

AGENDA

INAUGURAL SESSION

20 NOVEMBER 2019 VENUE: LT-1, C BLOCK, FIRST FLOOR, PDPU

TIME	TOPIC & SPEAKER
10:00 – 10:05 am	WELCOME ADDRESS BY Prof. Sunil Khanna, Director-School of Technology
10:05 – 10:10 am	ABOUT THE WORKSHOP BY Dr. Radha Kishan Motkuri, Senior Scientist, Pacific Northwest National Laboratory
10:10 – 10:15 am	ADDRESS BY Prof. C. Gopalkrishnan, Director General - PDPU
10:15 – 10:30 am	ADDRESS BY Guest of Honour, Prof. (Dr) J. M. Vyas, Director General, Gujarat Forensic Sciences University
10:30 – 10:45 am	ADDRESS BY Chief Guest, Prof. (Dr) Himanshu A. Pandya, Vice Chancellor, Gujarat University
10:45 – 10:50 am	Felicitation of Honorable Guests on the Dias
10:50 – 11:00 am	VOTE OF THANKS BY Prof. Anurag Mudgal, Head-Department of Nuclear Science & School of Technology, PDPU
11:00 – 11:15 am	Tea-Break

DAY 1 | THE ROLE OF THE NUCLEAR SECURITY PRACTITIONER IN A NUCLEAR SECURITY PROGRAM

TIME	TOPIC	PRESENTER(S)
11:15am - 12:15 pm	1. Introduction to the Role of the Nuclear Security Practitioner	Mr. Guy Landine (PNNL)
12:15 – 12:45 pm	2. Operational Technology and Nuclear Security	Mr. Guy Landine (PNNL)
12:45 – 1:15 pm	Exercise A: Digital Control identification by the Nuclear Security Practitioner	Dr. Radha Kishan Motkuri (PNNL)
1:15 – 2:00 pm	Lunch	
2:00 – 2:30 pm	3. Threats, Vulnerabilities, and Consequences Associated with Attacks on Nuclear Facilities	Dr. Craig Marianno (TAMU)
2:30 – 3:00 pm	4. Methods by which Adversaries may Attempt to Compromise a Nuclear Facility	Mr. Guy Landine (PNNL)
3:00 – 3:30 pm	Exercise B: Consequence Assessment	Dr. Radha Kishan Motkuri (PNNL)
3:30 – 3:45 pm	Tea	
3:45 – 4:15 pm	5. Regulatory Framework and International Guidance for the Nuclear Security Practitioner	Mr. Guy Landine (PNNL)
4:15 – 4:45 pm	6. Nuclear Security Program Basics	Dr. Craig Marianno (TAMU)
4:45 – 5:15 pm	7. Nuclear Security Program Development by the Nuclear Security Practitioner	Dr. Craig Marianno (TAMU)
5:15 – 5:30 pm	Wrap-up and Review of Day 1	Dr. Radha Kishan Motkuri (PNNL)

AGENDA

DAY 2 | TECHNICAL AREAS OF INTEREST FOR NUCLEAR SECURITY PRACTITIONERS

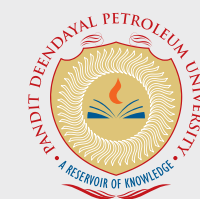
TIME	TOPIC	PRESENTER(S)
9:30 – 10:15 am	8. Access Control, Identification and Authorization	Dr. Mehul Raval and Mr. Guy Landine (PNNL)
10:15 – 10:45 am	Exercise C: Access Control Planning and Implementation by the Nuclear Security Practitioner	Dr. Radha Kishan Motkuri (PNNL)
10:45 – 11:15 am	9. Personnel Security: Addressing the Insider Threat	Dr. Craig Marianno (TAMU)
11:15 – 11:45 am	Tea	
11:45 - 12:15 pm	10. Defense-in-Depth and Security Design	Dr. Guy Landine (PNNL)
12:15 – 12:45 pm	Exercise D: Implementation of Defense-in-Depth by the Nuclear Security Practitioner	Dr. Radha Kishan Motkuri (PNNL)
12:45 – 1:15 pm	11. Hardening Assets and Configuration Management	Mr. Guy Landine (PNNL)
1:15 – 2:15 pm	Lunch	
2:15 – 2:45 pm	12. Soft skills for Nuclear Security	Dr. Radha Kishan Motkuri (PNNL)
2:45 – 3:15 pm	13. Meeting the challenge of Safety in Nuclear Reactors: Role of R&D	Prof. Sai Baba, NIAS
3:15 – 3:45 pm	14. Physical and Infrastructure Security in the Nuclear Facility	Dr. Craig Marianno (TAMU)
3:45 – 4:15 pm	Tea	
4:15 – 4:45 pm	15. Life-Cycle and Supply Chain Security for Nuclear Facilities	Dr. Radha Kishan Motkuri (PNNL)
4:45 – 5:15 pm	Exercise E: Nuclear Security Practitioner Identification and Analysis of Supply Chain Vulnerabilities	Dr. Radha Kishan Motkuri (PNNL)
5:15 – 5:45 pm	16. Nuclear Safety and Security Regimes-Understanding Various Security Levels Information Security for Nuclear Facilities	Dr. Ashutosh Mishra, MNIT
5:45 – 6:00 pm	Wrap-up and Review of Day 2	

DAY 3 | THE NUCLEAR SECURITY PRACTITIONER'S ROLE IN FORMULATING RISK MANAGEMENT DECISIONS AND RESPONDING TO INCIDENTS

TIME	TOPIC	PRESENTER(S)
9:30 – 10:00 am	17. Information Security for Nuclear Facilities	Mr. Guy Landine (PNNL)
10:00 – 10:30 am	18. Risk Assessment and Management by Nuclear Security Practitioners	Dr. Craig Marianno (TAMU)
10:30 – 11:00 am	Exercise F: Selecting Benefit- and Cost-Based Security Recommendations	Dr. Radha Kishan Motkuri (PNNL)
11:00 – 11:30 am	Tea	
11:30am – 12:00 pm	19. Incident Response by the Nuclear Security Practitioner • The Incident Response Lifecycle • Incident Response Teams • Post-Event Investigations	Guy Landine (PNNL)
12:00 – 12:30 pm	20. The Role of the Nuclear Security Practitioner in Nuclear Facilities	Dr. M. Sai Baba
12:30 – 1:00 pm	21. Panel Discussion – How Nuclear Engineers and Scientists can Become or Support Nuclear Security Practitioners	
1:00 – 2:00 pm	Lunch	
2:00 – 3:00 pm	Closing Remarks and Discussion	

TRAINING WORKSHOP ON DEVELOPING EMERGING NUCLEAR SECURITY PRACTITIONERS

DATE : 20-22 November 2019
VENUE : LTC-1, 1st Floor, C Block, PDPU, Gandhinagar



PDPU

PANDIT DEENDAYAL PETROLEUM UNIVERSITY



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ABOUT PDP

Pandit Deendayal Petroleum University (PDP) has been established by GERM as a Private University through the State Act enacted on 4th April, 2007. The University offers programs to address the need for trained human resources in the domains of Science, Technology, Management and Humanities. It intends to broaden the opportunities for students and professionals to develop core subject knowledge which are duly complemented by leadership training interventions, thereby helping the students to make a mark in the global arena. This objective is being further addressed through a number of specialized and well-planned undergraduate, post-graduate and doctoral programs as well as intensive research projects.



ABOUT PACIFIC NORTHWEST NATIONAL LABORATORY

PNNL advances the frontiers of knowledge, taking on some of the world's greatest science and technology challenges. Distinctive strengths in chemistry, earth sciences, and data analytics are the heart of our science mission, laying a foundation for innovations that improve America's energy resiliency and enhance our national security.

PNNL is a national lab with Pacific Northwest roots and global reach. Whether PNNL researchers are unlocking the mysteries of Earth's climate, helping modernize the U.S. electric power grid, or safeguarding ports around the world from nuclear smuggling, PNNL accept great challenges for one purpose: to create a world that is safer, cleaner, more prosperous, and more secure.



ABOUT GUJARAT UNIVERSITY

Gujarat University was established in the year 1949, and currently possesses over 260 acres of land in the heart of Ahmedabad city. The notable alumni of the University include the Hon'ble Prime Minister of India, Shri Narendra Modi; father of Indian space programme, Dr Vikram Sarabhai; Smt Elaben Bhatt; Dr K Kasturirangan; Shri Amit Shah; Shri Pankaj Patel, etc. More than 3.8 lakh students are enrolled with Gujarat University. The University has 38 full-time post-graduate departments and over 199 postgraduate centres, along with 20+ recognised institutes. The University also has 286 affiliated colleges. The University imparts education for Undergraduate and Post Graduate levels across nine different faculties such as Medical, Arts, Commerce, Dental, Pharmacy, Education, Law and Sciences. The University campus has more than 3000 computers, and all departments are interconnected with GUNET High Speed 1Gbps Fibre Internet Network. A state-of-the-art Sports Complex and a state-of-the-art Amphitheatre are soon to be made operational at the University campus. The University has a FM radio channel at 90.8 Hz frequency, which covers a radius of 15 km around the University campus. Seven different foreign languages are taught at the University's World Language Laboratory.



ABOUT THE WORKSHOP

Training Workshop on Developing Emerging Nuclear Security Practitioners takes place at Pandit Deendayal Petroleum University on Nov 20-22, 2019. The workshop is jointly organized by Pacific Northwest National Laboratory, USA and PDP in collaboration with Gujarat Forensic Sciences University and Gujarat University to discuss and promote the role of the nuclear security practitioner in a nuclear security program.

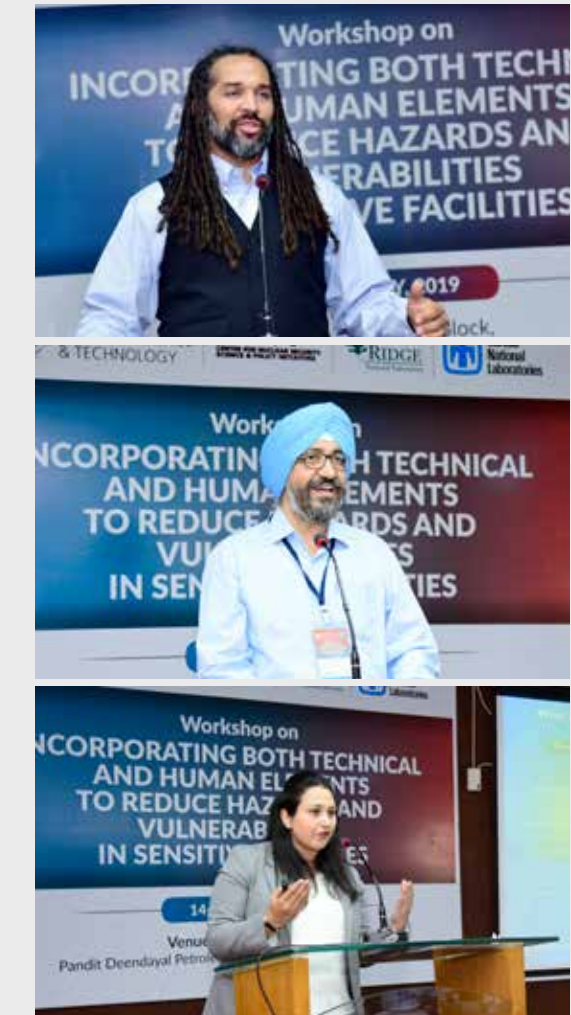
This workshop is open to graduate/under-graduate/PhD students pursuing Nuclear Engineering or related courses. This workshop also invites participation from the faculty members who have prior experience in this particular area. This workshop aims at complementing Nuclear Engineering studies by including the security aspects into the academic curriculum.

Following is the list of speakers:

1. **Mr. Cliff Glantz** - Systems Engineer, Pacific Northwest National Laboratory
2. **Dr. Radha Kishan Motkuri** - Senior Scientist, Pacific Northwest National Laboratory
3. **Mr. Guy Landine** - Senior Control Systems Specialist, Pacific Northwest National Laboratory
4. **Dr. Craig Marianno** - Deputy Director, Center for Nuclear Security Science and Policy Initiatives
5. **Dr. M. Sai Baba** - TV. Raman Pai Chair Professor, National Institute of Advanced Studies
6. **Dr. Prabhat Munshi** - Professor, Indian Institute of Technology, Kanpur
7. **Dr. Mehul Raval** - Head- Information and Communication Technology, PDP

TOPICS TO BE DISCUSSED:

- Industrial Control Systems (ICS) and Their Importance to Nuclear Security Practitioners
- Digital Control Identification by the Nuclear Security Practitioner
- Threats, Vulnerabilities, and Consequences Involving Physical and Cyber Attacks on Nuclear Facilities
- Methods by Which Insiders and Other Adversaries May Attempt to Compromise a Nuclear Facility
- Routes of Attack Identification by the Nuclear Security Practitioner
- Regulatory Framework and International Guidance for the Nuclear Security Practitioner
- Nuclear Security Program Development by the Nuclear Security Practitioner
- Access Control Planning and Implementation by the Nuclear Security Practitioner
- Implementation of Defence-in-Depth by the Nuclear Security Practitioner
- Hardening Assets and Configuration Management by the Nuclear Security Practitioner
- Remote Access and Wireless Connectivity in Nuclear Facilities



CHIEF PATRON

Prof. C. Gopalkrishnan, DG-PDP

PATRON

Dr. Sunil Khanna, Director-School of Technology

PROGRAM CHAIR

Dr. Anurag Mudgal, Mechanical Engineering

CONVENER

Dr. Mehul Raval, Computer Engineering

CO-CONVENER

Dr. Sameer Patel, Computer Engineering

ORGANISING SECRETARY

Prof. (Dr.) V.K. Jain, Gujarat University
Mr. Vipin Shukla, Electrical Engineering

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