



Amit Shukla

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Google Scholar: <https://scholar.google.ae/citations?user=pjJwY5oAAA&hl=en>

An achievement-driven professional targeting assignments in **Research & Development** with an organization of high repute

Profile Summary

- **Ph.D. professional** with **over 10 years** of experience in **Industrial Research & Development**
- **Successful Entrepreneurship** by conceptualizing founding and running **three startup companies**
- **Research Interests include** Robotics, Machine Learning, Artificial Intelligence, Mechatronics, Control Systems, Inspection Automation, Hybrid Electric Vehicles, Unmanned Aerial & Ground Vehicle
- Established “Robotics Center” at The Petroleum Institute by funding from GRC for developing robotics solution specific to Oil & Gas industry
- Conceptualizing and successfully delivering AI and Robotics based products like **NCM** (Non-contact Condition Monitoring System, PI-Robotics Center & Simhatel) & **mPreditiktive** (iSmriti) for inspection, maintenance and health prediction of industrial infrastructures
- Experience in managing complete project operations entailing planning, resource utilization and manpower management with technical guidance to the team
- Expertise in managing multiple tasks/projects simultaneously in challenging environments with excellent relationship management skills & capability to relate to people at any level of management

Core Competencies

Robotics & Mechatronics
Artificial Intelligence/ML
Control Systems & Automation

Drone Technology & Application
Machine Vision
Project Management

Teleoperation & IoT
Autonomous Driving & Electric Vehicle
Team Building & Leadership

Organizational Experience

Head of Robotics, 4iR, DEWA R&D

Dubai Electricity and Water Authority (DEWA) R&D, Dubai, UAE

Sept 2021 Till Present

- Technically supervising and managing all the robotics project at DEWA R&D
- Technically leading challenging projects such as “AI-assisted haptic teleoperated robotics for IMR of overheadlines” project with Stanford university
- Developing state of art robotics facilities for deploying robotics solutions for Power Industries & other utilities
- Building collaborations with world class universities and R&D centers to deliver robotics & AI based solution for Industrial Sector

Assistant Professor

School of Engineering, Indian Institute of Technology Mandi, Himachal Pradesh, India

May 2019 Till Present

- Built Robotics center of excellence
- Started center for condition monitoring of industrial machineries
- Creating Hybrid Electric Vehicle laboratory for testing at low temperature, low pressure and high altitude

Founder & Co-Founder

Simhatel Technologies Pvt Ltd, Uttar Pradesh, India

March 2019 Till Present

- Secured funding of INR 3 Crore in year 2021 for developing advance version of NCM3.0 and its commercialization
- Completed the prototype of NCM2.0 (Non-contact Condition Monitoring System) for autonomous robotic inspection of oil and gas pipelines
- Based on experience of NCM inspection of 32km of Oil and Gas pipelines of ADNOC, UAE, negotiated a new deal with Gas authority of India Ltd (GAIL India) for new inspection contract in India
- Advance stage in a new business deal for NCM with Arabian Robotics, subsidiary of SAUDI ARAMCO

iSmriti Infotek Pvt Ltd at Technopark, IIT Kanpur, Uttar Pradesh, India

Jan 2018 Till Present

- Delivered key projects like one titled as “Machine fault diagnosis and prediction for feeder pump” to Marubeni Power Asset management, Japan
- Developing AI based analysis from magnetic data collected by NCM

Team Size: 20-25

Founder & Director

iSmriti Infotek Pvt Ltd at Technopark, IIT Kanpur, Uttar Pradesh, India
Simhatel Technologies Pvt Ltd, Uttar Pradesh, India
Ahladini Technologies Pvt Ltd, Bangalore, Karnataka, India

Jan'18 - Till Present

Team Size: 6-15

Research Scientist

Khalifa University Center for Autonomous Robotic Systems (KUCAR) (The Khalifa University for Science and Technology (KUST)), Abu Dhabi, UAE

Jan'18 - May'19

Team Size: 12-14

Post-Doctoral Fellow

PI Robotics Centre Lab (The Petroleum Institute), ADNOC, Abu Dhabi, UAE

Sep'12 - Dec'17

Role:

- Conducting cutting edge research for finding solution of complex engineering challenges for application of Control Systems, Robotics, Teleoperation/Mechatronics, AI and Machine Vision in various industrial sector
- Performing high quality fundamental research contributing to advancement of world knowledge, preparing findings for publication; reviewing & abstracting published research
- Managing the R&D operations & modification of existing technology, based on feedback from industry & trends; supervising development of intermediates and finished products as per industrial requirements
- Conceptualizing, developing, commercializing and leading business negotiations of critical robotic and AI based autonomous inspection products for industries and consumers
- Contributing in setting the academic strategy of the department in line with institute strategic plans & direction
- Collaborating with leading researchers and acting as a mentor for the researchers and students
- Supervising projects, contributing to new proposals, preparing evaluation reports, and writing grant applications
- Conducting research and analysing design proposals, specifications & other data to evaluate the feasibility, cost, requirements of designs or applications
- Writing/reviewing detailed documents like process package, development reports, validation reports & results; preparing monthly reports, annual product reports & periodic product review

Previous Experience

Jul'07 – Mar'08 with John F. Welch Technology Centre (General Electric (GE)), Bengaluru as Executive Engineer

Project: Integrated Configuration Design System-Analysis (ICDS-A)

Description: This was built on top of UGNX integrated to work with Ansys in batch/interactive mode for executing the FE analysis for aircraft engine's configuration hardware such as tubes, brackets, clamps, fittings & ducts.

Publications

- Successfully published 8 Journal Publications and 26 Conference Publications (Refer Annexure for Details)

Patents

- "Power Source Control using Generated Efficiency Control Maps" in United Kingdom GB20120003884 20120305
- "Method and Apparatus for Power Source Control" in Europe EP20130704941 20130215
- Three major patents are under filing with application E20211044838, E20211044839 and E20211044840

Thesis Supervision

- Supervision on 2 PhD thesis, 3 M.S. Thesis, 5 M.Tech. Thesis & 10 B.Tech. projects (Refer Annexure for Details)

Teaching Experience

- Experience of facilitating/coaching students in various topics in Indian Institute of Technology Mandi, Khalifa University of Science & Technology, PI Robotics Centre Lab, BVIT, Imperial College London and Indian Institute of Technology Kanpur (Refer Annexure for Details)

Entrepreneurial Experience

Co-Founder of "iSMRITI", in year 2018, along with IITK alumni and IITK professor, with the purpose of developing robotics based automated inspection and surveillance systems for different infrastructures

Website: www.ismrititek.com/

Founder of "Simhatel Technologies Pvt. Ltd" and Co-Founder of "Systems for Smart Inspection LLC, Abu Dhabi, UAE", in year 2019, for field deployment and commercialization of NCM system for oil & Gas pipelines

Website: www.simhatel.com/

Founder of "Ahladini Technologies Pvt. Ltd., India" in year 2018, Creation of Digital Infrastructure for Modern Times

Website: www.ahladinitech.com/

Internship

Organization: University of Bordeaux, CNRS Lab, France

Period: May'05 – Jul'05

Project: Analysis of Convection Patterns in Supercritical Fluids under Vibrational Acceleration in Zero Gravity Condition

Responsibilities:

- Conducted study on the behaviour of fluid very near to its critical temperature and pressure in zero gravity
- Learned many aspects of fluid dynamics and heat transfer in the aerospace engineering

Research Grants

Project 1:

UAV/UGV Collaborative System for Autonomous Underground Utility Surveying

Project Budget: USD 427,872, **Funding Agency:** IHFC, IIT Delhi, Government of India

Period: Two years Y21-Y22

Responsibilities:

- Development of autonomous non-contact non-destructive underground utility surveying platform
- Global map creation using aerial images (UAV)
- Development of precise path planning algorithm using global and local map matching for UGV
- Development of automatic data analysis and object classification system
- 3D map generation for underground utilities with its geo-locations

Project 2:

Phase-II: A condition monitoring system with multi-agent mechanism for external non-contact smart inspection of buried oil and gas pipelines

Project Budget: USD 1,307,540 **Funding Agency:** ADNOC (Abu Dhabi National Oil Company), UAE

Period: Jan'18 – till date

Responsibilities:

- Developing robust and accurate tracking by fusion of data from GPS, Visual Camera and Pipe Locator
- Formulating algorithms for automated processing and interpretation of regularly gathered enormous data by using Artificial Intelligence (AI) & Machine Learning (ML) algorithms for speedy and accurate fault detection and future anomaly predictions
- Working on identification of 3D berms of buried pipelines by camera installed on low altitude flying UAV
- Managing autonomous landing and take-off of UAV from the top of the AGV for charging of UAV
- Performing experiments using contact and non-contact MMM sensors to generate relationship between magnetic fields to quantify stress of the pipelines under different operating conditions

Project 3:

Phase-I: A condition monitoring system with multi-agent mechanism for external non-contact smart inspection of buried oil and gas pipelines

Project Budget: USD 595,000, **Funding Agency:** ADNOC (Abu Dhabi National Oil Company), UAE

Period: Jan'15 – Dec'17

Description: Inspection sensor (MMM) not only detects existing faults, will also be able to predict the future possible fault (such as corrosion) location in the core of buried metal pipeline, standalone MMM sensors is validated.

Responsibilities:

- Built a smart multi-agent non-contact external inspection system, which will be used for condition monitoring and defect inspection in the buried metallic pipelines for Oil and Gas industries
- Developed automated tracking controllers for UAV and AGV based on individual navigation sensors such as Visual Camera, GPS and Pipe Locator

Phase I & Phase II of “**Condition Monitoring**” project is sponsored (\$2 million) by Gas Processing and material Science Research Centre (GRC), Abu Dhabi, UAE; Sponsors and affiliates for GRC include the Abu Dhabi National Oil Company (ADNOC) and four major international oil companies that include BP, Japan Oil Development Company, Shell and Total

Project 4:

Developing teleoperation technology based on the principles of tele-inspection and tele-manipulation with haptic feedback for oil and gas industry

Project Budget: AED 175,000

Period: Mar'13 – Dec'15

Description: The research has proposed a novel teleoperated mechanism to be used in oil and gas industry by integrating two non-isomorphic mechanisms in the master-slave configuration, where a 6-DOF parallel manipulator is the master robot and a 6-DOF serial manipulator is the slave robot.

Thesis

Ph.D. Thesis

Organization: Imperial College of London, London, U.K.

Title: Modeling & Simulation of Hybrid Electric Vehicles

Period: Apr'08 – Jun'12

Supervisors: Dr. Simos Evangelou (Electrical Engineer) and Dr. Ricardo Martinez-Botas (Mechanical Engineer)

Description: The work focused on the fast, accurate and dynamic analysis of the complete HEV along with its components. Inclusion of real physics-based dynamics instead of conventional charts and maps for the components of HEV is one of the novel features of the present work. Components of the HEV are modeled mathematically to incorporate transient features as well. With implementation of optimization based supervisory control; different kind of efficiency analysis has been also performed. PMSM & PMSG, Three Phase DC/AC (Inverter), AC/DC (Rectifier), DC/DC Converter, Li-ion Battery, Turbocharged Diesel Engine and Longitudinal Car Model are presented in the current work.

M.Tech. Thesis

Organization: Indian Institute of Technology Kanpur, India

Period: Aug'06 – Jul'07

Title: Inverse Kinematics learning and redundancy resolution of Six Link Robot Manipulator (ABB140, Puma 560, Power cube (Reconfigurable Robot)) using Visual Feedback and Neural Networks

Supervisors: Dr. Laxmidhar Behera (Electrical Engineer) and Dr. Ashish Dutta (Mechanical Engineer)

Description: The thesis concentrated on path planning, tracking & completing tasks without human interference. Many of

the current redundancy resolution techniques necessitate explicit orientation information which can't be obtained from visual feedback. New technique has been proposed to resolve the redundancy and faster response of the manipulator.

Academic Details

- Ph.D. in Mechanical Engineering from Imperial College London, London in 2012
- B.Tech. and M.Tech. (Dual Degree) in Mechanical Engineering from Indian Institute of Technology, Kanpur (IITK) in 2007

Technical Skills

- **Simulation & Design:** Simulink, Stateflow, Neural, DSP, Simdriveline, Simscape & Control, Toolbox in MATLAB, AutoCAD, SolidWorks, Ricardo-Wave
- **Modelling Tools:** MATLAB, Simulink, LabVIEW, PSpice, PSAT, AMESim, Dymola, Modelica, Autosim
- **Languages:** C/C++, Python, Java, Ruby, Ruby on Rails, HTML, CSS, Bootstrap, PHP
- **Platforms:** Robot Operating System (ROS), MS Windows & Linux, Mac, Raspberry PI, Arduino,

Personal Details

Date of Birth: 3rd September 1983
Languages Known: English & Hindi
Address: A6-11, South Campus, IIT Mandi, PinCode-175005, HP, India
Nationality: Indian
Passport Details: N9801259 valid up to 28/09/2026

Annexure

Teaching Experience

Main Instructor for **ME452 Robotics and Control** at Indian Institute of Technology Mandi 2020

Co-instructor for **ME620 Modeling and Simulation** at Indian Institute of Technology Mandi 2020

Main Instructor for **ME602 Mechanical Vibration** at Indian Institute of Technology Mandi 2019

Co-instructor for **ENG113 Introduction to Computing** at Khalifa University of Science & Technology 2018

Main Instructor for **MMEG376 Core Measurements Laboratory** for Spring 2017 at PI

Taught certain topics in **MEEG384 System Dynamics & Controls** in Spring 2017 at PI

Main Instructor for **MMEG221 Engineering Application of MATLAB** for Fall 2016 at PI

Main Instructor for **ZG573 Systems of Systems Engineering** for Fall 2016 at BVIT affiliated with Mumbai University

Main Instructor for **MMEG221 Engineering Application of MATLAB** for Fall 2014 at PI

Taught certain topics in **MEEG384 System Dynamics & Controls** in Spring 2013 at PI

Teaching Assistant for **Mechatronics for spring 2011** at Imperial College London, UK

Teaching Assistant for **EE250 Control Systems** at Indian Institute of Technology Kanpur, India

Thesis Supervision

PhD Thesis

- Asok Kumar Shivarathri for "UAV /UGV Collaborative System for Autonomous Inspection and Mapping of Underground Objects" at IIT Mandi (2020 onwards)*

M.Tech. Thesis

- Ayush Gupta for "Autonomous tracking of vertical structure by an UAV" at IIT Mandi (2019-2021)*
- Amit Kumar for "Horizontal structure tracking by autonomous ground vehicle" at IIT Mandi (2019-2021)*
- Mohit Shahu for "IC Engine performance at high altitude with low temperature & low pressure in HEV application" at IIT Mandi (2020)*
- Anuj Nandawar for "GPS based navigation of an AGV for ground structure tracking" at IIT Kanpur and PI (2016-2017)
- Huang Xioqian, "Autonomous Inspection of Oil and Gas pipelines by an Unmanned Aerial Vehicle" at PI (2017)
- Xiaoxiong Zhang, "Pipelines Inspection by Autonomous Ground Vehicle" at PI (2017)
- Sunil Kumar Reddy for "Teleoperation of two non-identical 6-DOF manipulators" at IIT Kanpur and PI (2015-2016)

B.Tech. Thesis

- Toshendra and Sahsi for "Deep learning based visual tracking of oil and gas pipelines berm" (2020)*
- Aditya for "Self-heating batteries for HEV at high altitude with low temperature & low pressure" at IIT Mandi (2020)*
- Yash Paliwal for "Fundamental principles and design of Magnetic Memory Sensor" (2020)*
- Arjun Sahdev for "Control and navigation of AGV" (2020)*
- Shreya for "Design of autonomous ground vehicle for teleoperated inspection" (2020)
- Team Pentagon, "Design and testing of a Quadcopter with variable rotor axis" at PI (2017-2018)
- Harshil Patel, "Development of Image based visual servoing scheme for inspection, maintenance and repairing operation on petroleum pipelines" at PI and BITS Dubai (2015-2016)
- Niu Zhenwei, "The analysis of walking based on Robovie-X robot" at PI (2016)
- Ganesh K. Ram for "A condition monitoring system with multi-agent mechanism for non-contact smart inspection of buried oil and gas pipelines" at PI and BITS Dubai (2015)

Publications

Journal Publications

- **A. Shukla**, H. Karki, L. Behera and M. M. Jamshidi, "Teleoperation by Using Nonisomorphic Mechanisms in the Master-Slave Configuration for Speed Control," in *IEEE Systems Journal*, vol. 12, no. 2, pp. 1369-1380, June 2018
- Padmini Singh, Pooja Agrawal, Hamad Karki, **Amit Shukla**, Nishchal K. Verma, and Laxmidhar Behera, "Vision Based Guidance and Switching Based Sliding Mode Controller for a Mobile Robot in the Cyber Physical Framework", in *IEEE Trans Industrial Informatics*, 2018
- R. R. Nair, H. Karki, **A. Shukla**, L. Behera and M. Jamshidi, "Fault-Tolerant Formation Control of Nonholonomic Robots Using Fast Adaptive Gain Nonsingular Terminal Sliding Mode Control," in *IEEE Systems Journal*, vol. PP, no. 99, pp. 1-12, February 2018
- **A. Shukla**, R. Martinez-Botas and S. A. Evangelou, "Control Oriented Dynamic Model of the Turbocharged Diesel Engine for Hybrid Electric Vehicle", *ASME Journal of Dynamic Systems, Measurement, and Control*, 2018 (Communicated)
- **Amit Shukla** and Hamad Karki. "Application of Robotics in Offshore Oil and Gas Industry— A review Part II", *Robotics and Autonomous Systems*, Volume 75, Part B, January 2016, Pages 508-524
- **Amit Shukla** and Hamad Karki. "Application of Robotics in Onshore Oil and Gas industry—A review Part I", *Robotics and Autonomous Systems*, Volume 75, Part B, January 2016, Pages 490-507
- Anjan K Ray, Laxmidhar Behera and **Amit Shukla**, "Kinematics Control of a 6-DOF Robot Manipulator using Kohonen Self-Organizing Map (SOM)", *DCDIS Journal (Dynamics of Continuous, Discrete and Impulsive Systems)*, Special Issue in *Advances in Neural Networks*, Vol. 14(S1) 550—558, 2007
- D. Mishra, **Amit Shukla**, Prem K. Kalra, "OR-Neuron Based Hopfield Neural Network for Solving Economic Load Dispatch Problem", *Neural Information processing-letters and reviews*, Vol. 10, No. 11, November 2006

Conference Publications

- **Amit Shukla**, Sunil Kumar Reddy and Hamad Karki, "Teleoperation of two non-isomorphic manipulators by Joint Space and Task Space Mapping", *IEEE International Conference on Mechatronics and Automation (ICMA 2020)*, Beijing, China.
- Bhadrans V, Abdullah A, **Shukla A**, Karki H, "Autonomous Inspection System for Anomaly Detection in Natural Gas Pipelines", *Society of Petroleum Engineers, The Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC)*, UAE, Nov 2020 (Accepted)
- Vidya Sudevan, **Amit Shukla** and Hamad Karki, "Hierarchical Controller for Autonomous Tracking of Buried Oil and Gas Pipelines and Geotagging of Buried Pipeline Structure", *9th International Conference on Cybernetics and Intelligent Systems (CIS) Robotics, Automation and Mechatronics (RAM)*, IEEE, Bangkok, Thailand, Nov 2019.
- Vishnu Bhadrans, Arjun Sharma, **Amit Shukla**, Hamad Karki "Non-Contact Flaw Detection and Condition Monitoring of Subsurface Metallic Pipelines using Magnetometric Method" (*2nd International Conference on Recent Advances in Materials & Manufacturing Technologies (IMMT 2019)*, Dubai, UAE).
- Sudevan V, Shukla A, Karki H, "Autonomous tracking and tagging of buried pipelines based on pipe-locator data", *The 3rd International Conference on Diagnostics of Structures and Components Using Metal Magnetic Memory Method*, Prague in May 22 - 23, 2019.
- Sudevan V, **Shukla A**, Sharma R, Karki H, "Hierarchical Controller for the Autonomous Inspection of Buried Oil and Gas", *Society of Petroleum Engineers, The Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC)*, UAE, 12-15 Nov 2019
- R. S. Sharma, S. Shukla, H. Karki, **A. Shukla**, L. Behera and V. K S, "DMP Based Trajectory Tracking for a Nonholonomic Mobile Robot With Automatic Goal Adaptation and Obstacle Avoidance," *2019 International Conference on Robotics and Automation (ICRA)*, Montreal, QC, Canada, 2019, pp. 8613-8619.
- Xiaoxiong Z., **Shukla A**, Abdulla A Ali, Karki H, "A Smart Robotic System for Non-contact Condition Monitoring and Fault Detection in Buried Pipelines", *Society of Petroleum Engineers, The Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC)*, UAE, 12-15 Nov 2018
- Xiaoqian H, **Shukla A**, Karki H, Xiaoxiong Z, "3D Autonomous Tracking of Buried Pipelines via a UAV in a Low Altitude" in *IEEE 3rd Advanced Information Technology, Electronic and Automation Control Conference 2018 (IAEAC 2018)*, Oct 12-14, Chongqing, China
- Vidya Sudevan, **Amit Shukla**, and Hamad Karki "Current and Future Research Focus on Inspection of Vertical Structures in Oil and Gas Industry" *Control, Automation and Systems (ICCAS)*, 2018 18th International Conference on IEEE, 2018
- Xiaoqian H, **Shukla A**, Karki H, Xiaoxiong Z, "UAVs Low-Altitude Visual Tracking of Unburied Pipeline by the Designed Variant PID Controller and Position Controller" in *RDPEURO 2018: Research and Development Petroleum Conference and Exhibition*, Abu Dhabi, UAE, 9-10 May 2018 (pp. 56-59), American Association of Petroleum Geologists, Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, and Society of Petroleum Engineers
- Sudevan, Vidya, **Amit Shukla**, and Hamad Karki "Inspection of Vertical Structures in Oil and Gas Industry: A Review of Current Scenario and Future Trends" *RDPEURO 2018: Research and Development Petroleum Conference and Exhibition*, Abu Dhabi, UAE, 9-10 May 2018, American Association of Petroleum Geologists, Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, and Society of Petroleum Engineers, 2018
- H. Xiaoqian, **A. Shukla**, H. Karki and Z. Xiaoxiong, "A Position Control Design for UAVs Low-Altitude Visual Tracking of Linear Ground Structures by the Designed Variant PID Controller," *2017 11th Asian Control Conference (ASCC)*, Gold Coast, QLD, 2017, pp. 1310-1313, Australia
- **Shukla, Amit**, and Hamad Karki, "Teleoperation of an UAV by a 6-DOF Parallel Manipulator with Hybrid Mapping for Inspection of Industrial Structures" in *IEEE sponsored 17th International Conference on Control, Automation and*

- Systems (ICCAS 2017) October 18-21, 2017 at Ramada Plaza, Jeju, Korea
- Vidya Sudevan, **Shukla, Amit**, and Hamad Karki, "Vision Based Autonomous Landing of an Unmanned Aerial Vehicle on a Stationary Target" in IEEE sponsored 17th International Conference on Control, Automation and Systems (ICCAS 2017) October 18-21, 2017 at Ramada Plaza, Jeju, Korea
 - Huang Xioqian, **Shukla, Amit**, and Hamad Karki, "Variant PID Controller Design for Autonomous Visual Tracking of Oil and Gas Pipelines via an Unmanned Aerial Vehicle" in IEEE sponsored 17th Int Conference on Control, Automation and Systems (ICCAS 2017). October 18-21, 2017 at Ramada Plaza, Jeju, Korea
 - **Shukla, Amit**, Huang Xioqian and Hamad Karki, "Autonomous Tracking of Oil and Gas Pipelines by an Unmanned Aerial Vehicle" in IEEE 59th Midwest Symposium on Circuits and Systems (MWSCAS2016) 16-19 October 2016, Abu Dhabi, UAE, 2016
 - **Shukla, Amit**, Huang Xioqian and Hamad Karki, "Autonomous Tracking and Navigation Controller for an Unmanned Aerial Vehicle Based on Visual Data for Inspection of Oil and Gas Pipelines" in IEEE sponsored 16th International Conference on Control, Automation and Systems (ICCAS 2016) October 16-19, 2016 at HICO, Gyeongju, Korea
 - Huang Xiaolian, **Amit Shukla** and Hamad Karki, "Autonomous Ground Pipelines Tracking via an UAV" in the IEEE 13th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP2016), Dec 16-18, 2016 at Chengdu, China
 - Anuj Nandanwar, Laxmidhar Behera, **Amit Shukla** and Hamad Karki, "Delay Constrained Utility Maximization in Cyber Physical System with Mobile Robotic Networks", in 42nd IEEE Industrial Electronics Conference (IEEE IECON2016), Firenze (Florence), Italy, October 24-27, 2016
 - Chandreyee Bhowmick, Laxmidhar Behera, **Amit Shukla** and Hamad Karki, "Flocking Control of Multi-Agent System with Leader-Follower Architecture Using Consensus Based Estimated Flocking Center" in 42nd IEEE Industrial Electronics Conference (IEEE IECON2016), Firenze (Florence), Italy, October 24-27, 2016
 - **Shukla, Amit**, and Hamad Karki. "Modeling Simulation and Control of 6-DOF Parallel Manipulator Using PID Controller and Compensator." in Advances in Control and Optimization of Dynamical Systems, vol. 3, no. 1, pp. 421-428. 2014
 - **Shukla, Amit**, and Hamad Karki. "A Review of Robotics in Onshore Oil-Gas Industry" in Mechatronics and Automation (ICMA), 2013 IEEE International Conference on, pp. 1153-1160. IEEE, 2013
 - Simos Evangelou, **Amit Shukla**, "Advances in the Modelling and Control of Series Hybrid Electric Vehicles" in American Control Conference, Montréal, Canada 2012
 - S. Kumar, **A. Shukla**, A. Dutta, L. Behera, "A Model-free Redundancy Resolution Technique for Visual Motor Coordination of a 6 DOF Robot Manipulator" in IEEE Multi-conference on Systems and Control, October 1-3, 2007, Suntec City Convention Centre, Singapore
 - Deepak Mishra, Arvind Tolambiya, **Amit Shukla**, Prem K. Kalra, "Stability Analysis for Higher Order Complex-Valued Hopfield Neural Network", in The 13th International Conference on Neural Information Processing, ICONIP'06 (Hong Kong)

Reviewer For Journals & Conferences

Regular reviewer for some of the reputed journals and conferences:

- IEEE Transactions on Industrial Informatics
- Artificial Intelligence Review, An International Science and Engineering Journal, Springer
- Robotics and Autonomous Systems, Elsevier
- Robotica (ROBOTICA) Journal: Cambridge University Press (CUP)
- IEEE Robotics and Automation Letters
- IEEE Conference on Decision and Control
- Society of Instrument and Control Engineers of Japan (SICE)
- IEEE International Conference on Control, Automation and Systems (ICCAS)
- IFAC Advances in Control and Optimization of Dynamical Systems (ACODS)

Presentations & Seminars

- Fundamental principle behind Metal Magnetic Memory and NCM for inspection of buried oil and Gas pipelines, Pipeline Integrity Team, GAIL India, 24th July 2020
- Non-Contact Condition Monitoring (NCM) of Buried Metallic Pipelines in Underwater Conditions, SUT Middle East Event: New Subsea Technology for Field-Life Extension, Khalifa University - SAN Campus, Abu Dhabi, U.A.E. 22 - 23 April, 2019
- Robust Hough Transformation based vision controller for autonomous tracking of the oil and gas pipelines by an UAV, The Petroleum Institute R&D Conference and Exhibition, ADRIC, 2017
- Condition Monitoring of oil and gas pipelines using non-contact external smart inspection agents, GRC PMC 2016, Abu Dhabi, UAE
- Vision based tracking of linear ground structure at low altitudes by an UAV, HICO 2016, Gyeongju, Korea
- Usage of unconventional energy sources for transportation, Department of Mechanical Engineering, The Petroleum Institute, Abu Dhabi, UAE in 2014
- Application of Robotics in Oil and Gas industry, ICMA 2013, Takamatsu, Japan
- Challenges in the field of modelling and simulation of Hybrid Electric Vehicles with Jaguar & Land Rover at Ashorn Hill in 2012, United Kingdom