

Joao M Lemos

List of Publications by Year in descending order

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113
papers

1,039
citations

471509

17
h-index

501196

28
g-index

123
all docs

123
docs citations

123
times ranked

770
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | ADAPTIVE CONTROL OF A SOLAR ENERGY PLANT: EXPLOITING ACCESSIBLE DISTURBANCES. International Journal of Adaptive Control and Signal Processing, 1997, 11, 327-342. | 4.1 | 67 |
| 2 | Variable sampling adaptive control of a distributed collector solar field. IEEE Transactions on Control Systems Technology, 2003, 11, 765-772. | 5.2 | 64 |
| 3 | Drug Delivery for Neuromuscular Blockade With Supervised Multimodel Adaptive Control. IEEE Transactions on Control Systems Technology, 2009, 17, 1237-1244. | 5.2 | 59 |
| 4 | Adaptive regulation of super-heated steam temperature: a case study in an industrial boiler. Control Engineering Practice, 2000, 8, 1405-1415. | 5.5 | 55 |
| 5 | Reduced complexity adaptive nonlinear control of a distributed collector solar field. Journal of Process Control, 2002, 12, 131-141. | 3.3 | 52 |
| 6 | Time scaling internal state predictive control of a solar plant. Control Engineering Practice, 2003, 11, 1459-1467. | 5.5 | 48 |
| 7 | Mathematical modelling of industrial pilot-plant penicillin-G fed-batch fermentations. Journal of Chemical Technology and Biotechnology, 1994, 61, 123-138. | 3.2 | 43 |
| 8 | Multipredictive adaptive control of arc welding trailing centerline temperature. IEEE Transactions on Control Systems Technology, 2000, 8, 159-169. | 5.2 | 31 |
| 9 | Identification of switched ARX models via convex optimization and expectation maximization. Journal of Process Control, 2015, 28, 9-16. | 3.3 | 31 |
| 10 | Diode/magnetic tunnel junction cell for fully scalable matrix-based biochip. Journal of Applied Physics, 2006, 99, 08B307. | 2.5 | 30 |
| 11 | Control of Neuromuscular Blockade in the Presence of Sensor Faults. IEEE Transactions on Biomedical Engineering, 2005, 52, 1902-1911. | 4.2 | 29 |
| 12 | A New Hand-Held Microsystem Architecture for Biological Analysis. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2006, 53, 2384-2395. | 0.1 | 28 |
| 13 | Adaptive and non-adaptive model predictive control of an irrigation channel. Networks and Heterogeneous Media, 2009, 4, 303-324. | 1.1 | 26 |
| 14 | Learning in switching multiple model adaptive control. IEEE Instrumentation and Measurement Magazine, 2006, 9, 24-29. | 1.6 | 21 |
| 15 | Distributed Linear-Quadratic Control of Serially Chained Systems: Application to a Water Delivery Canal [Applications of Control]. IEEE Control Systems, 2012, 32, 26-38. | 0.8 | 21 |
| 16 | Cancer therapy optimization based on multiple model adaptive control. Biomedical Signal Processing and Control, 2019, 48, 255-264. | 5.7 | 21 |
| 17 | Feedforward adaptive control of the Bispectral Index of the EEG using the intravenous anaesthetic drug propofol. International Journal of Adaptive Control and Signal Processing, 2009, 23, 485-503. | 4.1 | 19 |
| 18 | A high-order Discontinuous Galerkin Method with mesh refinement for optimal control. Automatica, 2017, 85, 70-82. | 5.0 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Integrating Predictive and Switching Control: Basic Concepts and an Experimental Case Study. , 2000, , 181-190. | | 15 |
| 20 | Multiple Model Adaptive Control. Advances in Industrial Control, 2014, , 105-130. | 0.5 | 15 |
| 21 | Model Predictive control of Depth of Anaesthesia: Guidelines for controller configuration. , 2008, 2008, 5822-5. | | 14 |
| 22 | Long-range adaptive control with input constraints. International Journal of Control, 1991, 54, 289-306. | 1.9 | 13 |
| 23 | Modeling and Classifying Human Activities From Trajectories Using a Class of Space-Varying Parametric Motion Fields. IEEE Transactions on Image Processing, 2013, 22, 2066-2080. | 9.8 | 13 |
| 24 | Identifying IIR filter coefficients using particle swarm optimization with application to reconstruction of missing cardiovascular signals. Engineering Applications of Artificial Intelligence, 2014, 34, 193-198. | 8.1 | 13 |
| 25 | Optimal and receding horizon control of tumor growth in myeloma bone disease. Biomedical Signal Processing and Control, 2016, 24, 128-134. | 5.7 | 13 |
| 26 | Control of a water delivery canal with cooperative distributed MPC. , 2012, , . | | 12 |
| 27 | Adaptive control of distributed collector solar fields. International Journal of Systems Science, 2006, 37, 523-533. | 5.5 | 11 |
| 28 | Control Óptimo Aplicado a Campos de Colectores Solares Distribuidos. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2018, 15, 327. | 1.0 | 11 |
| 29 | Adaptive predictive control with mean-square input constraint. Automatica, 1992, 28, 593-597. | 5.0 | 10 |
| 30 | Optimal and suboptimal shape tracking based on multiple switched dynamic models. Image and Vision Computing, 2001, 19, 539-550. | 4.5 | 10 |
| 31 | A methodology for impact evaluation of alternative control strategies in a large-scale power plant. Control Engineering Practice, 1997, 5, 325-335. | 5.5 | 9 |
| 32 | Nonlinear MPC of HIV-1 infection with periodic inputs. , 2011, , . | | 9 |
| 33 | Predictive adaptive temperature control in a solar furnace for material stress tests. , 2012, , . | | 9 |
| 34 | Distributed Inverse Optimal Control for Discrete-Time Nonlinear Multi-Agent Systems. , 2021, 5, 2096-2101. | | 9 |
| 35 | Switching reconfigurable control based on hidden Markov models. , 1999, , . | | 8 |
| 36 | An efficient Kullback-Leibler optimization algorithm for probabilistic control design. , 2008, , . | | 8 |

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| 37 | A target control infusion method for neuromuscular blockade based on hybrid parameter estimation. , 2008, 2008, 707-10. | | 8 |
| 38 | A simple model for the identification of drug effects. , 2009, , . | | 8 |
| 39 | D-ADMM based distributed MPC with input-output models. , 2014, , . | | 8 |
| 40 | Optimal control of the temperature in a solar furnace. Optimal Control Applications and Methods, 2016, 37, 466-478. | 2.1 | 8 |
| 41 | Predictive adaptive control of plants with online structural changes based on multiple models. International Journal of Adaptive Control and Signal Processing, 2008, 22, 774-794. | 4.1 | 7 |
| 42 | Solar furnace temperature control with active cooling. Solar Energy, 2018, 159, 66-77. | 6.1 | 7 |
| 43 | A semi-infinite horizon LQ self-tuning regulator for ARMAX plants based on RLS. Automatica, 1992, 28, 401-406. | 5.0 | 6 |
| 44 | An adaptive temperature control law for a solar furnace. , 2008, , . | | 6 |
| 45 | Multivariable and Distributed LQG Control of a Water Delivery Canal. Journal of Irrigation and Drainage Engineering - ASCE, 2013, 139, 855-863. | 1.0 | 6 |
| 46 | Control of a Solar Furnace using MPC with Integral Action. IFAC-PapersOnLine, 2016, 49, 961-966. | 0.9 | 6 |
| 47 | Multi-drug therapy design for HIV-1 infection using nonlinear model predictive control. , 2011, , . | | 5 |
| 48 | Application of distributed model predictive control to a water delivery canal. , 2011, , . | | 5 |
| 49 | Online Bayesian Time-varying Parameter Estimation of HIV-1 Time-series. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1294-1299. | 0.4 | 5 |
| 50 | Multiple-model adaptive control of an air heating fan using set-valued observers. , 2012, , . | | 4 |
| 51 | Information Geometric Algorithm for Estimating Switching Probabilities in Space-Varying HMM. IEEE Transactions on Image Processing, 2014, 23, 5263-5273. | 9.8 | 4 |
| 52 | Modeling multiple experiments using regularized optimization: A case study on bacterial glucose utilization dynamics. Computers in Biology and Medicine, 2015, 63, 301-309. | 7.0 | 4 |
| 53 | Identification and automatic segmentation of multiphasic cell growth using a linear hybrid model. Mathematical Biosciences, 2016, 279, 83-89. | 1.9 | 4 |
| 54 | A HMM approach to the estimation of random trajectories on manifolds. Signal Processing, 2002, 82, 1205-1214. | 3.7 | 3 |

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|----|--|-----|-----------|
| 55 | Nonlinear Receding Horizon Control based on Pontryagin Optimum Principle *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1069-1074. | 0.4 | 3 |
| 56 | Optimization strategies for metabolic networks. BMC Systems Biology, 2010, 4, 113. | 3.0 | 3 |
| 57 | Nonlinear feedback control of a HIV-1 infection model. , 2011, , . | | 3 |
| 58 | Nonlinear and Adaptive Control of a HIV-1 Infection Model. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14183-14188. | 0.4 | 3 |
| 59 | Robust Pointwise Min-Norm Control of distributed systems with fluid flow. , 2011, , . | | 3 |
| 60 | Distributed LQG control of a water delivery canal with feedforward from measured consumptions. , 2012, , . | | 3 |
| 61 | Control of a solar furnace using active cooling. , 2016, , . | | 3 |
| 62 | Fault-tolerant control of an air heating fan using set-valued observers: An experimental evaluation. International Journal of Adaptive Control and Signal Processing, 2016, 30, 336-358. | 4.1 | 3 |
| 63 | Optimal Impulsive Control for Cancer Therapy. Springer Briefs in Electrical and Computer Engineering, 2021, , . | 0.5 | 3 |
| 64 | Observer design in switching control of neuromuscular blockade: clinical cases. , 2006, 2006, 5436-9. | | 2 |
| 65 | Nonlinear Model Predictive Control of a Water Distribution Canal Pool. Lecture Notes in Control and Information Sciences, 2009, , 521-529. | 1.0 | 2 |
| 66 | Moving Horizon Estimation with Decimated Observations *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 296-301. | 0.4 | 2 |
| 67 | Batch identification of neuromuscular blockade models. , 2011, , . | | 2 |
| 68 | A bi-phase algorithm to identify hypnotic models of patients subject to deep sedation for ultrasonographic endoscopy*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 775-780. | 0.4 | 2 |
| 69 | Hybrid identification of time-varying parameter with particle filtering and expectation maximization. , 2013, , . | | 2 |
| 70 | Design of depth of anesthesia controllers in the presence of model uncertainty. , 2013, , . | | 2 |
| 71 | A polynomial design approach to robust control of neuromuscular blockade of patients subject to general anesthesia. , 2013, , . | | 2 |
| 72 | An information geometric framework for the optimization on a discrete probability spaces: Application to human trajectory classification. Neurocomputing, 2015, 150, 155-162. | 5.9 | 2 |

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|----|--|-----|-----------|
| 73 | Controlling Distributed Hyperbolic Plants with Adaptive Nonlinear Model Predictive Control. Lecture Notes in Control and Information Sciences, 2007, , 435-441. | 1.0 | 2 |
| 74 | A long-range adaptive controller for time-varying plants with sudden changes. International Journal of Adaptive Control and Signal Processing, 1991, 5, 219-230. | 4.1 | 1 |
| 75 | Adaptive Control in the Presence of Outliers. , 2006, , . | | 1 |
| 76 | Predictive adaptive control of unconsciousness - exploiting remifentanyl as an accessible disturbance. , 2006, , . | | 1 |
| 77 | Temperature modelling of a biochip for DNA analysis. , 2006, , . | | 1 |
| 78 | Control of Depth of Anesthesia using MUSMAR - Exploring Electromyography and the Analgesic dose as Accessible Disturbances. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1574-7. | 0.5 | 1 |
| 79 | Model analysis and control of a four segment irrigation canal. , 2007, , . | | 1 |
| 80 | Adaptive Nonlinear Model Predictive Control for a Class of Transport Phenomena Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 729-734. | 0.4 | 1 |
| 81 | Flexible trajectory modeling using a mixture of parametric motion fields for video surveillance. , 2011, , . | | 1 |
| 82 | Hybrid Dynamic Optimization for Cruise Speed Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 5082-5087. | 0.4 | 1 |
| 83 | A class of space-varying parametric motion fields for human activity recognition. , 2012, , . | | 1 |
| 84 | A velocity field approach to the detection of pedestrian interactions. , 2013, , . | | 1 |
| 85 | A nonlinear continuous-discrete filter with model parameter uncertainty and application to anesthesia. , 2013, , . | | 1 |
| 86 | Solar Energy Collector Systems. Advances in Industrial Control, 2014, , 1-25. | 0.5 | 1 |
| 87 | A Fokker-Planck approach to joint state-parameter estimation. IFAC-PapersOnLine, 2018, 51, 389-394. | 0.9 | 1 |
| 88 | Multi-agent detection and labelling of activity patterns. Signal, Image and Video Processing, 2020, 14, 1207-1215. | 2.7 | 1 |
| 89 | Cancer Therapy Optimization. Springer Briefs in Electrical and Computer Engineering, 2021, , 43-78. | 0.5 | 1 |
| 90 | Predictive Control for Spacecraft Rendezvous. SpringerBriefs in Applied Sciences and Technology, 2021, , . | 0.4 | 1 |

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|-----|--|-----|-----------|
| 91 | Rendezvous with Model Predictive Control. SpringerBriefs in Applied Sciences and Technology, 2021, , 55-103. | 0.4 | 1 |
| 92 | Efficient Optimization Algorithm for Space-Variant Mixture of Vector Fields. Lecture Notes in Computer Science, 2013, , 79-88. | 1.3 | 1 |
| 93 | Distributed LQ Control of a Water Delivery Canal Based on a Selfish Game. Lecture Notes in Electrical Engineering, 2021, , 466-476. | 0.4 | 1 |
| 94 | HMM based sensor fault detection in neuromuscular blockade control. , 2007, , . | | 0 |
| 95 | Stability of Discrete Systems Controlled in the Presence of Intermittent Sensor Faults. Journal of Control Science and Engineering, 2008, 2008, 1-11. | 1.0 | 0 |
| 96 | Clustering in Supervised Multi-model Adaptive Control Applied to Neuromuscular Blockade. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1000-1005. | 0.4 | 0 |
| 97 | Optimal cruise control with reduced complexity models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 390-395. | 0.4 | 0 |
| 98 | Neuromuscular blockade model identification based on the Hill function inversion. , 2010, , . | | 0 |
| 99 | Predictive adaptive control of neuromuscular relaxation. , 2012, , . | | 0 |
| 100 | Alignment of velocity fields for video surveillance. Pattern Recognition Letters, 2012, 33, 1632-1637. | 4.2 | 0 |
| 101 | Parameter estimation and identifiability of a HIV-1 model. , 2013, , . | | 0 |
| 102 | Reconfigurable distributed control of water delivery canals. , 2013, , . | | 0 |
| 103 | Temperature Control of a Heliostat Field Solar Furnace. , 2018, , . | | 0 |
| 104 | The Fokker-Planck equation in estimation and control. IFAC-PapersOnLine, 2019, 52, 91-95. | 0.9 | 0 |
| 105 | Distributed MPC control of a Water Delivery Canal based on D-ADMM. , 2020, , . | | 0 |
| 106 | Complementary Aspects. Springer Briefs in Electrical and Computer Engineering, 2021, , 79-93. | 0.5 | 0 |
| 107 | Conclusions and Research Topics. Springer Briefs in Electrical and Computer Engineering, 2021, , 95-99. | 0.5 | 0 |
| 108 | Model Predictive Control. SpringerBriefs in Applied Sciences and Technology, 2021, , 9-28. | 0.4 | 0 |

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|-----|--|-----|-----------|
| 109 | Relative Orbital Mechanics. SpringerBriefs in Applied Sciences and Technology, 2021, , 29-53. | 0.4 | 0 |
| 110 | Optimal Control for Vehicle Cruise Speed Transfer. , 2011, , . | | 0 |
| 111 | Trajectory Analysis Using Switched Motion Fields: A Parametric Approach. Lecture Notes in Computer Science, 2011, , 420-427. | 1.3 | 0 |
| 112 | Predictive Adaptive Control with Linear Models. Advances in Industrial Control, 2014, , 53-103. | 0.5 | 0 |
| 113 | Trajectory Planning for Landing with a Direct Optimal Control Algorithm. Lecture Notes in Electrical Engineering, 2021, , 648-657. | 0.4 | 0 |