International Conference

- 1. Pankaj Shivhare, G. Uma, Y. Sujan, **M. Umapathy**, "Sensitivity Improvement of a Silicon Nitride Beam Resonant Pressure Sensor", International Conference on MEMS and Sensors (ICMEMSS 2014) to be held at Indian Institute of Technology Madras, Chennai, December 18-20, 2014. (Accepted).
- Pandiyan.P, G. Uma, M. Umapathy, Y. Sujan, "Design and Simulation of Chevron Type MEMS Digital to Analog Converters", International Conference on MEMS and Sensors (ICMEMSS 2014) to be held at Indian Institute of Technology Madras, Chennai, December 18-20, 2014. (Accepted).
- 3. Pandiyan. P, G. Uma, **M. Umapathy**, K. Suresh, "Sensitivity Improvement of Resonant Sensor With PID Controller", Proceedings of the 2014 IEEE Students Technology Symposium (IEEE TechSym 2014) held at Indian Institute of Technology Kharagpur, Kharagpur, 2014,pp 170-175.
- 4. Pankaj Shivhare, G. Uma, **M. Umapathy**, "A Micro Gripper for High Force Application Using In-Plane Chevron Electrothermal Actuator", Proceedings of International Conference on Microelectronics, Circuits & Systems (Micro-2014), July 11-13, 2014.
- 5. P. Pandiyan, G. Uma, **M. Umapathy**, "Design and simulation of 3-bit MEMS electro thermal compliant actuator based analog to digital converter", Proceedings of 7th International Conference on smart materials, structures and systems(ISSS-2014), Bangalore, July 8-11, 2014.

- 6. Pankaj Shivhare, G. Uma, Y. Sujan, M. Umapathy, "Sensitivity Improvement of a Silicon Nitride Beam Resonant Pressure Sensor", International Conference **MEMS** be on and Sensors (ICMEMSS 2014) to held December 18-20, Technology Indian Institute Madras. Chennai. 2014. **(Accepted).**
- 7. Pandiyan. P, **G. Uma**, M. Umapathy, Y. Sujan, "Design and Simulation of Chevron Type MEMS Digital to Analog Converters", International Conference **MEMS** and Sensors (ICMEMSS 2014) be held on to **Technology** Chennai, Indian Institute Madras, December 18-20, 2014. **(Accepted).**
- 8. Pandiyan. P, **G. Uma**, M. Umapathy, K. Suresh, "Sensitivity Improvement of Resonant Sensor With PID Controller", Proceedings of the 2014 IEEE Students Technology Symposium (IEEE Tech Sym 2014) held at Indian Institute of Technology Kharagpur, Kharagpur, 2014,pp 170-175.
- 9. Pankaj Shivhare, **G. Uma**, M. Umapathy, "A Micro Gripper for High Force Application Using In-Plane Chevron Electrothermal Actuator", Proceedings of International Conference on Microelectronics, Circuits & Systems (Micro-2014), July 11-13, 2014.
- 10. P. Pandiyan, **G. Uma**, M. Umapathy, "Design and simulation of 3-bit MEMS electro thermal compliant actuator based analog to digital converter", Proceedings of 7th International Conference on smart materials, structures and systems(ISSS-2014), Bangalore, July 8-11, 2014.
- 11. M. Jerome Moses and **A. Ramakalyan**, "A Computationally Faster Randomized Algorithm for NP-Hard Controller Design Problem," In Proc. of IEEE International Symposium on Intelligent Informatics [Published in Recent Advances in Intelligent Informatics, Vol. 235 (2014), pp. 411-417, Springer-Verlag] SJCE, Mysore (2013).

- This paper may be accessed on-line at http://link.springer.com/chapter/10.1007%2F978-3-319-01778-5 42
- 12. M. J. Moses, and **R. Ayyagari**, "The Benefits of Noise in Systems and Control." In Proc. of 3rd IEEE Conference on Power, Control, Signals & Computation, Thrissur, India, 2014. http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6887486&queryText%3DThe+benefits+of+randomness+in+systems+and+control
- 13. M. J. Moses, and **R. Ayyagari**, "A Brief Survey of Stochastic Resonance and Its Applications to Control." In Proc. Third International Conference on Advances in Control & Optimization of Dynamical Systems, Kanpur, India, 2014. This paper may be accessed on-line at http://www.ifac-papersonline.net/Detailed/64786.html
- 14. S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Design and control of shape memory alloy actuated grippers', *Proceedings of the 3rd International Conference on <u>Advances in Control and Optimization of Dynamical Systems ACODS 2014, IIT Kanpur*, 13-15 March 2014, 400 407. **IFAC-PapersOnline** ISBN: 978-3-902823-60-1 DOI:10.3182/20140313-3-IN-3024.00166.</u>
- 15. S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Control of Shape Memory Alloy Actuated Gripper using Pulse Width Modulation', *Proceedings of the 3rd International Conference on Advances in Control and Optimization of Dynamical Systems ACODS 2014, IIT Kanpur*, 13-15 March 2014, 408 413. **IFAC-PapersOnline** ISBN: 978-3-902823-60-1 DOI:10.3182/20140313-3-IN-3024.00167.
- 16. D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and K. Dhanalakshmi, 'Prospective self-sensing actuator for stabilised control: beam balancing ball driven by shape memory alloy', Proceedings of the 3rd International Conference on <u>Advances in Control and Optimization of Dynamical Systems ACODS 2014</u>, IIT Kanpur, 13-15 March 2014, 577 584. IFAC-PapersOnline ISBN: 978-3-902823-60-1 DOI:10.3182/20140313-3-IN-3024.00152.
- 17. S. Sunjai Nakshatharan, D. Josephine Selvarani Ruth and **K. Dhanalakshmi**, 'Design and experimental evaluation of higher order sliding mode control for vibration suppression of shape memory alloy actuated structure', *Proceedings of the 3rd*

- International Conference on <u>Advances in Control and Optimization of Dynamical</u>

 <u>Systems ACODS 2014</u>, IIT Kanpur, 13-15 March 2014, 1061 1066. **IFAC-PapersOnline** ISBN: 978-3-902823-60-1 DOI:10.3182/20140313-3-IN-3024.00158.
- 18. Chinmay Sahu, V. Kirubhakaran, T. K. Radhakrishnan, **N. Sivakumaran**, "Closed loop building data based estimation and Energy Efficient Model Predictive Control of Heating Ventilation and Air Conditioning System", ICGTEPC 2014,pp. 239.
- 19. S.Sankaranarayanan, N.Sivakumaran, G.Swaminathan "Optimal Network Design for Flow Process", ICGTEPC 2014,pp. 270.
- 20. Kattilapparambu Abhfeeth, **Ezhilarasi Deenadayalan**, "GSM Based RF Energy Harvesting", VIIth international ISSS Conference on Smart Materials, Structures and Systems (ISSS2014), IISC Bangalore, July 2014
- 21. Abhinav Srivastava and **K.Srinivasan**, Paper titled 'Clock-less positioning of sampling pulse for extraction of critical information adding advantage on fixed rate and level based sampling' published in the proceedings of International Conference on Advances in Computing and Communications (ACC-2014).
- 22. Abhinav Srivastava and **K.Srinivasan**, Paper titled 'Signal dependent adaptive level based sampling technique to minimize quantization error' published in the proceeding of International conference *TENCON-2014*

- 1. **M. Umapathy**, Y. Sujan, K. Suresh, "Piezoelectric based Resonance Displacement sensor", proceedings of IEEE Sensors Applications Symposium (SAS 2013), Texas, USA, Feb 19-21, 2013.
- **2.** S. Harihara krishnan, D Ezhilarasi, G. Uma, **M. Umapathy**, "Experimental Investigation of a Novel hybrid Energy Harvesting System using Ferroelectric

Material" Texas Instruments India Educator's Conference, Bangalore, India, April 4-5, 2013

- 3. S. Harihara krishnan, D Ezhilarasi, **G. Uma**, M. Umapathy, "Experimental investigation of a novel hybrid energy harvesting system using ferroelectric material" Proceedings of Texas Instruments India Educator's Conference, Bangalore, India, April 4-5, 2013.
- **4. G. Uma**, U.Varun Kumar, B.V.M.P. Santosh Kumar, K. Suresh, "Design and Modelling of Piezoelectric Sifter" Proceedings of IEEE Sensors Applications Symposium (SAS-2013), Texas, USA, February 19-21, 2013, pp 205-208.
- 5. M. Jerome Moses and A. Ramakalyan, "A Computationally Faster Randomized Algorithm for NP-Hard Controller Design Problem," In Proc. of IEEE International Symposium on Intelligent Informatics [Published in Recent Advances in Intelligent Informatics, Vol. 235 (2014), pp. 411-417, Springer-Verlag] SJCE, Mysore (2013). This paper may be accessed on-line at http://link.springer.com/chapter/10.1007%2F978-3-319-01778-5 42
- 6. A. Pashilkar, S. Ismail, R. Ayyagari, & N. Sundarrajan, "Design of a Nonlinear Dynamic Inversion Controller for Trajectory Following and Maneuvering for Fixed Wing Aircraft," to be presented at IEEE Symposium on Computational Intelligence for Security and Defense Applications (2013 CISDA), Nanyung Technological Univ., April 16 19, 2013.
- 7. A. Pashilkar, S. Ismail, **R. Ayyagari**, & N. Sundarrajan, "Improved Autolanding Controller for Aircraft Encountering Unknown Actuator Failures," to be presented at

- IEEE Symposium on Computational Intelligence for Security and Defense Applications (2013 CISDA), Nanyung Technological Univ., April 16 19, 2013.
- 8. **Vasuki B**, Sathiya S, Suresh K, "A New Piezoelectric Laminated Cantilever Resonance based Hydraulic Pump" accepted in IEEE Sensors Applications Symposium, Texas, USA.
- 9. S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Design of a precise tracking shape memory alloy wire actuated gripper', *Proceedings of the 9th International Conference on Intelligent Unmanned Systems (ICIUS)*, *Jaipur*, 25-27 September 2013.
- 10. M. Banu Sundareswari, **K. Dhanalakshmi**, S. Sunjai Nakshatharan and D. Josephine Selvarani Ruth, 'Optimal design of PID controller for SMA actuated ball on beam system', *Proceedings of the 9th International Conference on Intelligent Unmanned Systems* (*ICIUS*), *Jaipur*, 25-27 September 2013.
- 11. S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Demonstration of Self-Sensing Shape Memory Alloy Actuated Gripper', *Proceedings of the 7th IEEE Multi-Conference on Systems and Control (MSC 2013) International Symposium on Intelligent Control (ISIC)*, *Hyderabad*, 28-30 August 2013 **IEEE Xplore** 978-1-4799-1557-6/13/\$31.00 ©2013 IEEE, 218 222. 10.1109/ISIC.2013.6658620
- 12. S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Control of Shape Memory Alloy Actuated Gripper using Sliding Mode Control', *Proceedings of the 7th IEEE Multi-Conference on Systems and Control (MSC 2013) International Conference on Control Applications (CCA)*, *Hyderabad*, 28-30 August 2013 **IEEE Xplore** 978-1-4799-1557-6/13/\$31.00 ©2013 IEEE, 1247 1252. 10.1109/CCA.2013.6662923
- 13. D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and **K. Dhanalakshmi**, 'Autosensing Antagonistic Shape Memory Alloy Wire Actuated Manipulator', *Proceedings of the 7th IEEE Multi-Conference on Systems and Control (MSC 2013) International Conference on Control Applications (CCA)*, Hyderabad, 28-30 August 2013 **IEEE**

- **Xplore** 978-1-4799-1557-6/13/\$31.00 ©2013 IEEE, 1253 1258. 10.1109/CCA.2013.6662924
- 14. V.Kirubhakaran, E.Ravi Teja, T.K.Radhakrishnan, **N.Sivakumaran**, "Real Time Control of non Self-Regulating Cylindrical Tank Process using Multiparametric Model Predictive Control", Int.Conf. on TIMA-2013,pp.30-34.
- 15. Navin John Mathew, K.R.Kandula, **N.Sivakumaran**, "Swing up and Stabilization control of a Rotary Inverted Pendulum", Id.No.128 DYCOPS 2013,IIT Bombay.
- 16. V.Kirubhakaran, T.K.Radhakrishnan, **N.Sivakumaran**, "Blood Glucose Concentration Regulation in Type1 Diabetics using Multi Parametric model Predictive Control: An Empirical approach, Id.No.68 CAB 2013,IIT Bombay.
- 17. T.Vinopraba, **N.Sivakumaran**, T.K.Radhakrishnan, "Design of fractional order controller for Biochemical Reactor", Id.No.8 CAB 2013, IIT Bombay.
- 18. T.Vinopraba N.Sivakumaran **S.Narayanan**, T.K.Radhakrishnan, Design of fractional order controller for Biochemical reactor", 12th IFAC Symposium on computer applications in bio technology, IFAC, 16-18,2013, December, Mumbai, India.
- 19. T.Vinopraba N.Sivakumaran **S.Narayanan**, T.K.Radhakrishnan, "Design of fractional order controller for Biochemical reactor', International conference on water desalination, treatment and management, 21-22, February, MNIT, Jaipur.
- 20. Anbarasan K and **Srinivasan K**, Paper tilted 'Design and development of RTDA controller for SOPDT process" has been accepted for Trends in Measurement and Automation (TIMA-2013) International Conference to be held form to be held from 22nd -24th December 2013
- 21. S. Harihara Krishnan, D. Ezhilarasi, G.Uma and M. Umapathy, Experimental Investigation Of A Novel Hybrid Energy Harvesting System Using Ferroelectric Material, *Texas Instruments India Educators' international Conference 2013*, April 4-6, 2013, Bangalore, India

1. P.Pandiyan, G. Uma, **M. Umapathy**, "Design Of Logic Gates Using Laterally-Actuated Double-Gate NEMS", proceedings of the 9th International Workshop on

Nanomechanical Sensing 2012(NMC-2012), IIT Bombay, Mumbai, India, June 6-8, 2012.

- 2. J Sivaraman, G Uma, **M Umapathy** "A modified chest leads for minimization of ventricular activity in electrocardiograms" International conference on Bio-medical Engineering ICoBE, Penang, Malaysia, 2012 (accepted)
- 3. L R Karlmarx, **M. Umapathy**, D Ezhilarasi "Discrete Time Sliding Mode Control with Nonlinear Sliding Surface for Piezo Actuated Structures", Proceedings of ISSS International Conference on Smart Materials Structures and Systems, No.1569522537, Bangalore, India, 2012.
- J Arunshankar, M. Umapathy "Control of Smart Cantilever Beam with SMA Actuator using Twisting and Supertwisting Controllers" Proceedings of ISSS International Conference on Smart Materials Structures and Systems, No. 1569517891, Bangalore, India, 2012.
- P Pavan satya kumar , D Ezhilarasi, M. Umapathy "Experimental investigation of energy harvesting using piezoelectric material" Proceedings of ISSS International Conference on Smart Materials Structures and Systems, No. 1569518613, Bangalore, India, 2012.
- 6. S Harihara krishnan, D Ezhilarasi, G Uma, **M. Umapathy**, Y Sujan "Enhancement of vertical displacement in electro thermal micro actuator", Proceedings of ISSS International Conference on Smart Materials Structures and Systems, No. 156951861, Bangalore, India, 2012.
- 7. Sujan, B Vasuki, G. Uma, **M. Umapathy**, S Harihara krishnan "Sensitivity enhancement of surface micromachined resonant pressure sensor", Proceedings of

- ISSS International Conference on Smart Materials Structures and Systems, No. 1569517275, Bangalore, India, 2012.
- 8. K. Suresh, G. Uma, **M. Umapathy**, "A Resonant Accelerometer with Piezoelectric self sensing electronics" Proceedings of ISSS International Conference on Smart Materials Structures and Systems, No. 1569505017, Bangalore, India, 2012.
- 9. Ezhilarasi Deenadayalan, K. Srikanth Reddy, Umapathy Mangalanathan, Bijnan Bandyopadhyay, "Design and Implementation of Second order SMC for vibration control of a mass loaded Smart cantilever beam with temperature uncertainty", Proceedings of the 12th International Workshop on Variable Structure Systems, IIT Bombay, Mumbai, 2012.
- 10. S. Dharmalingam, L. Sivakumar, **M. Umapathy**, "Optimizing boiler performance for varying coals using mathematical modeling and embedded statistical tools", Proceedings of the Heber International Conference on applications of mathematics and statistics, pp. 312-317, Tiruchirappalli, India, 2012.
- 11. Y Sujan, B.Vasuki, **G. Uma**, D. Ezhilarasi, K. Suersh "Thickness sensor for Ferromagnetic sheets", Proceedings of 6th IEEE International Conference on Sensing Technology (ICST-2012), Kolkata, India, December 18-21, 2012,pp 93-96.
- 12. Y Sujan, B.Vasuki, **G. Uma**, "T-Shaped Resonating Beam Pressure Sensor", Proceedings of 10th IEEE International Conference on Semiconductor Electronics (ICSE-2012), kualalumpur, Malaysia, September 19-21, 2012, pp 271-275.
- 13. P.Pandiyan, **G. Uma**, M. Umapathy, "Design of logic gates using laterally-actuated double-gate NEMS" Proceedings of the 9th International Workshop on Nanomechanical Sensing 2012(NMC-2012), IIT Bombay, Mumbai, India, June 6-8, 2012.

- 14. J.Sivaraman, **G.Uma**, M. Umapathy "A modified chest leads for minimization of ventricular activity in electrocardiograms" Proceedings of IEEE International Conference on Bio-Medical Engineering (ICoBE-2012), Penang, Malaysia, February 26-28, 2012, pp 79-82.
- 15. S. Harihara krishnan, D.Ezhilarasi, **G. Uma**, M. Umapathy, Y Sujan "Enhancement of vertical displacement in electro thermal micro actuator" Proceedings of International Conference on Smart Materials Structures and Systems (ISSS-2012), IISc Bangalore, January 2012.
- 16. Y. Sujan B.Vasuki, **G. Uma**, M. Umapathy, S.Harihara krishnan "Sensitivity enhancement of surface micromachined resonant pressure sensor" Proceedings of International Conference on Smart Materials Structures and Systems (ISSS-2012), Bangalore, January 2012.
- 17. K. Suresh, **G. Uma**, M. Umapathy, "A Resonant Accelerometer with Piezoelectric self sensing electronics" Proceedings of International Conference on Smart Materials Structures and Systems (ISSS-2012), Bangalore, January 2012.
- 18. V. Mishiga, S. Seshadhri, S. Ashok, S. Ramaswamy, and **R. Ayyagari**, "An Analytical Framework for Analysis and Design of Networked Control Systems with Random Delays and Packet Losses," presented at 25th Annual Canadian Conference on Electrical & Computer Engineering (IEEE Conference), Montreal 29th April to 2nd May 2012.
- 19. S. Seshadhri, Srini Ramaswamy, **R. Ayyagari**, N. Venkateswaran, "Hybrid Systems Approach for Networked Control Systems Subjected to Random Communication Delays," presented at 2nd Int. Conf. on Advances in Control and Optimization of Dynamical Systems (ACODS)," IISc Bangalore, 16th to 18th Feb 2012.
- 20. Shaik Ismail, A. Pashilkar, **R. Ayyagari**, "Guaranteed Stability and Improved Performance against Actuator Failure using Neural Aided Sliding Mode Controller for Autolanding Tasks," presented at the IFAC Workshop on Embedded Guidance

- Navigation and Control in Aerospace (EGNCA), IISc Bangalore, 11th to 15th February 2012.
- **21.**Sujan Y, Vasuki B, G Uma, D Ezhilarasi, K Suresh, "Thickness Sensor for Ferromagnetic Sheets", Proceedings of Sixth International conference of on Sensing Technology, Kolkata, India, Dec'18-21.
- **22.** Sujan, B Vasuki, G. Uma, "T-Shaped Resonating Beam Pressure Sensor" Proceedings of International Conference on Semiconductor Electronics (ICSE-2012) Grand Millenium, Kualalampur, Malaysia, Sep' 19-21.
- **23.** Sujan, B Vasuki, G. Uma, M. Umapathy, S Hariharakrishnan "Sensitivity enhancement of surface micromachined resonant pressure sensor", Proceedings of ISSS International Conference on Smart Materials Structures and Systems, No. 1569517275, Bangalore, India.
- **24.**S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Position control of shape memory alloy actuated gripper', *Proceedings of the 6th International Conference on Sensing Technology ICST 2012, Kolkata,* 18-21 December 2012 **IEEE Xplore-**978-1-4673-2248-5/12/\$31.00 ©2012 IEEE, 359 364. 10.1109/ICSensT.2012.6461701
- **25**. S. Sunjai Nakshatharan, D. Josephine Selvarani Ruth and **K. Dhanalakshmi**, 'Design based Active Vibration Control of a Flexible Structure using Shape Memory Alloy Wire Actuators', Proceedings of the 6th International Conference on Sensing Technology ICST 2012, Kolkata, 18-21 December 2012 **IEEE Xplore** 978-1-4673-2248-5/12/\$31.00 ©2012 IEEE, 476-480. 10.1109/ICSensT.2012.6461725
- **26.** D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and **K. Dhanalakshmi**, 'Angular Trajectory Tracking using Antagonistic Shape Memory Alloy Actuators', Proceedings of the 6th International Conference on Sensing Technology ICST 2012, Kolkata, 18-21 December 2012 **IEEE Xplore** 978-1-4673-2248-5/12/\$31.00 ©2012 IEEE, 757-762. 10.1109/ICSensT.2012.6461778
- **27.**S. Krishna Chaitanya and **K. Dhanalakshmi**, 'Design, Development and Investigation of Novel smart Grippers driven by NiTi fibers', *Proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures ACMFMS12, IITD Delhi*, 5-8 December 2012, 75-78.

- **28.**S. Sunjai Nakshatharan, **K. Dhanalakshmi** and D. Josephine Selvarani Ruth, 'A new ball and beam system using shape memory alloy actuators', *Proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures ACMFMS12, IITD Delhi*, 5-8 December 2012, 83-86.
- **29.**D. Josephine Selvarani Ruth, **K. Dhanalakshmi** and S. Sunjai Nakshatharan, 'Force Measurement using Self-Sensing Shape Memory Alloy', *Proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures ACMFMS12, IITD Delhi*, 5-8 December 2012, 55-58.
- **30.** Ashish Gupta, **N.Sivakumaran**, Ashalatha R. et al, "Statistical Parametric Mapping of EEG correlated fMRI data to detect Epileptic foci" BSSI 2012,IITM,Chennai.
- **31.**E.Sathish, S.Srinivasan, **N.Sivakumaran**, "Classification of Normal and Epileptic EEG Signals using Adaptive Neuro Fuzzy Inference System", 2nd International conference on Biomedical Engineering and assistive Technologies, December 6-7, 2012, NIT, Jalandhar.
- **32.**A.Gupta, **N.Sivakumaran**, E. Sathish, "Effect of modeling hemodynamic response function on statistical value in SPM for EEG correlated fMRI data of epileptic patient", 2nd International conference on Biomedical Engineering and assistive Technologies, December 6-7, 2012, NIT, Jalandhar.
- **33.** A.Rajeev, S.Sujesh, **N.Sivakumaran**, C.V.Muraleedharan, "A Linear After-Load Model for a CardioVascular Pulse Duplicator" ICACCI 12,pp.493-497,2012.
- 34. **Srinivasan K,** T.K.Radhakrishnan, Devi S, Paper titled 'Recurrent neural network based Internal model controller design for pH neutralization process' Published in the proceeding of second International Conference on Control, Automation and Robotics (CAR 2012) held at Bangkok 12th March 2012 organized by Global Science & Technology forum limited, Singapore.
- 35. Y.Sujan, B.Vasuki, G. Uma, **D Ezhilarasi**, K Suresh "Thickness sensor for Ferromagnetic sheets" in proceedings of the 6th International conference on Sensing Technology (ICST 2012), Kolkata, India, Dec"18-21, 2012
- 36. Akshay C, Nitin Karnwal, Abhfeeth K A, Rohan Khandelwal, Tapas Govindraju, **Ezhilarasi D**, Sujan Y "Wireless sensing and control for precision Green house

- management" in proceedings of the 6th International conference on Sensing Technology (ICST 2012), Kolkata, India, Dec"18-21, 2012
- 37. D. **Ezhilarasi**, K. Srikanth Reddy,M. Umapathy, B.Bandyopadhyay, "Design and Implementation of Second order SMC for vibration control of a mass loaded smart cantilever beam with temperature uncertainty", 12th IEEE International workshop on Variable Structure Systems, IITB, Mumbai, Jan 2012
- 38. S Harihara Krishnan S, **D Ezhilarasi**,G Uma, M Umapathy,Y Sujan, "Enhancement of Vertical Displacement in Electrothermal Microactuator", VIth international ISSS Conference on Smart Materials, Structures and Systems (ISSS2012), IISC Bangalore,Jan 2012
- 39. L.R. Karl Marx, M. Umapathy, **D. Ezhilarasi**, "Discrete Time Sliding Mode Control with Nonlinear Sliding Surface for Piezo Actuated Structures", VIth international ISSS Conference on Smart Materials, Structures and Systems (ISSS2012), IISC Bangalore, Jan 2012
- 40. P. Pavan Satya kumar, D. **Ezhilarasi**, M. Umapathy," Experimental Investigation of Energy Harvesting using Piezoelectric Material", VIth international ISSS Conference on Smart Materials, Structures and Systems (ISSS2012), IISC Bangalore, Jan 2012

- S. Dharmalingam, L. Sivakumar, M. Umapathy, "Optimizing boiler performance for varying coals using mathematical modeling and embedded controller", 54th Annual ISA POWID symposium, NC, USA, 2011.
- 2. J. Arunshankar, **M. Umapathy**, "Discrete Time Sliding Mode Control Using Multirate Output Feedback with Data Fusion", Proceedings of IEEE Recent Advances in Intelligent Computational Systems (RAICS 2011), pp. 36-40, September, Trivandrum, India, 2011.
- 3. J. Arunshankar, **M. Umapathy**, "Robust Loop Shaping Control of a Piezo Actuated Structure with Data Fusion", Proceedings of IEEE Recent Advances in Intelligent

Computational Systems (RAICS 2011), pp. 138-142, September, Trivandrum, India, 2011.

- 4. Shaik Ismail, A.A. Pashilkar, **R. Ayyagari**, "Adaptive Control of Micro Air Vehicles," Symposium on Applied Aerodynamics and Design of Aerospace Vehicles (SAROD 2011), Bangalore, 16th to 18th November 2011.
- 5. C.Ahilan, S.Kumanan, **N.Sivakumaran**, "Prediction of Shell and Tube Heat Exchanger Performance using Artificial Neural Networks" Proc. of the International Conference on Advanced Computing and Communication Technologies ACCT 2011, Rohtak, January 20-22, pp.307-312.
- 6. Akhil T. Nair,Dr.T.K.Radhakrishnan,Dr. **K. Srinivasan3** and Dr. S. Rominus Valsalam "KALMAN FILTER BASED STATE ESTIMATION OF A THERMAL POWER PLANT" published in the proceeding of IEEE Sponsored International Conference on Process Automation, Control and Computing (PACC 2011) was held at CIT, Coimbatore from 20th July 2011 to 22nd July 2011
- 7. S.Narayanan, N.Sivakumaran, T.Vinopraba, "Stabilization of commensurate fractional order system with desired damping", Proceedings of International conference on Trends in Industrial Measurements and Automation, (TIMA2011)CSIR, Chennai, January 6-8, 2011, pp.393-396.
- 8. M.S. Sekhar **D. Ezhilarasi,** A. Shankar Ram, "Remote Monitoring and Control of a Temperatute Plant using Zigbee Wireless Communication System", Proceedings of the 7th International conference on "Trends in Industrial Measurement and Automation" TIMA-2011, CSIR Madras, Chennai, pp 369-374, January 2011

2009-2010

 Dharmalingam, S., L. Sivakumar, and M. Umapathy, "Fuel switching in thermal power plants – Impact on critical process parameters of a steam generator, SYMOPA 2010, pp. 85-91, Thiruvananthapuram, India, 2010.

- J.Arunshankar, M. Umapathy and B. Bandyopadhyay, Performance of discrete time sliding mode controller with data fusion, Proceedings of IEEE – IFAC 11th International Workshop on Variable Structure Systems (VSS– 2010), Mexico City, pp. 422 – 427, 2010.
- 3. J. Arunshankar and **M. Umapathy**, Simultaneous periodic output feedback control of a smart cantilever beam with data fusion, Proceedings of IEEE International Conference on Robotics, Automation & Mechatronics (CISRAM-2010), Singapore, pp. 206-211, 2010.
- 4. K. Suresh, B.V.M.P. Santhosh Kumar, U.V. Kumar, **M. Umapathy** and G. Uma, "Simulation of DC Current Sensor, Proceedings of COMSOL Conference Bangalore, 2010.
- 5. B.V.M.P Santhosh Kumar, U. Varun Kumar, K. Suresh, G. Uma and **M. Umapathy**, "Frequency Detector using Piezo laminated cantilever beam", PEIE 2010, CCIS 102, pp. 104-107, 2010.
- D. Ezhilarasi, J. Arunshankar and M. Umapathy, "Implementation of information filter for vibration control of a smart cantilever beam", Proceedings of 6th International Conference on Control, Communication and Power Engineering (CCPE-2010), pp.137-140, 2010.
- 7. L. R. Karl Marx, **M. Umapathy**, D. Ezhilarasi, "Design and implementation of discrete slide mode control with nonlinear sliding surface for piezo actuated structures", Proceedings of 6th International Conference on Vibration Engineering & Technology of Machinery, pp., 509-516, IIT Delhi, 2010.
- 8. B.V.M.P Santhosh Kumar, **M. Umapathy**, U. Varun Kumar, K. Suresh and G. Uma, "Occupancy sensor using piezo laminated cantilever beam", Proceedings of 6th

- International conference on Vibration Engineering and Technology of Machinery, pp. 451-455, IIT Delhi, 2010.
- 9. Dharmalingam, S., L. Sivakumar, and **M. Umapathy**, "Fuel switching in thermal power plants Impact on critical process parameters of a steam generator, SYMOPA 2010, pp. 85-91, Thiruvananthapuram, India, 2010.
- 10. J.Sivaraman, **G. Uma** "A Non-Invasive Detection of Somnolence based on the peripheral physiological parameter" Proceedings of International Conference on Biomedical Engineering and Assistive Technologies (BEATS), NIT Jalandhar, December 17-19, 2010.
- 11. K. Suresh, B.V.M.P. Santhosh Kumar, U.V. Kumar, M. Umapathy and **G. Uma,** "Simulation of DC Current Sensor" Proceedings of COMSOL Conference
 Bangalore, 2010.
- 12. B.V.M.P Santhosh Kumar, U. Varun Kumar, K. Suresh, **G. Uma** and M. Umapathy, "Frequency Detector using Piezo laminated cantilever beam" Proceedings of International Conference on Power Electronics and Instrumentation Engineering (PEIE- 2010), 2010, CCIS 102,pp 104-107.
- 13. B.V.M.P Santhosh Kumar, M. Umapathy, U. Varun Kumar, K. Suresh and **G. Uma**, "Occupancy sensor using piezo laminated cantilever beam" Proceedings of 6th International conference on Vibration Engineering and Technology of Machinery, IIT Delhi, Delhi, 2010, pp. 451-455.
- 14. M. Shanmugavalli, **G. Uma**, M. Umapathy, "Experimental evaluation of coriolis mass flowmeter using piezoelectric sensing and actuation" Proceedings of 6th International conference on Vibration Engineering and Technology of Machinery, IIT Delhi, Delhi, 2010, pp. 456-462.

- 15. U.Varun Kumar, M. Umapathy, B.V.M.P.Santhosh kumar, **G. Uma** and K. Suresh, "Smart structure for measuring the time period of a simple pendulum" Proceedings of 6th International conference on Vibration Engineering and Technology of Machinery, IIT Delhi, Delhi, 2010, pp. 544-549.
- 16. S. Seshadhri and **R. Ayyagari**, "Consensus among robotic agents over packet dropping links," IEEE Int. Conf. BMEI & CISP, Yantai University, Yantai, China, 16 18 Oct, 2010.
- 17. S. Seshadhri and **R. Ayyagari**, "Hybrid Systems Approach for Networked Control Systems", Proc. Int. Conf. on Power Electronics and Instrumentation Engineering-2010.
- 18. P. Kavitha, and **R. Ayyagari**, "Computational Barriers in Linear Control System Design," Proc. of the National Conference on Computational Instrumentation (NCCI), CSIO, Chandigarh, 19th to 20th March 2010.
- 19. C.Ahilan, S.Kumanan, **N.Sivakumaran**, "Modeling and analysis of cutting parameters influence on power consumption and surface roughness in CNC turning of AISI 304", 2nd International Conference on Production and Industrial Engineering CPIE 2010, Jalandhar
- 20. T.Vinopraba, N.Kiran Kumar, P.Satheesh Kumar, **N.Sivakumaran**, S.Narayanan, "Design and implementation of Fractional order Controllers", 49 th IEEE conference on decision and control, December 15-17, Atlanta, USA, 2010.
- 21. S.Nithya, **N.Sivakumaran**, T.K.Radhakrishnan, N.Anantharaman, Soft Computing based Controller Implementation for nonlinear process in real time, WCECS 2010, Sanfrancisco, pp.1021-26, 2010
- 22. Martin Luthur S.K, Raja SinghB., Rominus Valsalam S., Narayanan S., Radhakrishnan T K., "Intelligent parameter and state estimation for coal mill in a thermal power plant", International conference on system modeling, optimization and advanced process automation(SYMOPA-2010) Dec.,18-19 2010.
- 23. D. **Ezhilarasi**, M. Umapathy, B.Bandyopadhyay, "Design and Implementation of Fast Output Sampling Feedback Control for Smart Structures via Reduced Orer Model", Proceedings of the 6th International conference on Vibration Engineering and Technology of Meachinery, VETOMAC-VI,IITD, 517-524, Dec.2010

- 24. L.R. Karl Marx, M. Umapathy, D. **Ezhilarasi**, "Design and Implementation of discrete Time Sliding Mode Control with Nonlinear Sliding Surface for Piezo Actuated Structures", Proceedings of the 6th International conference on Vibration Engineering and Technology of Meachinery, VETOMAC-VI,IITD, 509-516, Dec.2010
- 25. D. **Ezhilarasi**, J. Arunshankar, M. Umapathy, "Implementation of information filter for vibration control of a smart cantilever beam", Proc. of Int. Conf. on Control, Communication and Power Engineering 2010, ACEEE-2010, 137-140

- G. Uma, M. Umapathy, L. Baby Vidhya, M. Maya, T. Sophia, K. Tamilarasi, "Design and analysis of resonant based gas sensor", Proceedings of SAS 2008 – IEEE Sensors Applications Symposium, Atlanta, GA, USA, 2008
- 2. G. Uma, **M. Umapathy**, K. Suresh, M. Shanmugavalli, "Design and simulation of meso and micro split beam resonators", Proceedings of ISSS International Conference on Smart Materials Structures and Systems, P 84, Bangalore, India, 2008.
- 3. G. Uma, K. Suresh, **M. Umapathy**, M. Shanmugavalli, "Closed loop electronics for resonant sensors", Proceedings of ISSS 2008 International Conference on Smart Materials Structures and Systems, P 90, Bangalore, India, 2008.
- 4. R. Maheswari, **M. Umapathy**, L. R. Kralmarx, D. Ezhilarasi, "Design of periodic output feedback control using reaching law for piezo actuated cantilever beam", International Conference on Smart Structures and Systems (ISSS 2008),P 85,IISc,Bangalore,India, 2008.

- 5. **G. Uma**, M. Umapathy, L. Baby Vidhya, M. Maya, T. Sophia, K. Tamilarasi, "Design and analysis of resonant based gas sensor" Proceedings of IEEE Sensors Applications Symposium (SAS-2008), Atlanta, GA, USA, 2008.
- 6. **G. Uma**, M. Umapathy, K. Suresh, M. Shanmugavalli, "Design and simulation of meso and micro split beam resonators" Proceedings of International Conference on Smart Materials Structures and Systems(ISSS-2008), Bangalore, India, 2008.
- 7. **G. Uma**, K. Suresh, M. Umapathy, M. Shanmugavalli, "Closed loop electronics for resonant sensors" Proceedings of International Conference on Smart Materials Structures and Systems (ISSS-2008), Bangalore, India, 2008,pp-90.
- 8. J. Yogeswaran, S. Ismail, A.A. Pashilkar & **R. Ayyagari**, "Application of Flight Path Reconstruction and Parameter Estimation to a Micro Air Vehicle," Symposium on Applied Aerodynamics and Design of Aerospace Vehicles (SAROD 2009), B'lore, 10-12 Dec. 2009.
- 9. S. Seshadhri and **R. Ayyagari**, "Hybrid controllers for NCSs subjected to random communication delays and packet dropouts," Proceedings of IEEE ARTCom'09, Kottayam, Kerala, pp. 954-958, 2009.
- 10. S. Seshadhri and **R. Ayyagari**, "Hybrid model for NCSs subjected to random communication delays and packet dropouts," Proc. of the Intelligent Systems and Control conference (ISC'09), MIT, Massachusetts, 2nd to 4th Nov 2009.
- 11. C Ahilan, **S Kumanan**, and **N.Sivakumaran** "Design and Implementation of Fuzzy Logic Controller for an Air conditioner with Energy saving", 7th Global Conference on Sustainable Manufacturing GCSM, IITM,57-62,2009.
- 12. Rajini Jain, T.Vinopraba, **N.Sivakumaran**, T.K.Radhakrishnan, "Design and Implementation of Controllers for MIMO Process", International Conference on Advances in Recent Technologies in Communication and Computing, pp.750-752, 2009.

- 13. S.Narayanan, **N.Sivakumaran**, T.Vinopraba, N.Selvaganesan, "IMC Based PIλDδ Controller Design for Gas Turbine Plant", International Conference on Modeling and Simulation (MS09), Dec 1-3, pp.386-390, 2009.
- 14. T.Vinopraba, **N.Sivakumaran**, N.Selvaganesan and S.Narayanan, "Stabilization Using Fractional-Order PID^α Controllers for First Order Time Delay System", International Conference on Advances in Computing, Control, & Telecommunication Technologies, pp.725 728, 2009.
- 15. T.Vinopraba, **N.Sivakumaran**, T.K.Radhakrishnan, S.Raghavan, "Optimal Control of Blood Glucose Regulation for Type-I Diabetics", Proc. International Conference on TIMA, MIT, Anna University, 2009.
- 16. S.C.Lee, Q.G. Wang, W.X. Zheng, **N.Sivakumaran**, "Stabilization and Control of Unstable Processes with Large Dead Time, International Conference on Information Management", Innovation Management and Industrial Engineering, Taiwan, 2008.
- 17. C.Ahilan, S.Kumanan, **N.Sivakumaran**, "Optimizing Power Consumption for CNC turning process using grey based Taguchi Method", Proc. of the 2nd Intl.&23 AIMTDR Conf,2008,IIT Madras, Chennai.
- 18. B.Subathra, K.Harikumar, **N.Sivakumaran**, T.K.Radhakrishnan, "Multivariable Predictive Control System Design Using a RNF Network", Proc. of Chemcon 2008
- 19. Rajni Jain, **N.Sivakumaran**, T.K.Radhakrishnan, "Design of a Multimodel Controller for Heat Exchanger", Proc. Chemcon 2008.
- 20. Vinod Reddy T and **Srinivasan K**, Paper titled 'Multi model based controller design for Type I diabetic patients" published in proceedings of IEEE sponsored international conference on Advances in Recent Technologies in communication Computing (ARTCOM 2009) held at Kottayam, Kerala
- 21. **D. Ezhilarasi**, M. Umapathy, "Design and Implementation of Generalized Predictive Control for Piezo Actauted Cantilever Beam", Proceedings of the 6th International

- conference on "Trends in Industrial Measurement and Automation" TIMA-2009, MIT campus, Anna university. pp 176-181, January 2009
- 22. Joan of Arc, **D.Ezhilarasi**, S.K. Patnaik, B. Umamaheswari "Design of Loop-Shaping Hinfinity Controller for Vibration Control of a Smart Beam", Proceedings of the International conference on TIMA-2009, MIT campus, Anna university. pp 221-227, January 2009
- 23. D. Ezhilarasi, J.Rajalakshmi, "Design of Self Tuning Regulator for Vibration Control of Piezo Actuated Cantilever Beam", Proceedings of the International Conference on Advanced Manufacturing and Automation INCAMA-2009, Kalasalingam university, Virudunagar, March 2009
- 24. R. Shanthi, **D. Ezhilarasi**, "Design of Fuzzy Logic Controller for Piezoelectric Smart Beam", Proceedings of the International Conference on Advanced Manufacturing and automation INCAMA-2009, Kalasalingam university, Virudunagar, March 2009

- G. Uma, M. Umapathy, S. Meenatchisundaram "Dynamic simulation of micro resonator based differential pressure sensor", Proceedings of SPIE International conference on smart structures and materials, San Diego, USA, Volume 6528-25, 2007.
- M. Umapathy, A. Girija, G. Uma, B. Bandopadhyay, "Active vibration control of piezoactuated structures using fast output sampling based sliding mode control", Volume 6523-23, 2007
- 3. K. Dhanalakshmi, **M. Umapathy**, D. Ezhilarasi "Variable structure control of flexible smart structure **with shape memory alloy actuators**", Proceedings of SPIE

International conference on smart structures and materials, San Diego, USA, Volume 6528-26, 2007.

- 4. B. Vasuki, **M. Umapathy**, G. Uma, M. Shanmugavalli, S. Meenatchisundaram "**Uncertainty analysis of mircoresonator using classical and interval methods**", Proceedings of SPIE International conference on smart structures and materials, San Diego, USA, Volume 6528-23, 2007.
- 5. M Indumathy, G. Uma, **M. Umapathy**, "Design of fast output sampling feedback controller for er fluid actuated car suspension system", Proceedings of the International Conference TIMA 2007, pp. 251-256, 2007.
- S. Neduncheliyan, M. Umapathy, "Design of state feedback controller for smart cantilever beam using interval polynomial", Proceedings of the International Conference on Trends in Industrial Measurements and Automation (TIMA)- 2007, pp. 263-266, 2007.
- 7. C.Chandravathanam, K. Dhanalakshmi, **M. Umapathy**, "Design and characterization of shape memory alloy wire for actuation in smart structure applications", Proceedings of the International Conference TIMA 2007, pp. 202-207 2007.
- 8. S. Meenatchisundaram, G. Uma, **M. Umapathy**, B.S. Sathyanarayana and P.R. Venkateswaran, "Displacement analysis of micro-resonators", Proceedings of the International Conference TIMA 2007, pp. 83-87, 2007.

- 9. **G. Uma**, M. Umapathy, S. Meenatchisundaram "Dynamic simulation of micro resonator based differential pressure sensor" Proceedings of SPIE International conference on smart structures and materials, San Diego, USA, 2007, Vol. 6528-25.
- 10. M. Umapathy, A. Girija, **G. Uma**, B. Bandopadhyay, "Active vibration control of piezoactuated structures using fast output sampling based sliding mode control" Proceedings of SPIE International conference on smart structures and materials, San Diego, USA, 2007, Vol. 6523-23.
- 11. B. Vasuki, M. Umapathy, **G. Uma**, M. Shanmugavalli, S. Meenatchisundaram "Uncertainty analysis of mircoresonator using classical and interval methods", Proceedings of SPIE International conference on smart structures and materials, San Diego, USA, 2007, Vol. 6528-23.
- 12. M Indumathy, **G. Uma**, M. Umapathy, "Design of fast output sampling feedback controller for ER fluid actuated car suspension system" Proceedings of the International Conference on Trends in Industrial and Automation (TIMA-2007), NIT Trichy, Trichy 2007,pp. 251-256.
- 13. S. Meenatchisundaram, **G. Uma**, M. Umapathy, B.S. Sathyanarayana and P.R. Venkateswaran, "Displacement analysis of micro-resonators" Proceedings of the International Conference on Trends in Industrial and Automation (TIMA-2007), NIT Trichy, Trichy, 2007, pp. 83-87.
- 14. **R. Ayyagari**, K. Ramkumar, S. Mallikarjun, and B.V. Parvathi, "A Comparative Study of PI and Model Predictive Controllers for a Bench Mark Paper Machine Model," Proc. of the IEEE Int. Conf. on Recent Advances in Applications of Computers in Elec. Engg. (RACE), March 2007.
- 15. **R. Ayyagari**, K. Ramkumar, S. Mallikarjun, "Design of Fuzzy Reasoning Based Controllers for a MIMO Paper Machine Plant," Proc. of the IEEE Int. Conf. on Recent Advances in Applications of Computers in Elec. Engg. (RACE), March 2007.

- 16. R. Ayyagari, K. Ramkumar, S. Mallikarjun, and B.V. Parvathi, "Simulated Response of Neural Network Based Inverse Control of Paper Machine Plant," Proc. of the IEEE Int. Conf. on Recent Advances in Applications of Computers in Elec. Engg. (RACE), March 2007.
- 17. **R. Ayyagari**, and K. Ramkumar, "Study of Model Predictive of Controllers for Paper Machine MD Problems: Simulation Results," Proc. of the Int. Conf. on Trends in Industrial Measurements & Automation (TIMA), pp. 324 329, January 2007.
- 18. B. Vasuki, M. Umapathy, G. Uma, M. Shanmugavalli, S. Meenatchisundaram "Uncertainty analysis of mircoresonator using classical and interval methods", Proceedings of SPIE International conference on smart structures and materials, San Diego, USA, Volume 6528-23.
- 19. **K. Dhanalakshmi**, M. Umapathy and D. Ezhilarasi, 'Variable structure control of shape memory alloy actuated flexible smart structure', *Proceedings of 14th International Symposium on Smart Structures and Materials & Non-destructive Evaluation and Health Monitoring SPIE 07, San Diego, California*, March 2007, Vol.6528, 18-23. 10.1117/12.716066
- 20. C. Chandravathanam, K. Dhanalakshmi and M. Umapathy, 'Design and Characterization of Shape Memory Alloy Wire for Actuation in Smart Structure applications', Proceedings of 5th International Conference on Trends in Industrial Measurement and Automation TIMA 2007, NIT, Tiruchirappalli, 4-6 January 2007, 202-207.
- 21. Abhay Singh Gour, S.Nithya, **N.Sivakumaran**, T.K.RadhaKrishnan and N.Anantharaman, "Predictive Controller Design of Shell and Tube Heat Exchanger", International Conference on Intelligent and Advanced Systems, IEEE Sponsored ICIAS 2007, Malaysia, November 25 -28, 2007,pp. 94-99.
- 22. Abhay Singh Gour, S.Nithya, **N.Sivakumaran**, T.K.RadhaKrishnan and N.Anantharaman, "Control of Heat Exchanger using Genetic Algorithm", International Conference on Modeling and Simulation, CITICOMS, August 25-27, 2007.

- 23. D.Kesavan, N.Sivakumaran, G.Balasubramaniam and T.K.Radhakrishnan, "Control of Neutralization process using Adaptive Interaction Technique" CITICOM07, T2ME150, 2007.
- 24. D.Kesavan, **N.Sivakumaran**, G.Balasubramaniam and T.K.Radhakrishnan, "Fuzzy Controller Design for Nonlinear Neutralization Process" International Conference on Hydrocarbon flow Measurement, jointly organized by Fluid Control Research Institute (FCRI), 2007,pp 594-602.
- 25. Devi and **Srinivasan K** "Recurrent Neuro modeling of pH neutralization process". has been published in the proceedings of the International Conference On Theoretical, Applied Computational and Experimental Mechanics (ICTACEM 2007) will be held at 2007Indian Institute of Technology, Kharagpur on 27th 29th December 2007
- 26. **Srinivasan K** & J. Prakash.. "Design of Gain scheduled PID controllers for CSTR Process". The fifth International Conference on Trends in Industrial Measurements and Automation (TIMA-2007) proceedings, Page No192-196, 4-6th January 2007 held at NIT, Trichy
- 27. K Dhanalakshmi , M.Umapathy, D.Ezhilarasi, C Chandravathanam, "variable Structure Control of Flexible Smart Structure with Shape Memory Alloy Actuators", SPIE International conference on Smart Structures and Materials. San Diego, USA, March 2007

1. A. Girija, **M. Umapathy**, B. Bandyopadhyay, G. Uma, K. Dhanalakshmi, "Discrete time sliding mode control for piezoelectric actuated structures", Proceedings of IEEE International Conference on Industrial Technology (ICIT 2006), Mumbai, pp. 1466 - 1471, 2006.

- 2. D. Ezhilarasi, **M. Umapathy**, B. Bandyopadhyay, G. Uma, "Design and experimental evaluation of composite output feedback control for smart structures", Proceedings of IEEE International Conference on Industrial Technology (ICIT 2006), Mumbai, pp. 692 697, 2006.
- 3. N. Senthil Manoharan, G. Uma, **M. Umapathy**, S. Meenatchisundaram, "Structural vibration control using quantitative feedback theory", Proceedings of IEEE International Conference on Industrial Technology (ICIT 2006), Mumbai, pp. 1816 1822, 2006.
- 4. D. Ezhilarasi, **M. Umapathy**, B. Bandyopadhyay, "Design and experimental evaluation of simultaneous periodic output feedback control for smart structures", Proceedings of 2nd International Congress on Computational Mechanics and Simulation (ICCMS 2006), IIT Guwahati, pp. 642-645, 2006.
- S. Soundaravalli, M. Umapathy, D. Ezhilarasi, J. Balasubramani, "H infinity vibration controller for smart cantilever beam", Proceedings of 2nd International Congress on Computational Mechanics and Simulation (ICCMS 2006), IIT Guwahati, , pp. 501 -505,2006.
- 6. K. Dhanalakshmi, C. Chandravathanam, **M. Umapathy**, B. Vasuki, "Vibration control of shape memory alloy actuated structure using fast output sampling feedback control", Proceedings of 2nd International Congress on Computational Mechanics and Simulation (ICCMS 2006), IIT Guwahati, pp. 460 466,2006.

- 7. K Dhanalakshmi, C Chandravathanam, **M Umapathy**, D Ezhilarasi, "Design of state feedback control for vibration suppression of shape memory alloy actuated flexible beam" Proceedings of CANSMART 2006, 9th International Workshop on Smart Materials and Structures, Toronto, Ontario, Canada, pp. 129-138, 2006.
- 8. Jagadeesh Pandian, **M. Umapathy**, S. Balachandar, S. Ramaswamy, M. Arumugam, "Modeling & simulation of novel three arm MEMS actuators & its applications", International MEMS conference 2006(MEMS 2006), Singapore, P 174, 2006.
- **9.** Jagadeesh Pandian, **M. Umapathy**, S. Balachandar, S. Ramaswamy, M. Arumugam, "Design of industrial vibration transmitter using MEMS accelerometer", International MEMS conference 2006(MEMS 2006), Singapore, P 175, 2006.
- 10. S.A Anbalagan, G. Uma, **M. Umapathy**, "Modeling and simulation of Capacitive Micro machined Ultrasonic Transducer(CMUT)", International MEMS conference 2006(MEMS 2006), Singapore, P 203, 2006.
- 11. J. Vijay, Ivan Saha, G.Uma, **M. Umapathy**, "Modeling and simulation of multi-port RF switch", International MEMS conference 2006(MEMS 2006), Singapore, P 225, 2006.
- **12.**M Shanmugavalli, G. Uma, B. Vasuki, **M. Umapathy**, "Design and simulation of mems devices using interval analysis", International MEMS conference 2006(MEMS 2006), Singapore, P 204, 2006
- 13. Girija, M. Umapathy, B. Bandyopadhyay, **G. Uma**, K. Dhanalakshmi, "Discrete time sliding mode control for piezoelectric actuated structures" Proceedings of IEEE

- International Conference on Industrial Technology (ICIT -2006), Mumbai, 2006,pp 1466-1471.
- 14. 30. D. Ezhilarasi, M. Umapathy, B. Bandyopadhyay, **G. Uma**, "Design and experimental evaluation of composite output feedback control for smart structures" Proceedings of IEEE International Conference on Industrial Technology (ICIT-2006), Mumbai, 2006, pp 692-697.
- 15. 31. N. Senthil Manoharan, **G. Uma**, M. Umapathy, S. Meenatchisundaram, "Structural vibration control using quantitative feedback theory" Proceedings of IEEE International Conference on Industrial Technology (ICIT-2006), Mumbai, 2006,pp 1816-1822.
- 16. 32. S.A Anbalagan, **G. Uma,** M. Umapathy, "Modeling and simulation of Capacitive Micro machined Ultrasonic Transducer (CMUT)" International MEMS conference (MEMS-2006), Singapore, 2006.
- 17. 33. J. Vijay, Ivan Saha, **G.Uma**, M. Umapathy, "Modeling and simulation of multi-port RF switch" International MEMS conference (MEMS-2006), Singapore, 2006.
- 18. 34. M Shanmugavalli, **G. Uma**, B. Vasuki, M. Umapathy, "Design and simulation of mems devices using interval analysis" International MEMS conference (MEMS-2006), Singapore, 2006.
- **19.**M Shanmugavalli, G. Uma, B. Vasuki, M. Umapathy, "Design and simulation of mems devices using interval analysis", International MEMS conference 2006(MEMS 2006), Singapore, P 204.
- **20.**M.Shanmugavalli, G.Uma, M.Umapathy and **B.Vasuki**, "Design and Simulation of MEMS Device using interval Analysis" International MEMS Conference(iMEMES2006)Biopolis, Singapore, May 9th-12th.Published in Journal of Physics Conference Series 34, 2006, pp 60-605.
- **21.**K. Dhanalakshmi, C. Chandravathanam, M. Umapathy, B. Vasuki," Vibration Control of Shape Memory Alloy Actuated Structure Using Fast Output Sampling Feedback Control", Proceedings of 2nd International Congress on Computational Mechanics and Simulation (ICCMS 2006), IIT Guwahati, December, pp 460 to 466.
- **22.** A. Girija, M. Umapathy, B. Bandyopadhyay, G. Uma and **K. Dhanalakshmi,** 'Discrete Time Sliding Mode Control for Piezoelectric Actuated Structures', *Proceedings of ICIT*

- 2006, IEEE International Conference on Industrial Technology, IIT, Kharagpur, Mumbai, 15 17 December 2006, 1466-1471. **IEEE Xplore** 1-4244-0726-5/06/\$20.00 '2006 IEEE 10.1109/ICIT.2006.372487
- **23.K. Dhanalakshmi**, C. Chandravathanam, M. Umapathy and B. Vasuki, 'Vibration control of Shape Memory Alloy actuated structure using Fast Output Sampling Feedback Control', *Proceedings of 2nd International Congress on Computational Mechanics and Simulation ICCMS 06, IITG*, India, I, 8-10 December 2006, 460-466.
- **24.K. Dhanalakshmi**, C. Chandravathanam, M. Umapathy and D. Ezhilarasi, 'Design of State Feedback Control for Vibration Suppression of Shape Memory Alloy actuated Flexible Beam,' *Proceedings of 9th International Workshop on Smart Materials and Structures CANSMART 2006, Toronto, Ontario, Canada*, 12-13 October 2006, 129-138.
- **25.N.Sivakumaran**, V.Kirubakaran, and T.K.Radhakrishnan, "Neural Model Predictive Controller for Multivariable Process", Proceedings of the IEEE International Conference on Industrial Technology 2006 (ICIT 2006), Paper No. 6327, IIT, Mumbai,pp.3072-3077.
- **26.N.Sivakumaran**, S.Nagammai, P.Karthikeyan and T.K.Radhakrishnan, "Control of Neutralization Process Using Neural Networks", Proceedings of the International Conference on Modeling and Simulation 2006 (MS 2006), Paper No. 192, 852-858, 2006, Kuala Lumpur, Malaysia.
- **27. N. Sivakumaran**, V. Kirubakaran, and T. K. Radhakrishnan, "Modeling and Robust Controller Design for Multivariable Process", Proceedings of the International Conference on Modeling and Simulation 2006 (MS 2006), Paper No. 193, 863-868, 3-5 April 2006, Kuala Lumpur, Malaysia.
- **28.Srinivasan K** & J. Prakash. "Non-linear State Estimation for Continuous Stirred Tank Reactor using Neural Network State Filter". IEEE sponsored International Conference on Emerging Trends in Information and Communication Technology (IEEE –indicon-2006) Proceedings,15-17 September 2006 held at New Delhi.
- **29.D. Ezhilarasi,** M. Umapathy, B. Bandyopadhyay, G. Uma, "Design and Experimental Evaluation of Composite Output Feedback Control for Smart Structures",

- Proceedings of IEEE International Conference on Industrial Technology (ICIT 2006), Mumbai, December 2006, pp 692 to 697
- **30.D. Ezhilarasi**, M. Umapathy, B. Bandyopadhyay, "Design and Experimental Evaluation of Simultaneous Periodic Output Feedback Control for Smart Structures", Proceedings of 2nd International Congress on Computational Mechanics and Simulation (ICCMS 2006), IIT Guwahati, December 2006, pp 642 to 645
- **31.**S. Soundaravalli, M. Umapathy, **D. Ezhilarasi**, J. Balasubramani, "H Infinity Vibration Controller for Smart Cantilever Beam", Proceedings of 2nd International Congress on Computational Mechanics and Simulation (ICCMS 2006), IIT Guwahati, December 2006, pp 501 to 505
- **32.**K Dhanalakshmi, C Chandravathanam, M Umapathy, **D Ezhilarasi**, "Design of State Feedback Control for Vibration Suppression of Shape Memory Alloy actuated Flexible Beam" Proceedings of CANSMART 2006, 9th International Workshop on Smart Materials and Structures, Toronto, Ontario, Canada, 12 13 October, 2006

- 1. Jagadeesh Pandiyan, S. Balachandar, S. Ramaswamy, M. Arumugam and **M. Umapathy** "Novel MEMS electrothermal actuators & its application", Proceedings of the IEEE Indicon 2005 conference, Chennai, pp. 123-126, 2005.
- 2. N. Senthil Manoharan, G. Uma and **M. Umapathy**, "Design and implementation of fuzzy control for inverted pendulum", Proceedings of 2nd Indian International Conference on Artificial Intelligent (IICAI-05), Pune, pp. 108-123, 2005.
 - 3. **M. Umapathy,** C. Gomathi Saratha and S. Neduncheliyan, "Design and implementation of simultaneous fast output sampling feedback control using programmable logic controller", Proceedings of the International Conference on Intelligent Systems 2005 (ICIS 2005), Kuala Lumpur, 2005.

- 4. **M. Umapathy,** C. Gomathi Saratha and S. Neduncheliyan, "Design and implementation of periodic output feedback control using programmable logic controller", Proceedings of the International Conference on Intelligent Systems 2005 (ICIS 2005), Kuala Lumpur, 2005.
- Jagadeesh Pandiyan, M. Umapathy, S. Balachandar, M. Arumugam and S. Ramaswamy, "Industrial acceleration sensing transmitter using capacitive MEMS accelerometer", Proceedings of the 1st International Conference on Sensing Technology, Palmerston North, New Zealand, pp. 123-127,2005
- J. Arunshankar, M. Umapathy and J. Balasubramani, "Real time state feedback control of a piezo actuated beam", Proceedings of ISSS 2005 International Conference on Smart Materials, Structures and Systems, Bangalore, Vol. I, pp. SA 143 – SA 147, 2005.
- 7. Sumy jose , V. Natarajan, G. Uma, **M. Umapathy**, M. Kathiresan, "Design and simulation of a PVDF-MOSFET based MEMS acoustic sensors", Proceedings of ISSS 2005 International Conference on Smart Materials, Structures and Systems, Bangalore, Vol. II, pp. SE 36-SE 43, 2005.
- 8. M. Sridevi, J. Balasubramani and **M. Umapathy,** "Design & implementation of state and output feedback control for piezoelectric bonded beam", Proceedings of ISSS 2005 International Conference on Smart Materials, Structures and Systems, Bangalore, Vol I, pp. SA 148 SA 155, 2005.

- 9. T.C. Manjunath, B. Bandyopadhyay, P. Seshu and **M. Umapathy,** "Active vibration control of smart structures using fast output sampling feedback technique", Proceedings of ISSS 2005 International Conference on Smart Materials, Structures and Systems, Bangalore, Vol. I, pp. SA 84 SA 91, 2005.
- 10. T.C. Manjunath, B. Bandyopadhyay, P. Seshu and **M. Umapathy,** "Discrete output feedback sliding mode control of flexible euler-bernoulli based smart structures", Proceedings of the Fourth International Conference on Smart Materials, Structures and Systems, Bangalore, Vol. I, pp. SA 163 SA 170, 2005.
- 11. N. Senthil Manoharan, **G. Uma** and M. Umapathy, "Design and implementation of fuzzy control for inverted pendulum" Proceedings of 2ndIndian International Conference on Artificial Intelligent (IICAI-2005), Pune, 2005.
- 12. Sumy jose , V. Natarajan, **G. Uma**, M. Umapathy, M. Kathiresan, "Design and simulation of a PVDF-MOSFET based MEMS acoustic sensors" Proceedings of International Conference on Smart Materials, Structures and Systems(ISSS-2005), Bangalore, 2005, Vol. II, pp. SE 36-SE 43.
- 13. S.Anbalagan, **G. Uma,** M.Umapathy, "Design simulation and analysis of capacitive micromachined ultrasonic transducer" Proceedings of the International Conference on MEMS and Semiconductor Nanotechnology, IIT Kharagpur, Kharagpur, 2005.
- 14. Srinivasa Rao Pragada, **G. Uma**, M.Umapathy, "Design and simulation piezoelectric micro actuator for high density hard disk" Proceedings of the International

Conference on MEMS and Semiconductor Nanotechnology, IIT Kharagpur, Kharagpur, 2005.

- 15. B.Vasuki, M.Shanmugavalli, "Uncertainty Analysis of Instrumentation Systems: Classical and interval Methods", SICE Annual Conference 2005, Okayama, Japan, Aug 8^{th} 10^{th} , pp 3725-3728.
- 16. Vijayan V., **Narayanan S**., Kanagasabapathy P.and Prakash J. (2005), 'Stability Analysis of First Order Plus Time Delay System under PI & PID Control for Simultaneous Parameter Variation', IEEE INDICON, 2005, 11-13 December 2005, Pages: 73-77.