Research Paper publication by Dr. Nirupama, ECE, IIT(ISM) Dhanbad.

Sl. No.	Publications in International Journals	Indexed	DOI
1	I. Bhar and ***N. Mandal***, "Design of a Noncontact Passive LC-Based Level Sensor With a Readout System," ***IEEE Transactions on Instrumentation and Measurement***, vol. 71, pp. 1-9, January 2022	**SCI Q1**	**https://doi.org/10.1109/TIM.2022.3145353**
2	I. Bhar and ***N. Mandal***, "A review on advanced wireless passive temperature sensors," ***Measurement, Elsevier Science***, vol. 187(110255), Jan. 2022.	**SCI Q1**	**https://doi.org/10.1016/j.measurement.2021.110255**
3	Anamika Lata, Ishita Bhar, ***N. Mandal***, "Multifunctional Electrode Polarization Impedance Based Sensor for Calculating Flow Rate and Conductivity of Fluid", ***IEEE Transactions on Instrumentation and Measurement***, vol.7, December 2021	**SCI Q1**	**https://doi.org/10.1109/TIM.2021.3139704**
4	P. Maurya, Sayyed Faizan Ali, ***N. Mandal***, "Design and Development of SAW Sensor based Wireless Target type Flow Transmitter" ***IEEE Sensors Journal***, vol.21, no. 19, pp. 21390–21399, August 2021.	**SCI Q2**	**https://doi.org/10.1109/JSEN.2021.3104863**
5	Sayyed Faizan Ali, ***N. Mandal***, "Design and Development of Wireless Electronic Flow Transmitter Using Circular IDC as Primary Sensor" ***IEEE Transactions on Instrumentation and Measurement***, vol.70, 2021	**SCI Q1**	**https://doi.org/10.1109/TIM.2021.3075034**
6	B. Mondal, Sayyed F Ali, ***N. Mandal***, "An Approach to Design a Wireless Air Flow Transmitter using Flex Sensor", ***IEEE Sensors Journal,*** vol.21, Issue. 9, pp. 10498–10505, May 2021.	**SCI Q2**	**https://doi.org/10.1109/JSEN.2021.3060814**
7	Anamika Lata, ***N. Mandal,*** "ANN based liquid level transmitter using Force resistive sensor for minimization of hysteresis and non-linearity error", ***IET Science, Measurement & Technology***, vol.14, Issue.10, pp.923-930, March 2021.	**SCI Q3**	**https://doi.org/10.1049/iet-smt.2020.0009**
8	M. Bandyopadhyay, S. Chowdhury Kolay, S. Chattopadhyay, ***N. Mandal***, "Modification of De' Sauty Bridge Network for Accurate Measurement of Process Variables by Variable Parameter Transducers", ***IEEE Transactions on Instrumentation and Measurement,*** vol.70, February 2021	**SCI Q1**	**https://doi.org/10.1109/TIM.2021.3060580**
9	Anamika Lata, ***N. Mandal***, "Electrode Polarization Impedance and its Application in Flow Rate Measurement of Conductive Liquid: A Review" ***IEEE Sensors Journal,*** vol.21, Issue. 4, pp. 4018–4029, February 2021.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2020.3029207**
10	Anamika Lata, ***N. Mandal***, "A Anemometric Type Flow Transmitter Using Transistor as a Primary Sensor.", ***IETE Journal of Research***, Taylor & Francis, April 2020.DOI: https://doi.org/10.1080/03772063.2020.1753586	**SCIE Q4**	**https://doi.org/10.1080/03772063.2020.1753586**

11	Sayyed F Ali, ***N. Mandal***, "Neural network based target type flow meter for high velocity liquid flow measurement", ***IET Science, Measurement & Technology***, vol.14, Issue.6, pp.726-734, July, 2020.	**SCI Q3**	**https://doi.org/10.1049/iet-smt.2019.0321**
12	Ishita Bhar, ***N. Mandal*** "Effect of Position of Electrodes in Polarization type Flowmeter: Analysis and Experimental Evaluation", ***IEEE Transaction on Instrumentation and Measurement***, vol. 69, no. 6, pp. 3061-3069, June 2020.	**SCI Q1**	**https://doi.org/10.1109/TIM.2019.2931527**
13	Mandakinee Bandyopadhyay, ***N. Mandal***, Subrata Chatterjee, S. C. Bera, "Low Cost System of Direct Measurement of Dissipation Factor for High Voltage Electrical Machine" ***IEEE Transaction on Instrumentation and Measurement***, vol. 69, no. 4, pp. 1547-1555, April 2020.	**SCI Q1**	**https://doi.org/10.1109/TIM.2019.2916241**
14.	B. Mondal, R. Sarkar, ***N. Mandal***, "Design and Implementation of an RF based Wireless Displacement transmitter" ***IEEE Sensors Journal,*** vol.20, Issue. 3, pp. 1383–1392, February 2020.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2019.2947318**
15.	Anamika Lata, ***N. Mandal***, "Investigation of Influence of Area of Electrodes on the Characteristics of Electrode Polarization Based Flow Sensor", ***IEEE Sensors Journal,*** vol.19, Issue. 19, pp. 8781–8789, October 2019.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2019.2921984**
16.	Anamika Lata, ***N. Mandal***, "Design of Flow Transmitter using a Capacitive type Sensor", ***IETE Journal of Research***, April 2019. DOI: 10.1109/JSEN.2019.2911991	**SCIE Q4**	**https://doi.org/10.1080/03772063.2019.1604175**
17.	Anamika Lata, **N. Mandal**, "Investigation of the Effect of Electrodes Distance on the Polarization Impedance type Flowmeter" ***IEEE Sensors Journal,*** vol.19, Issue. 15, pp. 6279–6288, August 2019.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2019.2911991**
18.	Sayyed F Ali, ***N. Mandal,*** "Design and Development of an Electronic Level Transmitter using Inter Digital Capacitor" ***IEEE Sensors Journal,*** vol. 19, Issue. 13, pp.5179–5185, July 2019.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2019.2903296**
19.	***N. Mandal,*** B. Mondal, R. Sarkar,, "Design of an Optical Temperature Transmitter for Inflammable Industry" ***IET Science, Measurement & Technology***, vol.13, Issue.5, pp.671-677, March, 2019.	**SCI Q3**	**https://doi.org/10.1049/iet-smt.2018.5100**
20.	S. Sinha, N. Mandal, "Design of a Smart Pressure Transmitter and Its Temperature Compensation Using Artificial Neural Network" **Journal of Control Automation and Electrical Systems, Springer,** vol.30, Issue.1, pp. 95-103, February 2019.	**Scopus**	**https://doi.org/10.1007/s40313-018-00430-1**
21.	Sayyed F Ali, ***N. Mandal,*** "Design and Development of an Electronic Level Transmitter based on Hydrostatic Principle", ***Measurement, Elsevier,*** vol. 132, pp. 125-134, January 2019.	**SCI Q2**	**https://doi.org/10.1016/j.measurement.2018.09.055**
22.	P. Maurya, ***N. Mandal,*** "Design Analysis of Wireless Pressure Measurement by Integrating Surface Acoustic Wave sensor with Bourdon tube" ***IEEE Sensors Journal,*** vol.18, Issue. 21, pp. 8996–9004, November 2018.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2018.2867567**
23.	P. Maurya, ***N. Mandal,*** **"**Design and Analysis of an Electro-Optic type Pressure Transmitter using Bellows as Primary Sensor" ***IEEE Sensors Journal,*** vol.18, no. 18, pp. 7330–7340, September 2018.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2018.2862921**

24.	S. Sinha, Rupam, ***N. Mandal***, "Design and Development of a Capacitance Based wireless Pressure Transmitter" ***IET Science, Measurement & Technology,*** vol.12, Issue.7, pp. 858-864, October 2018.	**SCI Q3**	**https://doi.org/10.1049/iet-smt.2017.0545**
25.	S. Chakraborty, S. K. Bera, S. C. Bera, N. Mandal "Design of a Simple Temperature Transmitter Circuit of an Electric Heater Operated Water Bath" ***IEEE Sensors Journal,*** vol.18, no. 8, pp. 3140–3151, February 2018.	**SCI Q1**	**https://doi.org/10.1109/JSEN.2018.2809465**
26.	B. Mondal, B. Kumar, ***N. Mandal***, "Design of an Inductive Pickup type Displacement Transducer using an electro-optic effect of lithium niobate based Mach-Zehnder Interferometers" ***IET Science, Measurement & Technology,*** 2018 vol.12, Issue.3, pp.395-404, May, 2018.	**SCI Q1**	**https://doi.org/10.1049/iet-smt.2017.0219**
27.	A. Lata, B. Kumar, ***N. Mandal***, "Design and development of a level transmitter using force resistive sensor as a primary sensing element" ***IET Science, Measurement & Technology***, vol. 12, issue.1, pp. 118-125, January 2018	**SCI Q3**	**https://doi.org/10.1049/iet-smt.2016.0513**
28.	***N. Mandal,*** G.Rajita, "An accurate technique of measurement of flow rate using rotameter as a primary sensor and an improved op-amp based network" ***Flow Measurement and Instrumentation, Elsevier,*** vol. 58, pp. 38-45, Dec. 2017.	**SCI Q3**	**https://doi.org/10.1016/j.flowmeasinst.2017.09.014**
29.	G. Rajita, A. Lata, ***N. Mandal***, "Anemometric type flow transmitter using LM335– A temperature sensing IC" ***Measurement, Elsevier,*** vol. 108, pp. 134-142, Oct. 2017.	**SCI Q2**	**https://doi.org/10.1016/j.measurement.2017.05.021**
30.	P. Maurya, N. Singh, ***N. Mandal*** "A novel technique on MZI based electro-optic type pressure transmitter using modified bourdon tube" ***Optik, Elsevier,*** vol. 144, pp. 573-585, Sept. 2017	**SCI Q3**	**https://doi.org/10.1016/j.ijleo.2017.07.012**
31.	S. Sinha, ***N. Mandal,*** **"**Design and Analysis of an Intelligent Flow Transmitter Using Artificial Neural Network" ***IEEE Sensors Letters***, vol. 1, No. 3, June. 2017		**https://doi.org/10.1109/LSENS.2017.2701409**
32.	P. Maurya, S. K. Bera, ***N. Mandal*** "Design and analysis of flow measurement of conductive liquid and transmission via optical channel" ***Flow Measurement and Instrumentation, Elsevier,*** vol. 52, pp. 246-254, Dec. 2016.	**SCI Q3**	**https://doi.org/10.1016/j.flowmeasinst.2016.11.003**
33.	S. Sinha, ***N. Mandal,*** **"** Optimization of Modified Rotameter using Hall Probe Sensor with respect to Liquid Density and its Calibration using Artificial Neural Network" ***International Journal on Smart Sensing and Intelligent Systems***, vol. 9, no. 4, pp. 2204-2218, Dec.2016		**https://doi.org/10.21307/ijssis-2017-960**
34.	B. Kumar, ***N. Mandal,*** 'Study of an electro-optic technique of level transmitter using Mach-Zehnder interferometer and float as primary sensing elements', ***IEEE Sensors Journal,*** vol.16, no. 11, pp. 4211–4218, June. 2016	**SCI Q1**	**https://doi.org/10.1109/JSEN.2016.2544960**
35.	B. Kumar, S. K. Bera***, N. Mandal,*** "Design and Development of an Electro-Optic Type-Flow Transmitter Using Mach–Zehnder Interferometer" ***IEEE Transaction on Instrumentation and Measurement***, vol. 65, no. 7, pp. 1716-1723, May. 2016	**SCI Q1**	**https://doi.org/10.1109/TIM.2016.2540886**

36.	S. Sinha, D. Banerjee, ***N. Mandal***, R. Sarkar, S. C. Bera, "Design and Implementation of Real-time Flow Measurement System using Hall Probe Sensor and PC based SCADA" ***IEEE Sensors Journal,*** vol. 15, no. 10, pp. 5592-5600, Oct. 2015	**SCI Q1**	**https://doi.org/10.1109/JSEN.2015.2442651**
37.	S. Chakarborty, S. K. Bera, ***N. Mandal***, S.C. Bera, "Study on Further Modification of Non-Contact Capacitance type Level Transducer for a Conducting Liquid" ***IEEE Sensors Journal,*** vol. 15, no. 11, Nov. 2015	**SCI Q1**	**https://doi.org/10.1109/JSEN.2015.2464072**
38.	G. Rajita, D. Banerjee, ***N. Mandal,*** S. C. Bera**, "**Design and Analysis of Hall Effect Probe-Based Pressure Transmitter Using Bellows as Sensor" ***IEEE Transaction on Instrumentation and Measurement,*** vol. 64, no. 9, pp. 2548-56, Sept. 2015	**SCI Q1**	**https://doi.org/10.1109/TIM.2015.2403152**
39.	***N. Mandal***, B. Kumar, R. Sarkar, S. C. Bera "Design of a Flow Transmitter Using an Improved Inductance Bridge Network and Rotameter as Sensor" ***IEEE Transactions on Instrumentation and Measurement,*** vol. 63, no. 12, pp. 3127-3136, Dec.2014	**SCI Q1**	**https://doi.org/10.1109/TIM.2014.2326770**
40.	*Brajesh Kumar, G Rajita, and* ***N. Mandal***,, "A Review on Capacitive-Type Sensor for Measurement of Height of Liquid Level" ***Measurement and Control, SAGE publication***, Vol 47, No 6, pp 219-224, September 2014	**SCI Q3**	**https://doi.org/10.1177%2F0020294014546943**
41.	S. Chakraborty, ***N. Mandal***, S. C. Bera, "Study of an IR Defusing Surface of a Float Used as Non-Contact Level Sensor" ***Sensors & Transducers Journal,*** vol. 183, Issue. 12, Dec. 2014, pp. 53-59	**Scopus**	**https://doi.org/10.1109/CIEC.2016.7513759**
42.	K.Chakraborty, ***N. Mandal***, R.Sarkar "Design of an Electronic Flow Transmitter Using LVDT & Hall Sensor" IJECT, vol. 4, issue spl. 1, pp. 180- 182, March 2013	**Scopus**	
43.	S.C. Bera, R. Sarkar, ***N. Mandal***, "An optoisolator based linearization technique of a typical thyristor driven pump" *"****ISA Transactions", Elsevier***, vol. 51, Issue.1, pp. 220-228, Jan. 2012	**SCI Q1**	**https://doi.org/10.1016/j.isatra.2011.09.005**
44.	S.C. Bera, ***N. Mandal***, R. Sarkar**,** "A novel technique of using a thyristor driven pump as the final control element and flow indicator of a flow control loop" ***"ISA Transactions", Elsevier,*** vol. 50, Issue. 3, pp. 496-503 July 2011	**SCI Q1**	**https://doi.org/10.1016/j.isatra.2011.03.006**
45.	S.C. Bera, ***N. Mandal***, R. Sarkar, "Study of a Pressure Transmitter Using an Improved Inductance-Bridge Network and Bourdon Tube as Transducer", ***IEEE Transaction on Instrumentation and Measurement***, vol. 60, no. 4, pp. 1453-60, April 2011	**SCI Q1**	**https://doi.org/10.1109/TIM.2010.2090697**
46.	S.C. Bera, R. Sarkar, ***N. Mandal*** "Study of the Effect of Excitation Frequency on the Performance of Electrode Polarization Impedance Type Flow Transducer for a Conducting Liquid" ***IEEE Transactions on Instrumentation and Measurement***, vol. 59, No. 12, pp.3289-95, Dec. 2010	**SCI Q1**	**http://dx.doi.org/10.1109/TIM.2010.2047133**
47.	S.C. Bera, ***N. Mandal***, R. Sarkar *"Study of an Improved Temperature Indicating Circuit Using Thermocouple"* ***IET Science Measurement and Technology***, vol.4, Issue.3, pp.169-76, April, 2010	**SCI Q3**	**http://dx.doi.org/10.1049/iet-smt.2009.0057**

48.	S.C. Bera, **N. Mandal**, R. Sarkar, "An accurate technique of measurement of a transducer output by using a modified two core saturable reactor" ***"Measurement", Elsevier,*** vol. 42, Issue. 8, pp. 1233-1240, Oct. 2009	**SCI Q2**	**https://doi.org/10.1016/j.measurement.2009.07.004**
49.	S.C. Bera, ***N. Mandal,*** R. Sarkar, "Design of a PC based mass flow Indicator of an electrical motor driven water lift pump using motor load current as the flow sensing parameter", ***Sensors & Transducers Journal***, vol. 108, Issue. 9, pp. 116-127, Sept. 2009	**Scopus**	**https://doi.org/10.1016/B978-034072018-9/50014-X**
50.	S.C. Bera, ***N. Mandal,*** R. Sarkar, S. Maity, "Design of a PC based pressure indicator using inductive pick-up type transducer and bourdon tube sensor", ***Sensors & Transducers Journal***, vol. 107, Issue. 8, pp. 42-51, Aug. 2009.	**Scopus**	
51.	S.C. Bera, ***N. Mandal,*** R. Sarkar, "A modified design of an electronic float transducer for measurement of liquid level", ***Sensors & Transducers Journal,*** vol. 92, Issue. 5, pp. 10-15, May 2008	**Scopus**	**http://dx.doi.org/10.1109/JSEN.2016.2544960**
52.	S.C. Bera, ***N. Mandal,*** "A modified Design of an Anemometric Flow Transducer" ***Sensors & Transducers Journal***, vol. 89, Issue. 3, pp. 83-92, March 2008	**Scopus**	**http://dx.doi.org/10.1109/CIEC.2014.6959077**
53.	S. C. Bera, B. Chakraborty, **N. Mandal,** R. Sarkar, "Study of Electrode Polarization Impedance Type Transducer for the Measurement of Flow Rate of a Conducting Liquid", ***International Journal of Lecturer on Modeling and Simulation,*** AMSE France, vol. 8, Issue 3, pp. 1-2-3, 2007	**Scopus**	**http://dx.doi.org/10.1109/TIM.2010.2047133**

International Conference

54.	Anamika Lata, Ishita Bhar, ***N. Mandal***, "Measurement of Conductive fluid flow rate with four terminals Electrodes", The 46th Annual Conference of the IEEE Industrial Electronics Society- IECON 2020, October 18-21, 2020, Singapore.	**https://doi.org/10.1109/iecon43393.2020.9254410**
55.	Sayyed Faizan Ali, Praveen Maurya, Anamika Lata, ***N. Mandal,*** "SAW Sensor based a Novel Hydrostatic Liquid Level Measurement" The 46th Annual Conference of the IEEE Industrial Electronics Society- IECON 2020, October 18-21, 2020 Singapore.	**https://doi.org/10.1109/iecon43393.2020.9254540**
56.	M. Bandyopadhyay, ***N. Mandal***, S. Chatterjee, S. C. Bera, "Remote Fault Monitoring System of a Transformer using GSM Technology" 9th Annual Information Technology, Electromechanical Engineering and Microelectronics Conference (IEMECON-2019), March 13-15, 2019, Jaipur, India.	**https://doi.org/10.1109/iemeconx.2019.8877107**
57.	Ishita Bhar, ***N. Mandal***, "An ANN Based Temperature Compensation Technique for Level Measurement Using Float and Hall Sensor", 15th IEEE India Council International Conference (INDICON-2018), December 16-18, 2018 Coimbatore, India.	**https://doi.org/10.1109/indicon45594.2018.8987122**

58.	A. Lata, ***N. Mandal,*** P. Maurya, J. K. Roy, S. C. Mukhopadhyay, *"*Development of a Smart Rotameter with Intelligent Temperature Compensation", 12th International Conference on Sensing Technology (ICST 2018), 4-6 December 2018, Lemrik, Ireland.	**https://doi.org/10.1109/icsenst.2018.8603670**
59.	P. Maurya, ***N. Mandal***, J. K. Roy, S. C. Mukhopadhyay, *"*A Novel Approach for Wireless Liquid Level Measurement Using SAW Sensor", 12th International Conference on Sensing Technology (ICST 2018), 4-6 December 2018, Lemrik, Ireland.	**https://doi.org/10.1109/icsenst.2018.8603665**
60.	Joyanta Kumar Roy, Tanmay Sinha Roy, ***N. Mandal***, Octavian A. Postolache, "A Simple technique for heart sound detection and identification using kalman filter in real time analysis", International Symposium on Sensing and Instrumentation in IoT Era (ISSI 2018), 6-7 September, 2018 Shanghai, China.	**https://doi.org/10.1109/issi.2018.8538255**
61.	***N. Mandal****, A. Lata, J. K. Roy, R. Sarkar*, "Design of a Real-Time PC Based Automatic Pressure Controller and An Optical Pressure Transmitter", 4th International Conference on Control, Automation and Robotics, (ICCAR2018), April 20-23, 2018, Auckland University of Technology, Auckland, New Zealand	**https://doi.org/10.1109/ICCAR.2018.8384684**
62.	Mandakinee Bandyopadhyay, ***N. Mandal***, Subrata Chatterjee, "PLC Based Flow Control System Using a Motor Operated Valve", 4th International Conference on Control, Automation and Robotics, (ICCAR2018), April 20-23, 2018, Auckland University of Technology, Auckland, New Zealand	**https://doi.org/10.1109/iccar.2018.8384681**
63.	Siddhartha Sarkar, Bipin Kumar Singh, ***N. Mandal***, Shakti Sangram Behera, "A FSR Based Data Acquisition System to Study the Interaction of Different Footwear with Different Foot-Regions" 2nd International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech) April 04-05, 2018, Science City, Kolkata.	**https://doi.org/10.1109/iementech.2018.8465235**
64.	***N. Mandal,*** A. Lata, J. K. Roy, R. Sarkar **"**Design and implementation of a real time PC based flow indicating controller and optical transmitter" IEEE Eleventh International Conference on Sensing Technology (ICST), pp. 1-6, 4-6 Dec., 2017, Sydney, NSW, Australia.	**https://doi.org/10.1109/icsenst.2017.8304468**
65.	B. Mondal, S. Rakshit, R. Sarkar, ***N. Mandal*** "Study of PID and FLC based water level control using ultrasonic level detector" **IEEE** International Conference on Computer, Electrical & Communication Engineering (ICCECE), pp. 1-6, 16-17 Dec. 2016, Kolkata, India.	**https://doi.org/10.1109/iccece.2016.8009560**
66.	S. Chakraborty, ***N. Mandal,*** S. C. Bera, S. K. Bera, M. Chattopadhyay, "An innovative method for the measurement of liquid level of a conducting liquid" IEEE International Conference on Computer, Electrical & Communication Engineering (ICCECE), pp. 1-5, 16-17 Dec. 2016, Kolkata, India.	**https://doi.org/10.1109/iccece.2016.8009594**
67.	B. Mondal, J. K. Roy, ***N. Mandal,*** R. Sarkar "An approach to design a Bourdon tube pressure transmitter for remote measurement" **IEEE** 10th International Conference on Sensing Technology (ICST), pp. 1-6, 11-13 Nov. 2016, Nanjing, China.	**https://doi.org/10.1109/icsenst.2016.7796254**

68. M. Bandyopadhyay, S. Chattopadhyay, ***N. Mandal***, "Position control system of a PMDC motor" **IEEE** International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT), pp. 752- 754, 3-5 March 2016, Chennai, India. **https://doi.org/10.1109/iceeot.2016.7754785**

69. S. Sinha, ***N. Mandal***, S.C. Bera, " Calibration of Electrode Polarization Impedance type Flow meter Using Neural Network" **IEEE** 2nd International Conference on Control, Instrumentation, Energy & Communication (CIEC), pp. 64-67, 28-30 Jan. 2016, Kolkata, India. **https://doi.org/10.1109/ciec.2016.7513807**

70. S. Chakraborty, ***N. Mandal,*** S. C. Bera, "Study of a modified IR defusing surface as a uniform source and its application as non-contact level sensor" **IEEE** 2nd International Conference on Control, Instrumentation, Energy & Communication (CIEC), pp. 106-110, 28-30 Jan. 2016, Kolkata, India. **https://doi.org/10.1109/ciec.2016.7513759**

71. G. Rajita, ***N. Mandal***, "Review on transit time ultrasonic flowmeter" **IEEE** 2nd International Conference on Control, Instrumentation, Energy & Communication (CIEC), pp. 88-92, 28-30 Jan. 2016, Kolkata, India. **https://doi.org/10.1109/ciec.2016.7513740**

72. G. Rajita, B. Mondal, ***N. Mandal,*** R. Sarkar "Design of a PC based real time mass flow indicator using AD590 as sensor" **IEEE** First International Conference on Control, Measurement and Instrumentation (CMI), pp. 449-453, 8-10 Jan. 2016, Kolkata, India. **https://doi.org/10.1109/cmi.2016.7413788**

73. **N. Mandal,** B. Kumar, R.Sarkar "Design and development of an optical pressure sensing system using bellows as primary sensor" **IEEE** International Conference on Telecommunications and Photonics (ICTP), pp. 1-4, 26-28 Dec. 2015, Dhaka, Bangladesh. **https://doi.org/10.1109/ictp.2015.7427923**

74. B. Kumar, S. Sinha, ***N. Mandal*** "Design and development of an eletro-optic type flow transmitter using Mach-Zehnder Interferometer" **IEEE** International Conference on Industrial Instrumentation and Control (ICIC), pp. 602-606, 28-30 May 2015, Pune, India. **https://doi.org/10.1109/iic.2015.7150813**

75. ***N. Mandal,*** B. Kumar, G. Rajita, B. Mondal "A modified design of a flow transmitter using rotameter as a primary sensor and LVDT as a transducer" IEEE International Conference on Control, Instrumentation, Energy and Communication (CIEC), pp. 194 – 198, 31 Jan.-2 Feb. 2014, Calcutta, India. **https://doi.org/10.1109/ciec.2014.6959077**

76. S. C. Bera, N. Mandal, R. Sarkar, "Study of a Thyristor driven pump as a flow indicator", **IEEE** International Conference on Power Systems, pp. 1-6, 27-29 Dec. 2009, Kharagpur, India. **https://doi.org/10.1109/icpws.2009.5442771**

77. S.C. Bera, R. Sarkar, ***N. Mandal*** "A Review Work on Reconstruction of ECG Wave from Fourier Harmonic Components" **IEEE** Region 10 and the Third international Conference on Industrial and Information Systems (ICIIS 2008), pp. 1-5, 8-10 Dec. 2008, Kharagpur, India. **https://doi.org/10.1109/iciinfs.2008.4798438**

78. S.C. Bera, B. Chakraborty, ***N. Mandal,*** R. Sarkar " Study of electrode polarization impedance type transducer for the measurement of flow rate of a conducting liquid"– Proceedings of the International

Conference on "Modeling and Simulation, MS'07, India" pp. 332-335, Dec. 3-5, 2007, Kolkata, India. [**Obtained best paper award.]**

79. S.C. Bera, ***N. Mandal*** "Study of an IC based flow transducer"– Proceedings of the International Conference on "Modeling and Simulation, MS'07, India" pp 329-331, Dec. 3-5, 2007, Kolkata, India.

80. S.C. Bera, ***N. Mandal***, R. Sarkar, "Study of A Modified Transductor Type Temperature Indicator Using Thermocouple" Proceedings of the International Conference on "Emerging Trends on Electrical Engineering, ETEE-2007, Jan. 12-14, 2007, Electrical Engineering Department, Jadavpur University, at Science City, Kolkata, India

National Conference

81. G. Rajita, *N. Mandal*, "Design of an Inductive Pick up Type Flow Transducer Using Rotameter" Proceeding of IEEE &IETE Sponsored National Conference ETES 2014, Asansol Engineering College, Feb 01-02, 2014

82. Brajesh Kumar, *N. Mandal*, "A Modified Design of a Hydrostatic Level Transducer using Bourdon Tube" Proceeding of IEEE &IETE Sponsored National Conference ETES 2014, Asansol Engineering College, Feb 01-02, 2014

83. Deblina Banerjee, *N. Mandal*, "Design of a PC based Flow Indicator Using AD590 as a sensor" Proceeding of IEEE &IETE Sponsored National Conference ETES 2014, Asansol Engineering College, Feb 01-02, 2014

84. Bikas Mondal, *N. Mandal*, "Comparative Analysis of Conventional PID Controller and Fuzzy Logic Controller in the Field of Liquid Level Control System" Proceeding of IEEE &IETE Sponsored National Conference ETES 2014, Asansol Engineering College, Feb 01-02, 2014.

85. ***N. Mandal,*** *R. Sarkar, Animesh Ghosh, and Lipika Ghosh* "Design of a Hall Probe Pressure Transmitter using Bellows as Sensor" *Proceeding of National Conference on Recent Trends in Communication, Measurement & Control, CMC-2012, vol. 1, pp. 26-29, August 2012.*

86. ***N. Mandal,*** *R. Sarkar, Kunal Chakraborty, Lipika Ghosh, and Sumana Roy* "Design of an Electronic flow Transmitter using Rotameter" *Proceeding of National Conference on Recent Trends in Communication, Measurement & Control, CMC-2012, vol. 1, pp. 30-33, August 2012.*

87. *S.C. Bera,* ***N. Mandal*** *and R. Sarkar,*"A Simple Technique for the measurement of Flow in a Pipe Line", *Proceeding of National Conference, 14th West Bengal Science and Technology Congress*, Jadavpur University, Kolkata, February 27 to March 1st , pp 93-93A, 2007

88. *S.C. Bera,****N. Mandal*** *and R. Sarkar* "Design of a Modified Magnetic Modulator for Measurement of very small output of a Transducer", *Proceeding of National Conference, 14th West Bengal Science and Technology Congress*, Jadavpur University, Kolkata, February 27 to March 1st , pp 73-73A, 2007