

List of Publications:

- **Paper published in International journal:**

- [1]. **Richa Negi**, Shubhi Purwar, Haranath Kar, “Delay-dependent stability analysis of discrete time delay system with actuator saturation” *Intelligent Control and Automation*, vol. 3, no. 1, pp. 34-43, 2012.
- [2]. **Richa Negi**, Haranath Kar, and Shubhi Purwar, “Stability analysis of 2-D discrete linear system described by the Fornasini-Marchesini second model with actuator saturation,” *ISRN Computational Mathematics*, vol. 2012, Article ID: 847178.
- [3]. **Richa Negi**, Shubhi Purwar, Haranath Kar, “Anti -windup design with global asymptotic stability for discrete-time linear systems: An LMI-based approach,” *Canadian Journal on Electrical and Electronics Engineering*, vol. 2, no. 12, 2011.
- [4]. A. Pati and **Richa Negi**, “An anti-windup control strategy to actuator saturating input voltage for active magnetic bearing system” *COMPEL - The international journal for computation and mathematics in electrical and electronic engineering*, vol. 35, no. 3, pp 1-19, 2016.
- [5]. A. Pati, V.C. Pal and **Richa Negi**, “Design of 2-DOF control and disturbance estimator for magnetic levitation system” *Engineering, Technology & Applied Science Research*, vol. 7, no. 1, pp 1369-1376, 2017.
- [6]. V. C. Pal, and **Richa Negi**, “An observer based dynamic output feedback controller for discrete system with input saturation and time varying delay,” *International Journal of Control Theory and Applications*, vol. 8, no. 4, pp. 1383-1394, 2015.
- [7]. V. C. Pal, **Richa Negi**, and H. Kar, “Stability analysis of 2-D discrete systems described by Roesser model with time varying delay and input saturation using anti-windup strategy,” *International Journal of Innovative Computing, Information and Control*, vol. 12, no. 6, pp. 1943-1960 , 2016.
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- [10]. V. C. Pal and **Richa. Negi**, “ H_∞ based anti-windup controller for 2-D discrete delayed systems in presence of actuator saturation,” *IMA Journal of Mathematical Control and Information* vol. 35, pp. 627-660, 2018.
- [11]. V. C. Pal and **Richa Negi**, “Delay-dependent stability criterion for uncertain discrete time systems in presence of actuator saturation,” *Transactions of the Institute of Measurement and Control*, DOI: 10.1177/0142331217695387.
- [12]. O. Yadav, N. Kishor and **Richa Negi**, “Supplementary frequency regulation in non-synchronous AC system connected via MTDC,” *International Journal of Electrical Power & Energy Systems*, vol. 104, pp. 110-123, 2019.
- [13]. O. Yadav, N. Kishor and **Richa Negi**, “Power imbalance sharing among the power converters in MTDC system,” *International Journal of Electrical Power & Energy Systems*, vol. 109, pp. 584-596, 2019.

- [14]. V. C. Pal, **Richa Negi** and Quanxin Zhu “Stabilization of discrete-time delayed systems in presence of actuator saturation based on Wirtinger Inequality,” *Mathematical Problems in Engineering*, Hindawi, 2019 vol. 2019, Article ID 5954642.
- [15]. R. Jaiswal, A. Agarwal and **Richa Negi**, “Smart solution for reducing the COVID-19 risk using smart city technology,” *IET Smart Cities*, vol. 2, no. 2, pp. 82-88, 2020.
- [16]. O. Yadav, S. Prasad, Nand Kishor, **Richa Negi**, and S. Purwar, “Controller Design for MTDC grid to Enhance Power Sharing and Stability,” *IET Generation Transmission & Distribution*, vol. 14, no. 12, 2020.
- [17]. V. C. Pal, **Richa Negi** and Ishaan Mudgal, “Design of Nonlinear Anti-windup Compensator for Time-Delayed Systems based on Triple Lyapunov Functional,” *Transactions of the Institute of Measurement and Control*; vol. 42, no. 5, pp. 997-1007, 2020.
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- [20]. R. Jaiswal, A. Agarwal, **R. Negi**, A. Vikram “[Design and Development of Experimental Based Phase Modulated Model Predictive Control for Torque Ripple Reduction of MMC Fed BLDC Motor](#)” *Journal of Engineering Research*, vol.9, pp. 70-78, 2021.
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- [22]. K. Agrawal, V. C. Pal, **Richa Negi** and V. Patel, “H_∞ stabilization of uncertain discrete time-delayed system with actuator saturation by using Wirtinger inequality” *International Journal of Automation and Control*, vol. 17, no. 1, pp. 43-72, Nov, 2022.
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- [29]. A. Srivastava, **Richa Negi** and H. Kar, “Optimal guaranteed cost control of discrete-time uncertain systems subjected to state saturation nonlinearity,” Transactions of the Institute of Measurement and Control, 01423312231181977, Jun 2023.
- [30]. A. Srivastava, **Richa Negi** and H. Kar, “Guaranteed Cost Control for 2-D Uncertain Discrete State-Delayed Systems in Roesser Model Employing Actuator Saturation,” Circuits, Systems, and Signal Processing, pp. 1-29, Aug 2023.
- [31]. A. Yadav, N. Kishor, **R. Negi**, M. Opas, P. Raussi, “Performance Analysis of Bus Voltage in Distribution Network with High Penetration of PV Controlled via Data-Driven Approach,” International Transactions on Electrical Energy Systems. 2023 Sep 30; 2023.
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- **Papers presented in International/National conferences:**

- [1]. **Richa Negi**, “Stability of regulated synchronous machine with penstock,” National conference in Power System, Warangal, 1998.
- [2]. **Richa Negi**, S. Purwar, and H. Kar, “An LMI criterion for anti-windup design with global asymptotic stability for continuous-time linear system,” Power, Control and Embedded Systems (ICPCES), 2010 International Conference, pp.1-3, Nov. 29 2010-Dec. 1 2010.
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- [5]. Janardhan Kundu and **Richa Negi**, “Stability analysis of discrete time delay system with actuator saturation,” Power, Control and Embedded System (ICPCES), 2012, 17-19 DEC. Dec. 2012.
- [6]. Vipin Chandra Pal, Ram Lautan, Nitin Kumar Sharma and **Richa Negi**, “An Overview of Anti windup Technique for Discrete Time Linear Systems with Input Saturation,” presented in ISRTEC 2012 at KNIT Sultanpur.
- [7]. Sonal Singh, **Richa Negi** and Bhanu Pratap, “Nonlinear Feedback Linearization Controller Design for Half Car Suspension System,” Annual IEEE India Conference (INDICON), 2013.
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- [10]. Vikas Singh, Vipin Chandra Pal, Shikha Singh and **Richa Negi**, "An analysis of discrete time anti-windup system subjected to saturation: An observer based approach," 2014 Students Conference on Engineering and Systems (SCES), 28-30 May 2014, MNNIT Allahabad, Uttar Pradesh, India.
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- [12]. Vipin Chandra Pal, Vikas Singh and **Richa Negi**, "Stability Analysis of Discrete Systems Subjected to Input Quadratic Nonlinearity with Saturation," presented in IEEE UPCON 2015 at IIT Allahabad.
- [13]. Vipin Chandra Pal, Jeetendra Kumar, and **Richa Negi**, " H_∞ control of discrete time delayed systems in presence of actuator saturation," Indian Control Conference (ICC), 2017, pp. 295 - 302, 4-6 Jan. 2017, at IIT Guwahati.
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- [18]. A. Yadav, N. Kishor, **R. Negi**, "Voltage Profile Analysis in Distribution Network for Allowable Hosting Capacity from PV Integration," 2022 1st International Conference on Sustainable Technology for Power and Energy Systems (STPES), Srinagar, India, pp. 1-6, 04-06 Jul 2022, IEEE.
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- [20]. Ghosh S, Singh AK, **Negi R**, Singh SN, "Battery Degradation Aware Power Exchange in Grid-Integrated PV-Battery Assisted EV Charging Station," In 2022 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES) 2022 Dec 14 (pp. 1-6). IEEE.

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- [27]. K. Rana, M. Biswal, N. Kishor, and **R. Negi**, “Fault Detection and AC-DC System Dynamics Analysis of a Modular Multi-level Converter based HVDC Network under DC Faults,” proceeding of SIGMAA-Advances in Intelligent Systems and Computing Series, Springer 2023.