MANISH YADAV

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Key Expertise:

Experienced Ph.D., Solution-oriented and **Analytical Electrical Engineer** with a combined experience of over **4+ years** in Research, Academia for **Model-Based Controller Design** related to **Process control Technology, non-linear models and mathematical models** using **MATLAB software.** I am primarily focused in Control system design, operation, and tuning. Having knowledge in model based controller design in **MATLAB Simulink.**

Work Summary:

- Working in **Tech Mahindra for MIL Testing with TPT**
- Experience in model based controller design using **MATLAB Simulink**.
- Experience in Model-Based Controller Design for **DC-DC converters in MATLAB Simulink.**
- Experience in Model Based Controller Design for **Process Control Applications**
- Experience in schematic drawing.
- Experience in preparing engineering and technical reports.
- Communicating with the customer on a regular basis which helps in understanding the requirements in deep, focusing on the Customer Satisfaction Feedback.
- Experience in **teaching from 2011 to 2017.**

Skills:

Organizational Experience:

Lab	**Control system Lab, Electro-Technic(ET) Lab, Measurement Lab**
Simulation Tools	***MATLAB, PLC***
Schematic Graphical layout software	VISIO
Programming Tool	***MATLAB: Simulink/MIL Testing***
Equipment's Handled	Digital Multimeters, Analogue Multimeter,

Educational Qualifications:

Course	Discipline/ Specialization	School/College	Board/ University	Passing Year	Percentage /CGPA
PhD	Control System	S.V. National Institute of Technology, Surat	S.V. National Institute of Technology, Surat, Gujarat	Thesis Completed	8.2
M.E.	Control System	MITS, Gwalior	RGPV	2011	77

B.Tech	Electrical Engineering	MPCT, Gwalior	RGPV	2006	65.09 %
Intermediate (10+2)	Physics, Chemistry, Maths, English, Hindi	Gorkhi Higher Secondary School	Madhya Pradesh (MP) Board	2000	59%
High School	Regular	Boys Higher Secondary School	Madhya Pradesh (MP) Board	1998	62%

Project Handled:

Project 1

Project Name	ISUZU MATLAB
Description	The objective is to test the model in different scenario. As a result, I have developed the test frame and write the test case for different scenario. After that I have generate the test report.
Role & Contribution	Role: Senior engineer Contribution: ➢ Creation of test frame ➢ Write the test case in different scenario ➢ Generate the report
Tools/Software	• Time partition testing(TPT) • MATLAB Simulink

Project 2:

Project Name	Control of Non-Minimum Phase System using inverse response compensator.
Description	The objective is to modified the controller after embedding the compensator which overcome the pernicious effect of Non-Minimum Phase zeros. Further developed and implement a new tuning strategy of PID Controller.
Role & Contribution	Role: Ph.D Scholar Contribution: ➢ Literature Survey ➢ Design of fractional order PID controller using MATLAB ➢ Using optimization for getting better results ➢ Simulation and coding the controller design, stability and sensitivity analysis
Tools/Software	• MATLAB (script) • MATLAB Simulink

Courses:

- Attended a short-term course on "*Precision Positioning Systems: Dynamics and Control*", conducted at NIT Kurukshetra, during 31 Jan.– 4 Feb. 2022.
- Attended a Faculty Development Program on "*Recent Trends in Research and Opportunities in Electrical and Electronics Engineering*", organized by the Department of Electrical Engineering, NIT Patna, 15-23 March 2021.

Journals:

1. **Manish Yadav**, Hirenkumar G. Patel, Control of non-minimum phase system using inverse response compensator with different approximations, *International Journal of Modelling, Identification and Control*. (Inderscience). ***(Accepted)***
2. **Manish Yadav**, Hirenkumar G. Patel, "Control of non-minimum phase system using parallel cascade control", *International Journal of Modelling, Identification and Control. (Inderscience*). ***(Accepted)***
3. **Manish Yadav,** "An Enhancement in series cascade control for non-minimum phase system", *Chemical Product & Process Modelling , De Gruyter* ***(Accepted)***
4. **Manish Yadav,** Hirenkumar G. Patel, Optimal fractional IMC based series cascade control for the non-minimum phase system: A delayed Bode's ideal transfer function approach, *Chemical Product & Process Modelling.* ***(Accepted)***
5. **Manish Yadav**, Hirenkumar G. Patel, "An enhanced feedback-feedforward control scheme for process industries" *Chemical Product and Process Modeling, De Gruyter* , pp. 000010151520210016**.** ***(Accepted)***

Conferences:

1. **Manish Yadav**, Hirenkumar G. Patel and S.Nagarsheth " Enhancement in series cascade control for non-minimum phase system", IFAC-PapersOnLine, Vol. 55, Iss.1, pp. 303-308, NIT Silchar, 2022.
2. **Manish Yadav**, Hirenkumar G. Patel and Shipra kumari, "The combined effect of controller & compensator for three-level dc-dc boost converter" IFAC-PapersOnLine, Vol. 55, Iss. 1, pp. 454-459, NIT Silchar, 2022.
3. **Manish Yadav,** and Hirenkumar G. Patel, "Sensitivity analysis of IMC-PID controller with smith predictor using different filters", *Proc. of 17th India Council International Conference (INDICON)), NSIT, New Delhi*, pp. 978-983, Dec. 2020.
4. **Manish Yadav**, P.G. Medewar and Hirenkuamr G. Patel " Sensitivty analysis of knee joint motion", Proceedings of the International Conference on Intelligent Computing and Control Systems, pp. 236-241, Madurai, 2020.

Book Chapter:

Manish Yadav, Prashant G. Medewar, Arvind K. Singh and Hirenkumar G. Patel, "A Sensitivity Analysis of Phase-Locked Loop Systems", *Phase-Locked Loops: Structure, Functions and Applications, Editor: S. N. Sharma, Nova Science Publishers*, New York, pp. 205-224, 2020.

REFERENCES:	
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