# Victor M Becerra

## List of Publications by Year
in descending order

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|---|---|---|---|
| 128 papers | 2,126 citations | 279701<br>23 h-index | 276775<br>41 g-index |
| 131 all docs | 131 docs citations | 131 times ranked | 2015 citing authors |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 1 | Working Together: A Review on Safe Human-Robot Collaboration in Industrial Environments. IEEE Access, 2017, 5, 26754-26773. | 2.6 | 371 |
| 2 | Emergence of a Small-World Functional Network in Cultured Neurons. PLoS Computational Biology, 2012, 8, e1002522. | 1.5 | 132 |
| 3 | Applying the extended Kalman filter to systems described by nonlinear differential-algebraic equations. Control Engineering Practice, 2001, 9, 267-281. | 3.2 | 118 |
| 4 | Search space pruning and global optimisation of multiple gravity assist spacecraft trajectories. Journal of Global Optimization, 2007, 38, 283-296. | 1.1 | 90 |
| 5 | Solving complex optimal control problems at no cost with PSOPT. , 2010, , . |  | 77 |
| 6 | Controlling a Mobile Robot with a Biological Brain. Defence Science Journal, 2010, 60, 5-14. | 0.5 | 61 |
| 7 | Neural and Wavelet Network Models for Financial Distress Classification. Data Mining and Knowledge Discovery, 2005, 11, 35-55. | 2.4 | 44 |
| 8 | Solving Optimal Control Problems With State Constraints Using Nonlinear Programming and Simulation Tools. IEEE Transactions on Education, 2004, 47, 377-384. | 2.0 | 39 |
| 9 | Comparison of extrasystolic ECG signal classifiers using discrete wavelet transforms. Pattern Recognition Letters, 2006, 27, 393-407. | 2.6 | 39 |
| 10 | Validation of Canopy Height Profile methodology for small-footprint full-waveform airborne LiDAR data in a discontinuous canopy environment. ISPRS Journal of Photogrammetry and Remote Sensing, 2015, 104, 144-157. | 4.9 | 39 |
| 11 | Analysis of energy usage for RTG cranes. Energy, 2017, 125, 337-344. | 4.5 | 39 |
| 12 | A Review of Photovoltaic Thermal (PVT) Technology for Residential Applications: Performance Indicators, Progress, and Opportunities. Energies, 2021, 14, 3853. | 1.6 | 39 |
| 13 | Input Constraints Handling in an MPC/Feedback Linearization Scheme. International Journal of Applied Mathematics and Computer Science, 2009, 19, 219-232. | 1.5 | 38 |
| 14 | Dynamic integrated system optimization and parameter estimation for discrete time optimal control of nonlinear systems. International Journal of Control, 1996, 63, 257-281. | 1.2 | 36 |
| 15 | Strong Structural Controllability and the Multilink Inverted Pendulum. IEEE Transactions on Automatic Control, 2012, 57, 2891-2896. | 3.6 | 35 |
| 16 | Autonomous Control of Unmanned Aerial Vehicles. Electronics (Switzerland), 2019, 8, 452. | 1.8 | 33 |
| 17 | Electrical enhancement period of solar photovoltaic using phase change material. Journal of Cleaner Production, 2019, 221, 878-884. | 4.6 | 33 |
| 18 | Dynamic modelling, simulation, and control design of a pressurized water-type nuclear power plant. Nuclear Engineering and Design, 2020, 370, 110901. | 0.8 | 32 |

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|---|---------|-----|-----------|
| 19 | Combined bias and outlier identification in dynamic data reconciliation. Computers and Chemical Engineering, 2002, 26, 921-935. | 2.0 | 30 |
| 20 | Hardware retrofit and computed torque control of a Puma 560 Robot updating an industrial manipulator. IEEE Control Systems, 2004, 24, 78-82. | 1.0 | 30 |
| 21 | Day-ahead industrial load forecasting for electric RTG cranes. Journal of Modern Power Systems and Clean Energy, 2018, 6, 223-234. | 3.3 | 30 |
| 22 | Robust on-line diagnosis tool for the early accident detection in nuclear power plants. Reliability Engineering and System Safety, 2019, 186, 110-119. | 5.1 | 27 |
| 23 | Optimal control of a class of discreteâ€"continuous non-linear systemsâ€"decomposition and hierarchical structure. Automatica, 2001, 37, 1757-1769. | 3.0 | 24 |
| 24 | Optimal Energy Management and MPC Strategies for Electrified RTG Cranes with Energy Storage Systems. Energies, 2017, 10, 1598. | 1.6 | 24 |
| 25 | An Efficient Parameterization of Dynamic Neural Networks for Nonlinear System Identification. IEEE Transactions on Neural Networks, 2005, 16, 983-988. | 4.8 | 23 |
| 26 | Bioinspired Autonomous Visual Vertical Control of a Quadrotor Unmanned Aerial Vehicle. Journal of Guidance, Control, and Dynamics, 2015, 38, 249-262. | 1.6 | 23 |
| 27 | Subspace system identification framework for the analysis of multimoded propagation of THz-transient signals. Measurement Science and Technology, 2005, 16, 1037-1053. | 1.4 | 22 |
| 28 | Endogenous cholinergic tone modulates spontaneous network level neuronal activity in primary cortical cultures grown on multi-electrode arrays. BMC Neuroscience, 2013, 14, 38. | 0.8 | 22 |
| 29 | Optimal Power Management Strategy for Energy Storage with Stochastic Loads. Energies, 2016, 9, 175. | 1.6 | 22 |
| 30 | Enhancing model predictive control using dynamic data reconciliation. AICHE Journal, 2002, 48, 324-333. | 1.8 | 21 |
| 31 | A study on the robustness of neural network models for predicting the break size in LOCA. Progress in Nuclear Energy, 2018, 109, 12-28. | 1.3 | 21 |
| 32 | Novel developments in process optimisation using predictive control. Journal of Process Control, 1998, 8, 117-138. | 1.7 | 18 |
| 33 | Comparison of Subspace and ARX Models of a Waveguide's Terahertz Transient Response After Optimal Wavelet Filtering. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 2409-2419. | 2.9 | 18 |
| 34 | Application of a novel optimal control algorithm to a benchmark fed - batch fermentation process. Transactions of the Institute of Measurement and Control, 1998, 20, 11-18. | 1.1 | 17 |
| 35 | Body-centric modelling, identification, and acceleration tracking control of a quadrotor UAV. International Journal of Modelling, Identification and Control, 2015, 24, 29. | 0.2 | 17 |
| 36 | $L_\infty$â€¢Adaptive Robust Control Design for a Pressurized Water-Type Nuclear Power Plant. IEEE Transactions on Nuclear Science, 2021, 68, 1381-1398. | 1.2 | 17 |

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|---|---------|----|-----------|
| 37 | Strategies for Feedback Linearisation. Advances in Industrial Control, 2003, , . | 0.4 | 16 |
| 38 | Architecture for Neuronal Cell Control of a Mobile Robot. , 2008, , 23-31. | | 16 |
| 39 | Revealing Ensemble State Transition Patterns in Multi-Electrode Neuronal Recordings Using Hidden Markov Models. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 345-355. | 2.7 | 16 |
| 40 | Power improvement of finned solar photovoltaic phase change material system. Energy, 2020, 193, 116735. | 4.5 | 16 |
| 41 | Efficient Fuzzy Control of a Rotary Inverted Pendulum Based on LQR Mapping. , 2006, , . | | 16 |
| 42 | Visual sensor fusion for active security in robotic industrial environments. Eurasip Journal on Advances in Signal Processing, 2014, 2014, . | 1.0 | 15 |
| 43 | Speaker recognition using PCA-based feature transformation. Speech Communication, 2019, 110, 33-46. | 1.6 | 15 |
| 44 | Robust-optimal integrated control design technique for a pressurized water-type nuclear power plant. Progress in Nuclear Energy, 2021, 131, 103575. | 1.3 | 15 |
| 45 | LQGI/LTR based robust control technique for a pressurized water nuclear power plant. Annals of Nuclear Energy, 2021, 154, 108105. | 0.9 | 15 |
| 46 | Solar Photovoltaic Panels with Finned Phase Change Material Heat Sinks. Energies, 2020, 13, 2558. | 1.6 | 14 |
| 47 | Experiments with an In-Vitro Robot Brain. Lecture Notes in Computer Science, 2011, , 1-15. | 1.0 | 14 |
| 48 | Wiener-System Subspace Identification for Mobile Wireless mm-Wave Networks. IEEE Transactions on Vehicular Technology, 2007, 56, 1935-1948. | 3.9 | 13 |
| 49 | On improving the performance in robust controllers for robot manipulators with parametric disturbances. Control Engineering Practice, 2007, 15, 557-566. | 3.2 | 13 |
| 50 | Multiscale Evolving Complex Network Model of Functional Connectivity in Neuronal Cultures. IEEE Transactions on Biomedical Engineering, 2012, 59, 30-34. | 2.5 | 12 |
| 51 | Demand Response Model Development for Smart Households Using Time of Use Tariffs and Optimal Controlâ€"The Isle of Wight Energy Autonomous Community Case Study. Energies, 2020, 13, 541. | 1.6 | 11 |
| 52 | Efficient fuzzy control of a rotary inverted pendulum based on LQR mapping. , 2006, , . | | 10 |
| 53 | Nonlinear Model Predictive Control Using Feedback Linearization for a Pressurized Water Nuclear Power Plant. IEEE Access, 2022, 10, 16544-16555. | 2.6 | 10 |
| 54 | Practical Direct Collocation Methods for Computational Optimal Control. Springer Optimization and Its Applications, 2012, , 33-60. | 0.6 | 9 |

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|---|---------|----|-----------|
| 55 | Space heating and hot water demand analysis of dwellings connected to district heating scheme in UK. Journal of Central South University, 2012, 19, 1629-1638. | 1.2 | 9 |
| 56 | Ratio Selection for Classification Models. Data Mining and Knowledge Discovery, 2004, 8, 151-170. | 2.4 | 8 |
| 57 | Analysis of Transient Interactions between a PWR Nuclear Power Plant and a Faulted Electricity Grid. Energies, 2021, 14, 1573. | 1.6 | 8 |
| 58 | MIMO Wiener Model Identification for Large Scale Fading of Wireless Mobile Communications Links. IEEE Communications Letters, 2007, 11, 513-515. | 2.5 | 7 |
| 59 | Modeling Power Flow in a Hoist Motor of a Rubber-Tired Gantry Crane. IEEE Transactions on Industry Applications, 2016, 52, 2088-2094. | 3.3 | 7 |
| 60 | Nonlinear Predictive Control Using Dynamic Integrated System Optimisation and Parameter Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 795-800. | 0.4 | 6 |
| 61 | Energy reduction on eRTG. , 2016, , . | | 6 |
| 62 | Net energy savings in Rubber Tyred Gantry cranes equipped with an active front end. , 2016, , . | | 6 |
| 63 | A General Framework for Multi-Criteria Based Feasibility Studies for Solar Energy Projects: Application to a Real-World Solar Farm. Energies, 2021, 14, 2204. | 1.6 | 6 |
| 64 | Robust Subspace Predictive Control based on Integral Sliding Mode for a Pressurized Water Reactor. , 2020, , . | | 6 |
| 65 | Multiple-Model Fault Tolerant Control of Terminal Units of HVAC Systems. , 2006, , . | | 5 |
| 66 | High signal to noise ratio THz spectroscopy with ASOPS and signal processing schemes for mapping and controlling molecular and bulk relaxation processes. Journal of Physics: Conference Series, 2009, 183, 012003. | 0.3 | 5 |
| 67 | Modelling and simulating the operation of RTG container cranes. , 2012, , . | | 5 |
| 68 | Sparse density estimator with tunable kernels. Neurocomputing, 2016, 173, 1976-1982. | 3.5 | 5 |
| 69 | Novel thermal conductivity enhancing containers for performance enhancement of solar photovoltaics system integrated with phase change material. Energy, 2022, 243, 122923. | 4.5 | 5 |
| 70 | Dynamic Neural Network-based System Identification of a Pressurized Water Reactor. , 2020, , . | | 5 |
| 71 | Optimal control of nonlinear systems represented by differential algebraic equations. , 2000, , . | | 4 |
| 72 | Predictive control using feedback linearization based on dynamic neural models. , 2007, , . | | 4 |

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|----|---------|-----|-----------|
| 73 | Bio-inspired Autonomous Visual Vertical and Horizontal Control of a Quadrotor Unmanned Aerial Vehicle. Electronics (Switzerland), 2019, 8, 184. | 1.8 | 4 |
| 74 | Estimation of Visual Motion Parameters Used for Bio-inspired Navigation. Journal of Image and Graphics(United Kingdom), 2013, 1, 120-124. | 3.1 | 4 |
| 75 | Optimization of a novel Hybrid Wind Bio Battery Solar Photovoltaic System Integrated with Phase Change Material. Energies, 2021, 14, 6373. | 1.6 | 4 |
| 76 | Variable selection for financial distress classification using a genetic algorithm. , 0, , . | | 3 |
| 77 | A NOVEL DYNAMIC NEURAL NETWORK STRUCTURE FOR NONLINEAR SYSTEM IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 348-353. | 0.4 | 3 |
| 78 | New opportunities for secure communication networks using shaped femtosecond laser pulses inducing filamentation processes in the atmosphere. Journal of Physics: Conference Series, 2013, 472, 012009. | 0.3 | 3 |
| 79 | Fins integrated phase change material for solar photovoltaic for South East United Kingdom. AIP Conference Proceedings, 2019, , . | 0.3 | 3 |
| 80 | Gain Scheduled Subspace Predictive Control of a Pressurized Water-type Nuclear Reactor. , 2020, , . | | 3 |
| 81 | Estimation of Radioactivity Release Activity Using Non-Linear Kalman Filter-Based Estimation Techniques. Energies, 2020, 13, 3985. | 1.6 | 3 |
| 82 | Three dimensional analysis of dye-sensitized, perovskite and monocrystalline silicon solar photovoltaic cells under non uniform solar flux. Applied Thermal Engineering, 2021, 182, 115613. | 3.0 | 3 |
| 83 | An arbitrary-order continuous sliding mode control technique for nonlinear PWR-type nuclear power plants. Progress in Nuclear Energy, 2022, 150, 104309. | 1.3 | 3 |
| 84 | Efficient Control of Robot Manipulators with Model Disturbances. , 2006, , . | | 2 |
| 85 | Search space pruning and global optimization of multiple gravity assist trajectories with deep space manoeuvres. , 2007, , . | | 2 |
| 86 | INTEGRATING THE UTKIN OBSERVER WITH THE UNSCENTED KALMAN FILTER. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12534-12539. | 0.4 | 2 |
| 87 | Investigation of spatio-temporal dependencies in neuronal functional connectivity. , 2010, , . | | 2 |
| 88 | Channel equalization for indoor lighting communications networks. Journal of Physics: Conference Series, 2013, 450, 012051. | 0.3 | 2 |
| 89 | CHP Toolkit: Case Study of LAIe Sensitivity to Discontinuity of Canopy Cover in Fruit Plantations. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 5071-5080. | 2.7 | 2 |
| 90 | Constrained pre-equalization accounting for multi-path fading emulated using large RC networks: applications to wireless and photonics communications. Optical and Quantum Electronics, 2016, 48, 1. | 1.5 | 2 |

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|---|---------|-----|-----------|
| 91 | LMI Based Robust PID Controller Design for PWR with Bounded Uncertainty using Interval Approach. , 2019, , . | | 2 |
| 92 | Dynamic data reconciliation for sequential modular simulators. , 1998, , . | | 2 |
| 93 | Disturbance Observer-based Subspace Predictive Control of a Pressurized Water-type Nuclear Reactor. , 2020, , . | | 2 |
| 94 | ANN Based Sensor and Actuator Fault Detection in Nuclear Reactors. , 2020, , . | | 2 |
| 95 | Optimal Control of Non-Linear Hybrid Systems Under Model-Reality Differences - Decomposition and Hierarchical Structure. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 169-174. | 0.4 | 1 |
| 96 | Steady-State Optimisation Using Data Reconciliation and Bias Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 283-288. | 0.4 | 1 |
| 97 | Hierarchical Algorithm for Optimal Control of Nonlinear Differential Algebraic Equation Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 271-276. | 0.4 | 1 |
| 98 | LINEAR-WAVELET MODELS FOR SYSTEM IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 217-222. | 0.4 | 1 |
| 99 | Preliminary results from a real time control system using optical information. , 0, , . | | 1 |
| 100 | Actuator placement in the multi-link inverted pendulum. , 2010, , . | | 1 |
| 101 | Adaptive recursive control of a soil testing load frame. , 2011, , . | | 1 |
| 102 | Real-time application of a constrained predictive controller based on dynamic neural networks with feedback linearization. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 6727-6732. | 0.4 | 1 |
| 103 | A method to assess individual research outputs. International Journal of Modelling, Identification and Control, 2014, 21, 1. | 0.2 | 1 |
| 104 | Intelligent Control Approaches for Modeling and Control of Complex Systems. Complexity, 2018, 2018, 1-2. | 0.9 | 1 |
| 105 | Adapting futures scenarios to study UK household energy demand. Proceedings of the Institution of Civil Engineers: Engineering Sustainability, 2020, 173, 241-256. | 0.4 | 1 |
| 106 | Limit equation of fuzzy relation and its application. , 0, , . | | 0 |
| 107 | A Hierarchical Extension of Dynamic Integrated System Optimisation and Parameter Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 191-196. | 0.4 | 0 |
| 108 | Integrated Predictive Control and Economic Optimisation: Decomposition and Hierarchical Structure. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 463-468. | 0.4 | 0 |

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|---|---------|----|-----------|
| 109 | Wavelet filtered modelling applied to measurements of a waveguide's THz time domain response. , 0, , . | | 0 |
| 110 | Nonlinear Identification of a Two Link Robotic System Using Dynamic Neural Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 363-368. | 0.4 | 0 |
| 111 | Stable Nonlinear Receding Horizon Regulator Using RBF Neural Network Models. , 2006, , . | | 0 |
| 112 | Hybrid fault detection and isolation in an heater bank of an HVAC system. , 2007, , . | | 0 |
| 113 | Optimising the feedback loop of a millimetre-wave absolute photoacoustic power meter using $H$-infinity control synthesis. Journal of Physics: Conference Series, 2009, 178, 012042. | 0.3 | 0 |
| 114 | Um tutorial sobre mÃ©todos pseudo-espectrais para controle Ã³timo computacional. Controle and Automacao, 2010, 21, 224-244. | 0.2 | 0 |
| 115 | Robust H$^{\infty}$ optimal controller designs for feedback substitution schemes using LSDP and MOGA. , 2010, , . | | 0 |
| 116 | Application of Poisson-based hidden Markov models to in vitro neuronal data. , 2010, , . | | 0 |
| 117 | A robust controller design method for feedback substitution schemes using genetic algorithms. Journal of Physics: Conference Series, 2011, 307, 012040. | 0.3 | 0 |
| 118 | Spatio-temporal dependencies in functional connectivity in rodent cortical cultures. Paladyn, 2011, 2, . | 1.9 | 0 |
| 119 | Choosing the most suitable analogue redesign method for forward-type digital power converters. , 2012, , . | | 0 |
| 120 | Systematic selection of analogue redesign method for forward-type digital power converters. International Journal of Electronics, 2014, 101, 667-680. | 0.9 | 0 |
| 121 | Applying robust control theory to solve problems in bio-medical sciences: study of an apoptotic model. Journal of Physics: Conference Series, 2014, 490, 012140. | 0.3 | 0 |
| 122 | Modeling, Simulation, and Control of Pedestrian Avoidance Maneuver for an Urban Electric Vehicle. , 2015, , . | | 0 |
| 123 | Modelling power flow in a hoist motor of a Rubber Tyred Gantry crane. , 2015, , . | | 0 |
| 124 | Estimation of Radionuclide Release Activity Using an Unscented Kalman Filter. , 2019, , . | | 0 |
| 125 | Stable Nonlinear Receding Horizon Regulator Using RBF Neural Network Models. , 2006, , . | | 0 |
| 126 | A Wavelet Network Classifier Applied to Financial Distress Prediction. , 0, , . | | 0 |

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|---|---------|----|-----------|
| 127 | Interval Approach for Stability Analysis of a Pressurized Water Reactor with Parametric Uncertainty using LMI based H-infinity Controller. , 2020, , . | | 0 |
| 128 | Modeling, Simulation and Control of Pedestrian Avoidance Maneuver for an Urban Electric Vehicle. International Journal of Simulation: Systems, Science and Technology, 0, , . | 0.0 | 0 |