

# Babji Srinivasan

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## LIST OF PUBLICATIONS ( LAST FIVE YEARS)

TITLE	CITED BY	YEAR
Other Sites & Tools		2020
M Kodappully, B Srinivasan, R Srinivasan		
CEP		
Dynamic assessment of control room operator's cognitive workload using Electroencephalography (EEG)		2020
MU Iqbal, B Srinivasan, R Srinivasan		
Computers & Chemical Engineering 141, 106726		
Machine learning approach for blockage detection and localization using pressure transients		2020
S Gurav, P Kumar, G Ramshankar, PK Mohapatra, B Srinivasan		
2020 IEEE International Conference on Computing, Power and Communication ...		
Sensor placement for leak localization in water distribution networks using machine learning		2020
R Madbhavi, A Joshi, S Munikoti, L Das, PK Mohapatra, B Srinivasan		
2020 IEEE International Conference on Computing, Power and Communication ...		
Measuring smart grid resilience: Methods, challenges and opportunities	2	2020
L Das, S Munikoti, B Natarajan, B Srinivasan		
Renewable and Sustainable Energy Reviews 130, 109918		
La promoción de la inclusión a través de la protección social	1	2020
D Bas		
Inclusión y cohesión social en el marco de la Agenda 2030 para el Desarrollo ...		
Process control fundamentals: analysis, design, assessment, and diagnosis		2020
R Rengaswamy, B Srinivasan, NP Bhatt		
CRC Press		
IPMS for load sharing, monitoring and diagnosis of electrical loads in AFVs		2020
D Agarwal, S Ramu, M Nagarajan, P Rajappan, J Chinnachamy, ...		

TITLE	CITED BY	YEAR
2020 7th International Conference on Signal Processing and Integrated ...		
<b>Tensor completion based state estimation in distribution systems</b>	2	2020
R Madbhavi, HS Karimi, B Natarajan, B Srinivasan		
2020 IEEE Power & Energy Society Innovative Smart Grid Technologies ...		
<b>Fault diagnosis and degradation analysis of pm dc motors using fea based models</b>	1	2020
D Agarwal, M Kumari, B Srinivasan, P Rajappan, J Chinnachamy		
2020 IEEE International Conference on Power Electronics, Smart Grid and ...		
<b>Enhanced tensor completion based approaches for state estimation in distribution systems</b>		2020
R Madbhavi, B Natarajan, B Srinivasan		
Institute of Electrical and Electronics Engineers		
<b>Development of operational resilience metrics for water distribution systems</b>		2020
J Mankad, D Borse, L Das, N Padhiyar, B Srinivasan		
Resilience, Response, and Risk in Water Systems, 19-41		
<b>NeuralCompression: A machine learning approach to compress high frequency measurements in smart grid</b>	1	2020
L Das, D Garg, B Srinivasan		
Applied Energy 257, 113966		
<b>Recent developments towards enhancing process safety: Inherent safety and cognitive engineering</b>	6	2019
R Srinivasan, B Srinivasan, MU Iqbal, A Nemet, Z Kravanja		
Computers & Chemical Engineering 128, 364-383		
<b>On developing a framework for detection of oscillations in data</b>	4	2019
MF Ullah, L Das, S Parmar, R Rengaswamy, B Srinivasan		
ISA transactions 89, 96-112		
<b>Random forest-based robust classification for lithographic hotspot detection</b>		2019
R Dawar, S Barai, P Kumar, B Srinivasan, NR Mohapatra		
Journal of Micro/Nanolithography, MEMS, and MOEMS 18 (2), 023501		

TITLE	CITED BY	YEAR
<p><b>A practical approach to improve alarm system performance: Application to power plant</b></p> <p>J Sompura, A Joshi, B Srinivasan, R Srinivasan</p> <p>Chinese Journal of Chemical Engineering 27 (5), 1094-1102</p>	3	2019
<p><b>Fault detection and isolation in electrical machines using deep neural networks</b></p> <p>M Sai, P Upadhyay, B Srinivasan</p> <p>Defence Science Journal 69 (3), 249</p>		2019
<p><b>Frequency-induced morphology alterations in microconfined biological cells</b></p> <p>H Banerjee, B Roy, K Chaudhury, B Srinivasan, S Chakraborty, H Ren</p> <p>Medical &amp; biological engineering &amp; computing 57 (4), 819-835</p>	2	2019
<p><b>Effect of transformation in compressed sensing of smart grid data</b></p> <p>A Joshi, L Das, B Natarajan, B Srinivasan</p> <p>2019 IEEE PES GTD Grand International Conference and Exposition Asia (GTD ...</p>	2	2019
<p><b>Data-Driven Approaches for Diagnosis of Incipient Faults in DC Motors</b></p> <p>S Munikoti, L Das, B Natarajan, B Srinivasan</p> <p>IEEE Transactions on Industrial Informatics 15 (9), 5299-5308</p>	4	2019
<p><b>Electroencephalogram based biomarkers for tracking the Cognitive workload of operators in process industries</b></p> <p>MU Iqbal, B Srinivasan, R Srinivasan</p> <p>Computer Aided Chemical Engineering 46, 1393-1398</p>		2019
<p><b>Data driven approaches for diagnosis of incipient faults in DC motors</b></p> <p>M Sai, L Das, B Natarajan, B Srinivasan</p> <p>Institute of Electrical and Electronics Engineers</p>		2019
<p><b>A segmentation approach for oscillation characterization</b></p> <p>MF Ullah, L Das, S Parmar, B Srinivasan, R Rengaswamy, ...</p>		2018
<p><b>Sample plan selection techniques for lithography process model building</b></p> <p>P Kumar, B Srinivasan, NR Mohapatra</p> <p>Journal of Micro/Nanolithography, MEMS, and MOEMS 17 (4), 043501</p>		2018

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<p><b>A novel approach for benchmarking and assessing the performance of state estimators</b></p> <p>L Das, G Kumar, R Rengaswamy, B Srinivasan</p> <p>ISA transactions 80, 137-145</p>		2018
<p><b>A framework for efficient information aggregation in smart grid</b></p> <p>A Joshi, L Das, B Natarajan, B Srinivasan</p> <p>IEEE Transactions on Industrial Informatics 15 (4), 2233-2243</p>	5	2018
<p><b>Multiple stages of regression to improve accuracy in calibrated lithography process models</b></p> <p>P Kumar, AE Rosenbluth, RM Pusuluri, R Viswanathan, B Srinivasan, ...</p> <p>Journal of Micro/Nanolithography, MEMS, and MOEMS 17 (2), 023503</p>	2	2018
<p><b>Toward preventing accidents in process industries by inferring the cognitive state of control room operators through eye tracking</b></p> <p>L Das, MU Iqbal, P Bhavsar, B Srinivasan, R Srinivasan</p> <p>ACS Sustainable Chemistry &amp; Engineering 6 (2), 2517-2528</p>	3	2018
<p><b>An overview of system input &amp; structural parameter's influence on optoelectronic properties in AZO thin films</b></p> <p>P Rawat, B Srinivasan, E Panda</p>		2018
<p><b>A practical approach to improve the performance of alarm systems in industries: application to combined-cycle power plant</b></p> <p>A Joshi, J Sompura, B Srinivasan, R Srinivasan</p> <p>Elsevier</p>		2018
<p><b>Eye tracking as a tool to enhance operator learning in safety critical domains</b></p> <p>P Bhavsar, B Srinivasan, R Srinivasan</p> <p>Computer Aided Chemical Engineering 44, 2347-2352</p>		2018
<p><b>Process fault detection in heat recovery steam generator using an Artificial Neural Network simplification of a dynamic first principles model</b></p> <p>P Patil, B Srinivasan, R Srinivasan</p> <p>Computer Aided Chemical Engineering 44, 2065-2070</p>	1	2018
<p><b>Towards obviating human errors in real-time through eye tracking</b></p>	3	2018

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MU Iqbal, B Srinivasan, R Srinivasan Computer Aided Chemical Engineering 43, 1189-1194		
Simulation and analysis of Indian residential electricity consumption using agent-based models	1	2018
S Dhar, B Srinivasan, R Srinivasan Computer Aided Chemical Engineering 43, 205-210		
Enhancement of energy efficiency at an Indian milk processing plant using exergy analysis	4	2018
B Srinivasan, J Pal, R Srinivasan Sustainable Energy Technology and Policies, 425-450		
Non-intrusive load monitoring of residential electricity sector using factorial hidden markov mode		2017
N Patel, B Srinivasan, R Srinivasan		
Quantifying situation awareness of control room operators using eye-gaze behavior	16	2017
P Bhavsar, B Srinivasan, R Srinivasan Computers & chemical engineering 106, 191-201		
How Does a Control Room Operator Identify the Process? Insights Using a Cognitive Engineering Approach		2017
L Das, B Srinivasan, R Srinivasan 2017 AIChE Annual Meeting		
A novel approach to evaluate state estimation approaches for anaerobic digester units under modeling uncertainties: Application to an industrial dairy unit	2	2017
L Das, G Kumar, MD Rani, B Srinivasan Journal of environmental chemical engineering 5 (4), 4004-4013		
Data mining and control loop performance assessment: The multivariate case	8	2017
L Das, R Rengaswamy, B Srinivasan AIChE Journal 63 (8), 3311-3328		
Fault Diagnosis of Anaerobic Digester System Using Nonlinear State Estimator: Application to India's Largest Dairy Unit		2017

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MD Rani, L Das, B Srinivasan Frontiers International Conference on Wastewater Treatment and Modelling ...		
<b>Study of water reuse opportunities in a large-scale milk processing plant through process integration</b>	19	2017
E Buabeng-Baidoo, N Mafukidze, J Pal, S Tiwari, B Srinivasan, T Majazi, ... Chemical Engineering Research and Design 121, 81-91		
<b>Intelligent power management system with fault detection capabilities for armored fighting vehicles</b>		2017
B Srinivasan Indian Institute of Technology Gandhinagar		
<b>Cognitive behavior based framework for operator learning: knowledge and capability assessment through eye tracking</b>		2017
L Das, B Srinivasan, R Srinivasan Computer Aided Chemical Engineering 40, 2977-2982		
<b>Lessons learnt from alarm management in a combined-cycle gas turbine power plant</b>		2017
J Sompura, P Shankar, S Gamit, B Srinivasan, R Srinivasan Computer Aided Chemical Engineering 40, 2461-2466		
<b>Water conservation, re-use and challenges: a case study performed at Amul dairy</b>	1	2017
S Tiwari, B Srinivasan CRC Press		
<b>A multivariate data driven approach for modelling the cognitive behaviour of control room operator using eye tracking</b>		2016
PK Bhavsar, B Srinivasan, R Srinivasan		
<b>Simulation and analysis of power systems using non-intrusive appliance load monitoring</b>		2016
N Patel, B Srinivasan, R Srinivasan		
<b>A critical review of monitoring approaches in anaerobic and aerobic systems: application to anaerobic system in India's largest dairy company</b>		2016
DM Rania, S Tiwaria, A Talatib, B Srinivasana		

TITLE	CITED BY	YEAR
<p><b>On the detection of valve nonlinearities in otherwise linear closed-loop systems</b></p> <p>T Spinner, B Srinivasan, R Rengaswamy</p> <p>IEEE Transactions on Automatic Control 62 (2), 955-960</p>	1	2016
<p><b>Towards predicting human error: Eye gaze analysis for identification of cognitive steps performed by control room operators</b></p> <p>M Kodappully, B Srinivasan, R Srinivasan</p> <p>Journal of Loss Prevention in the Process Industries 42, 35-46</p>	19	2016
<p><b>Cognitive engineering for process safety: effective training for process operators using eye gaze patterns</b></p> <p>K Madhu, B Srinivasan, R Srinivasan</p> <p>European Symposium on Computer Aided Process Engineering</p>		2016
<p><b>Exploring water reuse opportunities in a large-scale milk processing plant through superstructure optimization</b></p> <p>E Buabeng-Baidooa, N Mafukidzea, S Tiwari, B Srinivasan, T Majozia, ...</p> <p>European Symposium on Computer Aided Process Engineering</p>		2016
<p><b>Optimal back-off point determination and controller weight selection for multivariate systems under finite-horizon control</b></p> <p>T Spinner, B Srinivasan, R Rengaswamy</p> <p>Journal of Process Control 40, 134-145</p>	3	2016
<p><b>Pupillometry based real-time monitoring of operator's cognitive workload to prevent human error during abnormal situations</b></p> <p>P Bhavsar, B Srinivasan, R Srinivasan</p> <p>Industrial &amp; Engineering Chemistry Research 55 (12), 3372-3382</p>	20	2016
<p><b>Simulation and experimental studies to enhance water reuse and reclamation in India's largest dairy industry</b></p> <p>S Tiwari, CR Behera, B Srinivasan</p> <p>Journal of environmental chemical engineering 4 (1), 605-616</p>	14	2016
<p><b>Eye gaze movement studies of control room operators: A novel approach to improve process safety</b></p> <p>C Sharma, P Bhavsar, B Srinivasan, R Srinivasan</p>	26	2016

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Computers & Chemical Engineering 85, 43-57		
<b>Cognitive Engineering for Process Safety: Effective Training for Process Operators Using Eye Gaze Patterns</b>		2016
M Kodappully, B Srinivasan, R Srinivasan		
Computer Aided Chemical Engineering 38, 2043-2048		
<b>Non-intrusive Appliance Load Monitoring for Electrical Energy Systems Simulation and Analysis—A case study in India</b>	3	2016
N Patel, B Srinivasan, R Srinivasan		
Computer Aided Chemical Engineering 38, 2061-2066		
<b>A novel framework for integrating data mining with control loop performance assessment</b>	9	2016
L Das, B Srinivasan, R Rengaswamy		
AIChE Journal 62 (1), 146-165		
<b>Towards predicting human error: eye gaze analysis for identification of cognitive steps performed by control room operators</b>		2016
K Madhu, B Srinivasan, R Srinivasan		
Elsevier		
<b>Lithography process model building using locally linear embedding</b>	2	2015
P Kumar, AE Rosenbluth, B Srinivasan, R Viswanathan, NR Mohapatra		
2015 International Conference on Simulation of Semiconductor Processes and ...		
<b>Multivariate control loop performance assessment with Hurst exponent and Mahalanobis distance</b>	13	2015
L Das, B Srinivasan, R Rengaswamy		
IEEE Transactions on Control Systems Technology 24 (3), 1067-1074		
<b>A new measure to improve the reliability of stiction detection techniques</b>	3	2015
B Srinivasan, T Spinner, R Rengaswamy		
Industrial & Engineering Chemistry Research 54 (30), 7476-7488		
<b>Selective transformations between nanoparticle superlattices via the reprogramming of DNA-mediated interactions</b>	94	2015



TITLE	CITED BY	YEAR
Y Zhang, S Pal, B Srinivasan, T Vo, S Kumar, O Gang Nature materials 14 (8), 840-847		
<b>On-line performance monitoring of PEM fuel cell using a fast EIS approach</b>	4	2015
L Das, B Srinivasan, R Rengaswamy 2015 American Control Conference (ACC), 1611-1616		
<b>Model based predictive control for energy efficient biological nitrification process with minimal nitrous oxide production</b>	6	2015
CR Behera, B Srinivasan, K Chandran, V Venkatasubramanian Chemical Engineering Journal 268, 300-310		
<b>Fast and accurate lithography simulation using cluster analysis in resist model building</b>	11	2015
P Kumar, B Srinivasan, NR Mohapatra Journal of Micro/Nanolithography, MEMS, and MOEMS 14 (2), 023506		
<b>Fiber interrogator for Bragg grating sensors based on cavity ring-down technique</b>	1	2015
S Chopra, L Das, B Srinivasan SPIE Digital Library		
<b>Performance monitoring of control room operators through eye gaze analysis</b>		2015
PK Bhavsar, S Parmar, B Srinivasan, R Srinivasan AIChE		
<b>Particle self-assembly in lyotropic hexagonal liquid crystals: Effect of particle loading, shape and phase transition kinetics</b>		2015
P Thareja, SV Kulkarni Carnegie Mellon University		
<b>A novel control algorithm based DSTATCOM for load compensation</b>		2015
R Sreejith, NM Pindoriya, B Srinivasan Journal of Physics: Conference Series 659 (1), 012031		
<b>Event driven multivariate analysis of eye gaze data for behavior analysis in process operations</b>		2015
K Madhu, B Srinivasan, R Srinivasan		

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AICHE		
On-line performance monitoring and control of the PEM fuel cell using a fast EIS approach		2015
L Das, B Srinivasan, R Rengaswamy		
American Automatic Control Council		
Structural similarities and differences between smart grids and process industry supply chains: India case study		2015
N Patel, R Abhinav, B Srinivasan, R Srinivasan		
Computer Aided Chemical Engineering 37, 2387-2392		
An integrated approach for oscillation diagnosis in linear closed loop systems	9	2015
B Srinivasan, U Nallasivam, R Rengaswamy		
Chemical Engineering Research and Design 93, 483-495		
Data-based automated diagnosis and iterative retuning of proportional-integral (PI) controllers	23	2014
T Spinner, B Srinivasan, R Rengaswamy		
Control Engineering Practice 29, 23-41		
Data driven approach for performance assessment of linear and nonlinear Kalman filters	7	2014
L Das, B Srinivasan, R Rengaswamy		
2014 American Control Conference, 4127-4132		
Detection of stiction in interacting systems using a hammerstein model approach		2014
R Rengaswamy, B Srinivasan, T Spinner		
ADCONIP 2014		
An approach to identify the cognitive load on the operator using pupillometry information		2014
C Sharma, B Srinivasan, R Srinivasan		
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Cognitive studies in process control using eye gaze tracking information		2014
C Sharma, PK Bhavsar, B Srinivasan, R Srinivasan		
IIT Gandhinagar		

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<p>Towards the development of an operator Cognitive assessment model for process control applications</p> <p>K Madhu, B Srinivasan, R Srinivasan</p> <p>IIT Gandhinagar</p>		2014
<p>Understanding cognitive behavior of process operators during abnormal situations through eye tracker studies</p> <p>C Sharma, PK Bhavsar, B Srinivasan, R Srinivasan</p> <p>AICHE</p>	1	2014
<p>Detection of Stiction in Interacting Systems using a Hammerstein Model Approach</p> <p>T Spinner, B Srinivasan, R Rengaswamy</p> <p>International Symposium on Advanced Control of Chemical Processes</p>	2	2014
<p>Process model accuracy enhancement using cluster based approach</p> <p>P Kumar, S Barai, B Srinivasan, NR Mohapatra</p> <p>Physics of Semiconductor Devices, 33-36</p>		