, 1369-1378, **2011**.
- [97] Sundaramoorthy A, Maravelias CT. A General Framework for Process Scheduling. *AIChE J.*, 57(3), 695-710, **2011**.
- [98] Colvin M, Maravelias CT. Modeling Methods and a Branch and Cut Algorithm for Pharmaceutical Clinical Trial Planning Using Stochastic Programming. *European Journal of Operational Research*, 203, 205-215, **2010**.
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- [100] Maravelias CT, Papalamprou K. Polyhedral Results for Discrete-time MIP Formulations for Scheduling and Production Planning. *Computers and Chemical Engineering*, 33(11), 1890-1904, **2009**.
- [101] Sung C, Maravelias CT. A Projection-Based Method for Production Planning of Multiproduct Facilities. *AIChE J.*, 55 (10), 2614-2630, **2009**.
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- [105] Sundaramoorthy A, Maravelias CT, Prasad P. Scheduling of Multi-stage Batch Processes under Utility Constraints. *Industrial and Engineering Chemistry Research*, 48 (13), 6050-6058, **2009**.
- [106] Colvin M, Maravelias CT. Scheduling of Testing Tasks and Resource Planning in New Product Development Using Stochastic Programming. *Computers and Chemical Engineering*, 33 (5), 964-976, **2009**.
- [107] Colvin M, Maravelias CT. A Stochastic Programming Approach for Clinical Trial Planning in New Drug Development. *Computers and Chemical Engineering*, 32(11), 2626-2642, **2008**.
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- [109] Prasad P, Maravelias CT. Batch Selection, Assignment and Sequencing in Multistage Processes. *Computers and Chemical Engineering*, 32 (6), 1114-1127, **2008**.
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- [2] *Chemical Production Scheduling and Supply Chain Optimization*, ASPEN Technology Inc, Houston, TX, October 24, **2017**.
- [3] *Process Systems Engineering for Renewable Energy*, School of Engineering, University of Edinburgh, Edinburgh, UK, September 29, **2017**.
- [4] *From Scheduling to Online Scheduling: Models, Solution Methods, Paradoxes, and Open Questions*, Center for Management Sciences, Technical University of Lisbon, Lisbon, Portugal, September 27, **2017**.
- [5] *Process Systems Engineering for Renewable Energy*, Department of Chemical and Biochemical Engineering, Technical University of Denmark, Lyngby, Denmark, September 25, **2017**.
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- [9] *Process Systems Engineering for Solar Fuels*, Argonne-Northwestern Solar Energy Research Center, Northwestern University, Evanston, IL, November 3, **2016**.
- [10] *Process Systems Engineering for Renewable Energy*, Chemical and Biochemical Engineering, Rutgers University, Piscataway, NJ, October 20, **2016**.
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- [12] *Process Systems Engineering for Renewable Energy*, Department of Chemical and Biological Engineering, Tufts University, January 25, **2016**.
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