

# Ignacio Pe  arrocha-Al  s

## List of Publications by Year in descending order

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Version: 2024-02-01

76  
papers

271  
citations

1163117  
8  
h-index

1058476  
14  
g-index

76  
all docs

76  
docs citations

76  
times ranked

234  
citing authors

| #  | ARTICLE                                                                                                                                                                                                   | IF   | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1  | A new approach to optimize the energy efficiency of CO2 transcritical refrigeration plants. Applied Thermal Engineering, 2014, 67, 137-146.                                                               | 6.0  | 43        |
| 2  | State estimator for multisensor systems with irregular sampling and time-varying delays. International Journal of Systems Science, 2012, 43, 1441-1453.                                                   | 5.5  | 21        |
| 3  | Estimation in multisensor networked systems with scarce measurements and time varying delays. Systems and Control Letters, 2012, 61, 555-562.                                                             | 2.3  | 18        |
| 4  | Design of robust output predictors under scarce measurements with time-varying delays. Automatica, 2007, 43, 281-289.                                                                                     | 5.0  | 17        |
| 5  | H $\infty$ Observer Design for a Class of Nonlinear Discrete Systems. European Journal of Control, 2009, 15, 157-165.                                                                                     | 2.6  | 12        |
| 6  | A simple rule for tuning Event-Based PID controllers with Symmetric Send-On-Delta sampling strategy. , 2014, , .                                                                                          |      | 9         |
| 7  | Performance Tradeoffs for Networked Jump Observer-Based Fault Diagnosis. IEEE Transactions on Signal Processing, 2015, 63, 2692-2703.                                                                     | 5.3  | 9         |
| 8  | Co-design of jump estimators and transmission policies for wireless multi-hop networks with fading channels. Automatica, 2017, 81, 68-74.                                                                 | 5.0  | 9         |
| 9  | Multiobjective performance-based designs in fault estimation and isolation for discrete-time systems and its application to wind turbines. International Journal of Systems Science, 2019, 50, 1252-1274. | 5.5  | 9         |
| 10 | Robust estimation and diagnosis of wind turbine pitch misalignments at a wind farm level. Renewable Energy, 2020, 146, 1746-1765.                                                                         | 8.9  | 8         |
| 11 | Model-based tool condition prognosis using power consumption and scarce surface roughness measurements. Journal of Manufacturing Systems, 2021, 61, 311-325.                                              | 13.9 | 8         |
| 12 | Networked gain-scheduled fault diagnosis under control input dropouts without data delivery acknowledgment. International Journal of Robust and Nonlinear Control, 2016, 26, 737-758.                     | 3.7  | 7         |
| 13 | Jump state estimation with multiple sensors with packet dropping and delaying channels. International Journal of Systems Science, 2016, 47, 982-993.                                                      | 5.5  | 7         |
| 14 | Estimation of Nonstationary Process Variance in Multistage Manufacturing Processes Using a Model-Based Observer. IEEE Transactions on Automation Science and Engineering, 2019, 16, 741-754.              | 5.2  | 7         |
| 15 | Control of a ceramic tiles cooling process based on water spraying. Journal of Process Control, 2009, 19, 1073-1081.                                                                                      | 3.3  | 5         |
| 16 | Event-based PI controller with adaptive thresholds. , 2012, , .                                                                                                                                           |      | 5         |
| 17 | Multivariable phase-locked loop free strategy for power control of grid-connected voltage source converters. Electric Power Systems Research, 2022, 210, 108084.                                          | 3.6  | 5         |
| 18 | Inferential networked control with accessibility constraints in both the sensor and actuator channels. International Journal of Systems Science, 2014, 45, 1180-1195.                                     | 5.5  | 4         |

| #  | ARTICLE                                                                                                                                                                                     | IF  | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Synthesis of nonlinear controller for wind turbines stability when providing grid support. International Journal of Robust and Nonlinear Control, 2014, 24, 2261-2284.                      | 3.7 | 4         |
| 20 | Optimal inspection/actuator placement for robust dimensional compensation in multistage manufacturing processes. , 2017, , 31-50.                                                           |     | 4         |
| 21 | Trade-offs on fault estimation via proportional multiple integral and multiple resonant observers for discrete-time systems. IET Control Theory and Applications, 2019, 13, 659-671.        | 2.1 | 4         |
| 22 | A simple procedure for fault detectors design in SISO systems. Control Engineering Practice, 2020, 96, 104302.                                                                              | 5.5 | 4         |
| 23 | A new method for experimental tuning of PI controllers based on the step response. ISA Transactions, 2022, 128, 329-342.                                                                    | 5.7 | 4         |
| 24 | Cooperative Project-based Learning for Machine Design in the Industrial Engineering Program: Methodologies and Experiences. , 0, , .                                                        |     | 4         |
| 25 | Closed loop analysis of control systems under scarce measurements. , 0, , .                                                                                                                 |     | 3         |
| 26 | Modeling and control of ceramic tile glazing using dimensional analysis. , 2009, , .                                                                                                        |     | 3         |
| 27 | A polynomial approach for observer design in networked control systems with unknown packet dropout rate. , 2013, , .                                                                        |     | 3         |
| 28 | Performance vs complexity trade-offs for Markovian networked jump estimators. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7412-7417.             | 0.4 | 3         |
| 29 | Markovian jump system approach for the estimation and adaptive diagnosis of decreased power generation in wind farms. IET Control Theory and Applications, 2019, 13, 3006-3018.             | 2.1 | 3         |
| 30 | Economic model predictive control of wastewater treatment plants based on BSM1 using linear prediction models. , 2019, , .                                                                  |     | 3         |
| 31 | Virtual Sensors Under Delayed Scarce Measurements. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 85-90.                                            | 0.4 | 2         |
| 32 | Fault Detection in the Blade and Pitch System of a Wind Turbine with $H_2$ PI Observers. Journal of Physics: Conference Series, 2015, 659, 012033.                                          | 0.4 | 2         |
| 33 | Performance-based design of PI observers for fault diagnosis in LTI systems under Gaussian noises. , 2016, , .                                                                              |     | 2         |
| 34 | Co-design of $H_\infty$ jump observers for event-based measurements over networks. International Journal of Systems Science, 2016, 47, 283-299.                                             | 5.5 | 2         |
| 35 | Actuator Fault Tolerant Control Proposal for PI Controlled SISO Systems. IFAC-PapersOnLine, 2018, 51, 680-687.                                                                              | 0.9 | 2         |
| 36 | A PID tuning approach to find the optimal compromise among robustness, performance and control effort. Implementation in a free software tool. International Journal of Control, 0, , 1-27. | 1.9 | 2         |

| #  | ARTICLE                                                                                                                                                                                   | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | A Sequential Inspection Procedure for Fault Detection in Multistage Manufacturing Processes. Sensors, 2021, 21, 7524.                                                                     | 3.8 | 2         |
| 38 | Initializing Parameter Estimation Algorithms Under Scarce Measurements. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 1897-1902.                 | 0.4 | 1         |
| 39 | OUTPUT PREDICTION UNDER RANDOM MEASUREMENTS. AN LMI APPROACH. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 303-308.                             | 0.4 | 1         |
| 40 | Design of Low Cost Virtual Sensors. , 2006, , .                                                                                                                                           |     | 1         |
| 41 | Fault detection and estimation in systems with scarce measurement. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 113-118.                        | 0.4 | 1         |
| 42 | Adaptive extended Kalman filter for recursive identification under missing data. , 2010, , .                                                                                              |     | 1         |
| 43 | Power analysis in wind generation with doubly fed induction generator with polynomial optimization tools. , 2012, , .                                                                     |     | 1         |
| 44 | Banks of estimators and decision mechanisms for pitch actuator and sensor FE in wind turbines. IFAC-PapersOnLine, 2018, 51, 1141-1148.                                                    | 0.9 | 1         |
| 45 | Model-based observer proposal for surface roughness monitoring. Procedia Manufacturing, 2019, 41, 618-625.                                                                                | 1.9 | 1         |
| 46 | Modelling and Optimization of the Operation of a Multiple Tank Water Pumping System. , 2017, , .                                                                                          |     | 1         |
| 47 | State Estimation and Send on Delta Strategy Codesign for Networked Control Systems. , 2012, , .                                                                                           |     | 1         |
| 48 | Ammonium Sensor Fault Detection in Wastewater Treatment Plants. , 2020, , .                                                                                                               |     | 1         |
| 49 | Performance, robustness and noise amplification trade-offs in Disturbance Observer Control design. European Journal of Control, 2022, 65, 100630.                                         | 2.6 | 1         |
| 50 | Inferential networked control with variable accessibility constraints. , 2009, , .                                                                                                        |     | 0         |
| 51 | Control system and fault detection algorithm for a restored teeth fatigue assay machine. , 2009, , .                                                                                      |     | 0         |
| 52 | State observer design for networked control systems with unknown disturbances. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 8805-8810.          | 0.4 | 0         |
| 53 | Guaranteed Performance Level Iterative Control with Input Constraints: an LMI Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 3451-3456. | 0.4 | 0         |
| 54 | Virtual torque control in wind generation with doubly fed induction generator. , 2012, , .                                                                                                |     | 0         |

| #  | ARTICLE                                                                                                                                                                                                                                                                                           | IF  | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Codesign strategy of inferential controllers for wireless sensor networks. , 2012, , .                                                                                                                                                                                                            |     | 0         |
| 56 | Experimental test of power saving strategies in a networked based control over a wireless platform. , 2013, , .                                                                                                                                                                                   |     | 0         |
| 57 | A jump filter for uncertain dynamic systems with dropouts. , 2014, , .                                                                                                                                                                                                                            |     | 0         |
| 58 | A gain-scheduled observer under transmissions without delivery acknowledgment. Journal of Physics: Conference Series, 2015, 659, 012020.                                                                                                                                                          | 0.4 | 0         |
| 59 | Observer-based controllers with data dropout rate adaptation. International Journal of Robust and Nonlinear Control, 2017, 27, 3904-3920.                                                                                                                                                         | 3.7 | 0         |
| 60 | Comparison of leakage estimation strategies in a real industrial pipe network * *This work has been supported by grant FPU14/01592 from MEC and by projects P11B2015-42 from Universitat Jaume I de Castell  and MINECO project number TEC2015-69155-R. IFAC-PapersOnLine, 2017, 50, 13550-13555. | 0.9 | 0         |
| 61 | Alternative control approach for the offshore grid of wind power plants. , 2019, , .                                                                                                                                                                                                              |     | 0         |
| 62 | Modelling and Minimum Cost Control of Multiple Tank Pumping Systems. Lecture Notes in Electrical Engineering, 2020, , 252-271.                                                                                                                                                                    | 0.4 | 0         |
| 63 | Extension of the Stream-of-Variation Model for General-Purpose Workholding Devices: Vices and Three-Jaw Chucks. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2216-2228.                                                                                                     | 5.2 | 0         |
| 64 | Problemes d'electr nica anal gica. , 0, , .                                                                                                                                                                                                                                                       |     | 0         |
| 65 | PROMOTING SELF-STUDY IN CONTROL SYSTEMS THROUGH AUTO-ASSESSMENT TOOLS. INTED Proceedings, 2016, , .                                                                                                                                                                                               | 0.0 | 0         |
| 66 | MOODLE QUESTIONNAIRES AS A SELF-ASSESSMENT TOOL FOR MEETING THE CHALLENGES OF DIVERSITY IN STUDENTS' BACKGROUND KNOWLEDGE. , 2018, , .                                                                                                                                                            |     | 0         |
| 67 | Modelado y optimizaci n de la operaci n de un sistema de bombeo de m ltiples dep sitos. , 0, , .                                                                                                                                                                                                  |     | 0         |
| 68 | Estimaci n de fugas en un sistema industrial mediante modelado por se ales aditivas. , 0, , .                                                                                                                                                                                                     |     | 0         |
| 69 | Alternativas para el control de la red el ctrica aislada en parques e licos marinos. , 0, , .                                                                                                                                                                                                     |     | 0         |
| 70 | Testing minimum cost strategies of pumping systems with scheduled electric tariffs in a lab scale plant. IFAC-PapersOnLine, 2020, 53, 11583-11588.                                                                                                                                                | 0.9 | 0         |
| 71 | Robust local controllers design for the AC grid voltage control of an offshore wind farm. IFAC-PapersOnLine, 2020, 53, 12751-12756.                                                                                                                                                               | 0.9 | 0         |
| 72 | ADAPTATIONS IN ENGINEERING TEACHING DUE TO COVID-19: A TRANSITION TOWARDS BLENDED LEARNING. , 2021, , .                                                                                                                                                                                           |     | 0         |

| #  | ARTICLE                                                                                                                                     | IF | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|----|-----------|
| 73 | IMPLEMENTATION OF A METHODOLOGY BASED ON AUTOMATIC ASSESSMENT OF PARAMETERIZED PROBLEMS FOR A MORE EFFICIENT LEARNING. , 2020, , .          |    | 0         |
| 74 | Predictores robustos de estructura fija. , 0, , .                                                                                           |    | 0         |
| 75 | Diseño basado en prestaciones de observadores PI para el diagnóstico de fallos en sistemas lineales con perturbaciones gaussianas. , 0, , . |    | 0         |
| 76 | Experiencias de evaluación automatizada en identificación y ajuste de PID. , 0, , .                                                         |    | 0         |