

Carlos A Mendez

List of Publications by Year in descending order

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110
papers

3,365
citations

257101

24
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57
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114
all docs

114
docs citations

114
times ranked

1765
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | State-of-the-art review of optimization methods for short-term scheduling of batch processes. Computers and Chemical Engineering, 2006, 30, 913-946. | 2.0 | 675 |
| 2 | Scope for industrial applications of production scheduling models and solution methods. Computers and Chemical Engineering, 2014, 62, 161-193. | 2.0 | 411 |
| 3 | An MILP continuous-time approach to short-term scheduling of resource-constrained multistage flowshop batch facilities. Computers and Chemical Engineering, 2001, 25, 701-711. | 2.0 | 183 |
| 4 | A simultaneous optimization approach for off-line blending and scheduling of oil-refinery operations. Computers and Chemical Engineering, 2006, 30, 614-634. | 2.0 | 159 |
| 5 | Multi-period design and planning of closed-loop supply chains with uncertain supply and demand. Computers and Chemical Engineering, 2014, 66, 151-164. | 2.0 | 152 |
| 6 | Electric Vehicles in Logistics and Transportation: A Survey on Emerging Environmental, Strategic, and Operational Challenges. Energies, 2016, 9, 86. | 1.6 | 125 |
| 7 | Dynamic scheduling in multiproduct batch plants. Computers and Chemical Engineering, 2003, 27, 1247-1259. | 2.0 | 109 |
| 8 | Optimal scheduling of batch plants satisfying multiple product orders with different due-dates. Computers and Chemical Engineering, 2000, 24, 2223-2245. | 2.0 | 108 |
| 9 | MIP-based decomposition strategies for large-scale scheduling problems in multiproduct multistage batch plants: A benchmark scheduling problem of the pharmaceutical industry. European Journal of Operational Research, 2010, 207, 644-655. | 3.5 | 88 |
| 10 | Using safety stocks and simulation to solve the vehicle routing problem with stochastic demands. Transportation Research Part C: Emerging Technologies, 2011, 19, 751-765. | 3.9 | 85 |
| 11 | The multi-echelon vehicle routing problem with cross docking in supply chain management. Computers and Chemical Engineering, 2011, 35, 3002-3024. | 2.0 | 72 |
| 12 | An MILP framework for batch reactive scheduling with limited discrete resources. Computers and Chemical Engineering, 2004, 28, 1059-1068. | 2.0 | 69 |
| 13 | An efficient MILP continuous-time formulation for short-term scheduling of multiproduct continuous facilities. Computers and Chemical Engineering, 2002, 26, 687-695. | 2.0 | 66 |
| 14 | MINLP model for the detailed scheduling of refined products pipelines with flow rate dependent pumping costs. Computers and Chemical Engineering, 2015, 72, 210-221. | 2.0 | 62 |
| 15 | Optimal scheduling of a resource-constrained multiproduct batch plant supplying intermediates to nearby end-product facilities. Computers and Chemical Engineering, 2000, 24, 369-376. | 2.0 | 53 |
| 16 | Detailed Scheduling of Single-Source Pipelines with Simultaneous Deliveries to Multiple Offtake Stations. Industrial & Engineering Chemistry Research, 2012, 51, 6145-6165. | 1.8 | 48 |
| 17 | An MILP-based approach to the short-term scheduling of make-and-pack continuous production plants. OR Spectrum, 2002, 24, 403-429. | 2.1 | 46 |
| 18 | Material Transfer Operations in Batch Scheduling. A Critical Modeling Issue. Industrial & Engineering Chemistry Research, 2008, 47, 7721-7732. | 1.8 | 46 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Detailed Scheduling of Operations in Single-Source Refined Products Pipelines. Industrial & Engineering Chemistry Research, 2011, 50, 6240-6259. | 1.8 | 41 |
| 20 | Optimization model for the detailed scheduling of multi-source pipelines. Computers and Industrial Engineering, 2015, 88, 395-409. | 3.4 | 39 |
| 21 | Integrating decisions of product and closed-loop supply chain design under uncertain return flows. Computers and Chemical Engineering, 2018, 112, 211-238. | 2.0 | 34 |
| 22 | Mathematical programming and game theory optimization-based tool for supply chain planning in cooperative/competitive environments. Chemical Engineering Research and Design, 2013, 91, 1588-1600. | 2.7 | 32 |
| 23 | Improving supply chain planning in a competitive environment. Computers and Chemical Engineering, 2012, 42, 178-188. | 2.0 | 31 |
| 24 | Hybrid Mathematical Programming Discrete-Event Simulation Approach for Large-Scale Scheduling Problems. Industrial & Engineering Chemistry Research, 2011, 50, 10665-10680. | 1.8 | 29 |
| 25 | Improved time representation model for the simultaneous energy supply and demand management in microgrids. Energy, 2015, 87, 615-627. | 4.5 | 25 |
| 26 | Optimal management of logistic activities in multi-site environments. Computers and Chemical Engineering, 2008, 32, 2547-2569. | 2.0 | 24 |
| 27 | Integrated Constraint Programming Scheduling Approach for Automated Wet-Etch Stations in Semiconductor Manufacturing. Industrial & Engineering Chemistry Research, 2011, 50, 1705-1715. | 1.8 | 24 |
| 28 | Managing daily surgery schedules in a teaching hospital: a mixed-integer optimization approach. BMC Health Services Research, 2014, 14, 464. | 0.9 | 24 |
| 29 | Design and Planning of Closed-Loop Supply Chains: A Risk-Averse Multistage Stochastic Approach. Industrial & Engineering Chemistry Research, 2016, 55, 6236-6249. | 1.8 | 23 |
| 30 | Managing Distribution in Supply Chain Networks. Industrial & Engineering Chemistry Research, 2009, 48, 9961-9978. | 1.8 | 21 |
| 31 | A novel optimization method to automated wet-etch station scheduling in semiconductor manufacturing systems. Computers and Chemical Engineering, 2011, 35, 2960-2972. | 2.0 | 21 |
| 32 | Hybrid time slots sequencing model for a class of scheduling problems. AIChE Journal, 2012, 58, 789-800. | 1.8 | 20 |
| 33 | Toward integrated production and distribution management in multi-echelon supply chains. Computers and Chemical Engineering, 2013, 57, 78-94. | 2.0 | 19 |
| 34 | Optimal Reactive Scheduling of Manufacturing Plants with Flexible Batch Recipes. Industrial & Engineering Chemistry Research, 2007, 46, 6273-6283. | 1.8 | 17 |
| 35 | Robust integrated production-maintenance scheduling for an evaporation network. Computers and Chemical Engineering, 2018, 110, 140-151. | 2.0 | 17 |
| 36 | An MILP framework for Short-Term Scheduling of Single-Stage Batch Plants with Limited Discrete Resources. Computer Aided Chemical Engineering, 2002, , 721-726. | 0.3 | 16 |

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|----|--|-----|-----------|
| 37 | Mixed-Integer Linear Programming Monolithic Formulations for Lot-Sizing and Scheduling of Single-Stage Batch Facilities. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 6482-6498. | 1.8 | 16 |
| 38 | Novel MILP Scheduling Model for Power-Intensive Processes under Time-Sensitive Electricity Prices. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 1581-1592. | 1.8 | 16 |
| 39 | A stochastic approach for integrated production and distribution planning in dairy supply chains. <i>Computers and Chemical Engineering</i> , 2020, 140, 106966. | 2.0 | 15 |
| 40 | Short-term scheduling of multistage batch processes subject to limited finite resources. <i>Computer Aided Chemical Engineering</i> , 2003, , 984-989. | 0.3 | 14 |
| 41 | Simultaneous Lot Sizing and Scheduling of Multistage Batch Processes Handling Multiple Orders per Product. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 5762-5780. | 1.8 | 14 |
| 42 | Operational planning of forward and reverse logistic activities on multi-echelon supply-chain networks. <i>Computers and Chemical Engineering</i> , 2016, 88, 170-184. | 2.0 | 13 |
| 43 | A reactive-iterative optimization algorithm for scheduling of air separation units under uncertainty in electricity prices. <i>Computers and Chemical Engineering</i> , 2020, 142, 107050. | 2.0 | 13 |
| 44 | Oil-derivatives pipeline logistics using discrete-event simulation. , 2010, , . | | 12 |
| 45 | A branch-and-price approach to evaluate the role of cross-docking operations in consolidated supply chains. <i>Computers and Chemical Engineering</i> , 2015, 80, 15-29. | 2.0 | 12 |
| 46 | Scheduling of flexible manufacturing plants with redesign options: A MILP-based decomposition algorithm and case studies. <i>Computers and Chemical Engineering</i> , 2020, 136, 106777. | 2.0 | 12 |
| 47 | An improvement-based MILP optimization approach to complex AWS scheduling. <i>Computers and Chemical Engineering</i> , 2012, 47, 217-226. | 2.0 | 11 |
| 48 | An efficient MILP-based decomposition strategy for solving large-scale scheduling problems in the shipbuilding industry. <i>Optimization and Engineering</i> , 2019, 20, 1085-1115. | 1.3 | 10 |
| 49 | Integration of Mathematical Programming and Game Theory for Supply Chain Planning Optimization in Multi-objective competitive scenarios. <i>Computer Aided Chemical Engineering</i> , 2012, 30, 402-406. | 0.3 | 9 |
| 50 | An iterative MILP-based approach for the maritime logistics and transportation of multi-parcel chemical tankers. <i>Computers and Industrial Engineering</i> , 2015, 89, 88-107. | 3.4 | 9 |
| 51 | Hybrid time representation for the scheduling of energy supply and demand in smart grids. <i>Computer Aided Chemical Engineering</i> , 2013, 32, 553-558. | 0.3 | 8 |
| 52 | A MILP-based column generation strategy for managing large-scale maritime distribution problems. <i>Computers and Chemical Engineering</i> , 2015, 72, 350-362. | 2.0 | 8 |
| 53 | A heuristic simulation-based framework to improve the scheduling of blocks assembly and the production process in shipbuilding. , 2017, , . | | 8 |
| 54 | A two-stage procedure for efficiently solving the integrated problem of production, inventory, and distribution of industrial products. <i>Computers and Chemical Engineering</i> , 2020, 134, 106690. | 2.0 | 8 |

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|----|---|-----|-----------|
| 55 | A rigorous approach to coordinate production and transport scheduling in a multi-site system. Computer Aided Chemical Engineering, 2006, 21, 2171-2176. | 0.3 | 7 |
| 56 | A Novel Optimization Method to Automated Wet-Etch Station Scheduling in Semiconductor Manufacturing Systems. Computer Aided Chemical Engineering, 2010, , 883-888. | 0.3 | 7 |
| 57 | An Integrated CP-Based Approach for Scheduling of Processing and Transport Units in Pipeless Plants. Industrial & Engineering Chemistry Research, 2010, 49, 1799-1811. | 1.8 | 7 |
| 58 | Discrete-Time MILP Formulation for the Optimal Scheduling of Maintenance Tasks on Oil and Gas Production Assets. Industrial & Engineering Chemistry Research, 2019, 58, 8231-8245. | 1.8 | 7 |
| 59 | Enhancing dynamic data reconciliation performance through time delays identification. Chemical Engineering and Processing: Process Intensification, 2007, 46, 1251-1263. | 1.8 | 6 |
| 60 | Managing Distribution in Refined Products Pipelines Using Discrete-Event Simulation. International Journal of Information Systems and Supply Chain Management, 2012, 5, 58-79. | 0.6 | 6 |
| 61 | Efficient MILP-based solution strategies for large-scale industrial batch scheduling problems. Computer Aided Chemical Engineering, 2006, , 2231-2236. | 0.3 | 5 |
| 62 | MILP-based Approach for the Scheduling of Automated Manufacturing System with Sequence-Dependent transferring times. Computer Aided Chemical Engineering, 2012, 30, 477-481. | 0.3 | 5 |
| 63 | A hybrid scheduling approach for automated flowshops with material handling and time constraints. International Journal of Production Research, 2014, 52, 2788-2806. | 4.9 | 5 |
| 64 | Hybrid MILP/Simulation/Heuristic Algorithms to Complex Hoist Scheduling Problems. Computer Aided Chemical Engineering, 2016, 38, 1929-1934. | 0.3 | 5 |
| 65 | Optimizing the inventorying and distribution of chemical fluids: An innovative nested column generation approach. Computers and Chemical Engineering, 2018, 119, 55-69. | 2.0 | 5 |
| 66 | A continuous-time approach to short-term scheduling of resource-constrained multistage batch facilities. Computer Aided Chemical Engineering, 2000, 8, 1045-1050. | 0.3 | 4 |
| 67 | MILP Optimization Models for Short-term Scheduling of Batch Processes. , 0, , 163-184. | | 4 |
| 68 | Integrated production and distribution management with cross docking in supply chains. Computer Aided Chemical Engineering, 2012, 31, 1050-1054. | 0.3 | 4 |
| 69 | Multi-stage stochastic optimization of the design and planning of a Closed-Loop Supply Chain. Computer Aided Chemical Engineering, 2013, 32, 691-696. | 0.3 | 4 |
| 70 | Solving Large Distribution Problems in Supply Chain Networks by a Column Generation Approach. International Journal of Operations Research and Information Systems, 2014, 5, 50-80. | 1.0 | 4 |
| 71 | A Branch-and-Price Approach To Manage Cargo Consolidation and Distribution in Supply Chains. Industrial & Engineering Chemistry Research, 2014, 53, 17226-17239. | 1.8 | 4 |
| 72 | Enhancing the General Precedence Approach for Industrial Scheduling Problems with Sequence-Dependent Issues. Industrial & Engineering Chemistry Research, 2014, 53, 17092-17097. | 1.8 | 4 |

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|----|---|-----|-----------|
| 73 | CLSC design with simultaneous consideration of product design for manufacturing and remanufacturing. Computer Aided Chemical Engineering, 2017, 40, 1453-1458. | 0.3 | 4 |
| 74 | Mixed-integer linear programming approach for product design for life-cycle profit. Computers and Industrial Engineering, 2019, 137, 106079. | 3.4 | 4 |
| 75 | Optimization of resource flows across the whole supply chain. Application to a case study in the dairy industry. Computers and Chemical Engineering, 2022, 158, 107632. | 2.0 | 4 |
| 76 | Applying a simulation-based tool to productivity management in an automotive-parts industry. , 2008, , . | | 3 |
| 77 | A robust MILP-based approach to vehicle routing problems with uncertain demands. Computer Aided Chemical Engineering, 2011, 29, 633-637. | 0.3 | 3 |
| 78 | Improving supply chain management in a competitive environment. Computer Aided Chemical Engineering, 2011, 29, 1000-1004. | 0.3 | 3 |
| 79 | A decomposition framework for managing inventory and distribution of fluid products by an order-based-resupply methodology. Computers and Chemical Engineering, 2017, 106, 373-384. | 2.0 | 3 |
| 80 | A mathematical programming approach including flexible recipes to batch operation rescheduling. Computer Aided Chemical Engineering, 2006, 21, 1377-1382. | 0.3 | 2 |
| 81 | A precedence-based monolithic approach to lotsizing and scheduling of multiproduct batch plants. Computer Aided Chemical Engineering, 2007, 24, 679-684. | 0.3 | 2 |
| 82 | A novel continuous-time MILP approach for short-term scheduling of multipurpose pipeless batch plants. Computer Aided Chemical Engineering, 2007, 24, 595-600. | 0.3 | 2 |
| 83 | An iterative MILP-based approach to automated multi-product multi-stage manufacturing systems. Computer Aided Chemical Engineering, 2012, 31, 1085-1089. | 0.3 | 2 |
| 84 | Optimizing the design and operation of a beer packaging line through an advanced simio-based DES tool. , 2014, , . | | 2 |
| 85 | Managing Risk in the Design of Product and Closed-Loop Supply Chain Structure. Computer Aided Chemical Engineering, 2016, , 443-474. | 0.3 | 2 |
| 86 | Effective Coordination of Simultaneous Delivery Flows into Receipt Terminals of Multiproduct Pipelines. Computer Aided Chemical Engineering, 2012, 30, 252-256. | 0.3 | 2 |
| 87 | Towards Integrated Production and Distribution Management. Computer Aided Chemical Engineering, 2012, 30, 417-421. | 0.3 | 2 |
| 88 | An efficient MILP continuous-time formulation for the optimal operation of general multipurpose facilities. Computer Aided Chemical Engineering, 2001, 9, 693-698. | 0.3 | 1 |
| 89 | MINLP model for synthesis of paraxylene separation processes based on crystallization technology. Computer Aided Chemical Engineering, 2005, , 829-834. | 0.3 | 1 |
| 90 | The supply-chain pick-up and delivery problem with transshipments. Computer Aided Chemical Engineering, 2009, , 1009-1014. | 0.3 | 1 |

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| 91 | Simulation-based framework to Automated Wet-etch station scheduling problems in the semiconductor industry. , 2011, , . | | 1 |
| 92 | Jaime Cerd; Festschrift Preface: In Honor of Professor Jaime Cerd. Industrial & Engineering Chemistry Research, 2014, 53, 16895-16898. | 1.8 | 1 |
| 93 | Optimal scheduling for power-intensive processes under time-sensitive electricity prices. Computer Aided Chemical Engineering, 2017, , 1423-1428. | 0.3 | 1 |
| 94 | An Efficient MILP-Based Decomposition Strategy for Solving Large-Scale Scheduling Problems in the Offshore Oil and Gas Industry. Computer Aided Chemical Engineering, 2019, , 943-948. | 0.3 | 1 |
| 95 | A Simulation-Based Tool to Support Decision-Making in Logistics Design of a Can Packaging Line. International Journal of Food Engineering, 2020, 16, . | 0.7 | 1 |
| 96 | A Discrete-time MILP Formulation for the Optimal Scheduling of Maintenance Tasks on Oil and Gas Wells and Surface Facilities. Computer Aided Chemical Engineering, 2019, , 727-732. | 0.3 | 1 |
| 97 | An optimization framework to computer-aided design of reliable measurement systems. Computer Aided Chemical Engineering, 2006, , 1293-1298. | 0.3 | 0 |
| 98 | Rigorous scheduling resolution of complex multipurpose batch plants: S-Graph vs. MILP. Computer Aided Chemical Engineering, 2006, 21, 2033-2038. | 0.3 | 0 |
| 99 | A novel combined approach for supply chain modeling and analysis. Computer Aided Chemical Engineering, 2006, , 2207-2212. | 0.3 | 0 |
| 100 | An Effective Decomposition Approach for Solving Large Supply Chain Oriented Pick-up and Delivery Problems. Computer Aided Chemical Engineering, 2009, , 2043-2048. | 0.3 | 0 |
| 101 | An optimization-based framework for the scheduling of Automated Manufacturing Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 780-785. | 0.4 | 0 |
| 102 | Implementing optimal hydrogen networks management. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 114-119. | 0.4 | 0 |
| 103 | Risk measures in a multi-stage stochastic supply chain approach. , 2015, , . | | 0 |
| 104 | Robust multi-objective scheduling in an evaporation network. , 2017, , . | | 0 |
| 105 | Optimization of a Distributed Wastewater Treatment Network Considering Lumped Parameters Interrelations. Computer Aided Chemical Engineering, 2017, , 2701-2706. | 0.3 | 0 |
| 106 | A decomposition framework for distribution of fluid products by a vendor-managed-inventory methodology. Computer Aided Chemical Engineering, 2017, , 1387-1392. | 0.3 | 0 |
| 107 | New Tools for the Detailed Scheduling of Refined Products Pipelines. Computer Aided Chemical Engineering, 2011, , 985-989. | 0.3 | 0 |
| 108 | A rigorous mathematical formulation to Automated Wet-Etch Station scheduling with multiple material-handling robots in Semiconductor Manufacturing Systems. Computer Aided Chemical Engineering, 2011, 29, 990-994. | 0.3 | 0 |

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|-----|--|-----|-----------|
| 109 | New Scheduling Approach for Shared Resources and Mixed Storage Policies. Computer Aided Chemical Engineering, 2011, 29, 975-979. | 0.3 | 0 |
| 110 | An Efficient Way to Tackle Uncertainty in the Scheduling of a Continuous Evaporation System. Computer Aided Chemical Engineering, 2017, , 1411-1416. | 0.3 | 0 |