UNIVERSITY WITH A PURPOSE

REPORT OF WORKSHOP/SEMINAR CONDUCTED ON INDUSTRY/ACADEMIA AT SCHOOL OF ENGINEERING, UPES.

2016-2017

BRIEF REPORT ON "SEMINAR ON AEROPLANE PROPULSION SYSTEM"

1) Slide/Banner/Photos

2) Date, Venue and Topic

"Seminar on Aeroplane Propulsion System" is organized by department of Aerospace Engineering, School of Engineering *at UPES* under Aerospace club and IEEE student chapter of the University on 15th April 2017.

3) Speaker(s) and their profiles (1-2 lines)

Dr. S. Senthilkumar, Department of Aerospace Engineering, SRM Institute of science and technology, Kattankulathur Campus. He is Dublin City University, Dublin, Ireland, M.S in Aerospace Engineering, Indian Institute of Technology Madras.

4) Attendees Details (Nos/Schools/Departments/ Teaching or Non-Teaching)

A total of 75 people participates in this. The faculty members (8 in numbers) are from the department of Aerospace Engineering, Electrical and Electronics Engineering department. There were 4 non-teaching staff and 63 students from B.Tech Aerospace Engineering Electronics Engineering.

5) Brief report about the event.

The seminar demonstrated the solid-state propulsion system can sustain powered flight, by designing and flying an electroaerodynamically propelled heavier-than-air aeroplane. It flew a fixed-wing aeroplane with a five-meter wingspan ten times and showed that it achieved steady-level flight. All batteries and power systems, including a specifically developed ultralight, high-voltage (40-kilovolt) power converter, were carried on-board. The concept for electroaerodynamic aeroplane propulsion, opening up possibilities for aircraft and aerodynamic devices is discussed that are quieter, mechanically simpler and do not emit combustion emissions.

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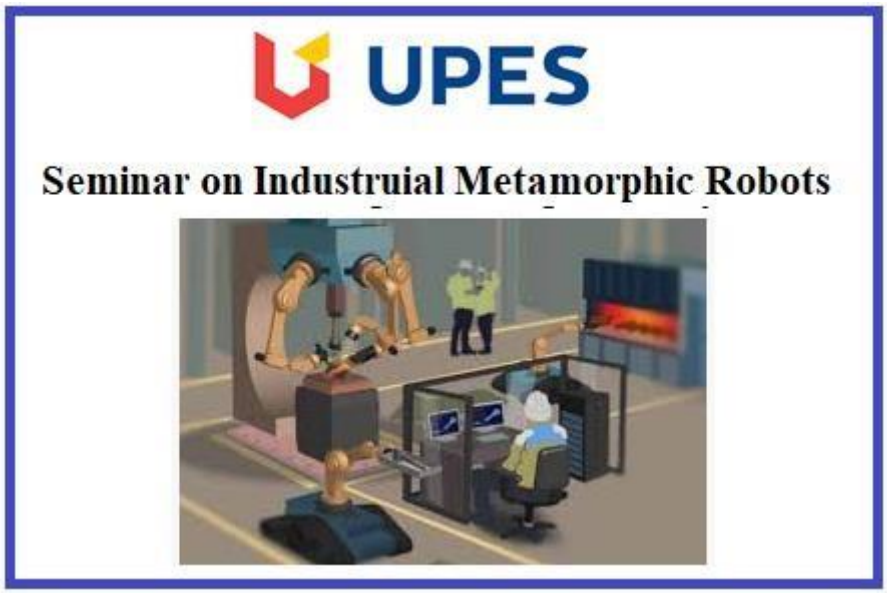
BRIEF REPORT ON "SEMINAR ON INDUSTRUIAL METAMORPHIC ROBOTS"

1) Slide/Banner/Photos



2) Date, Venue and Topic

"Seminar on Industrial Metamorphic Robots" is organized by the department of Mechanical Engineering, School of Engineering *at UPES* under Robotics Club and IEEE student chapter of the University on 15th April 2017.

3) Speaker(s) and their profiles (1-2 lines)

Prof. S. K. Saha, Professor in Mechanical Engineering, Indian Institute of Technology, Delhi. He is Ph.D., McGill University, Canada, M. Tech., Indian Institute of Technology, Kharagpur and B. E., Regional Engineering College (Presently, National Institute of Technology) Durgapur. His areas of interest are robotics dynamics, multibody dynamics, Robot design and Mechatronics Engineering.

4) Attendees Details (Nos/Schools/Departments/ Teaching or Non-Teaching)

A total of 112 people participates in this. The faculty members (8in numbers) are from the department of Mechanical Engineering, Aerospace Engineering, Electrical and Electronics Engineering. There were 4 non-teaching staff and 100 students from B.Tech Electronics Engineering, Mechanical Engineering, Aerospace Engineering & M.Tech Robotics Engineering.

5) Brief report about the event.

Metamorphic manufacturing is a new innovation under development that attempts to overcome this barrier by combining the incremental deformation of a Metalsmith with the precision and control of intelligent machines and robotic systems. The goal of the seminar was to detail about *Metamorphic Manufacturing: Shaping the Future of On-Demand Components* is to help jump-start this potentially disruptive technology. The seminar defined a new advanced manufacturing technology, metamorphic manufacturing, that is considered by technical leaders at the Lightweight Innovations for Tomorrow manufacturing institute to be the third wave of digital manufacturing.

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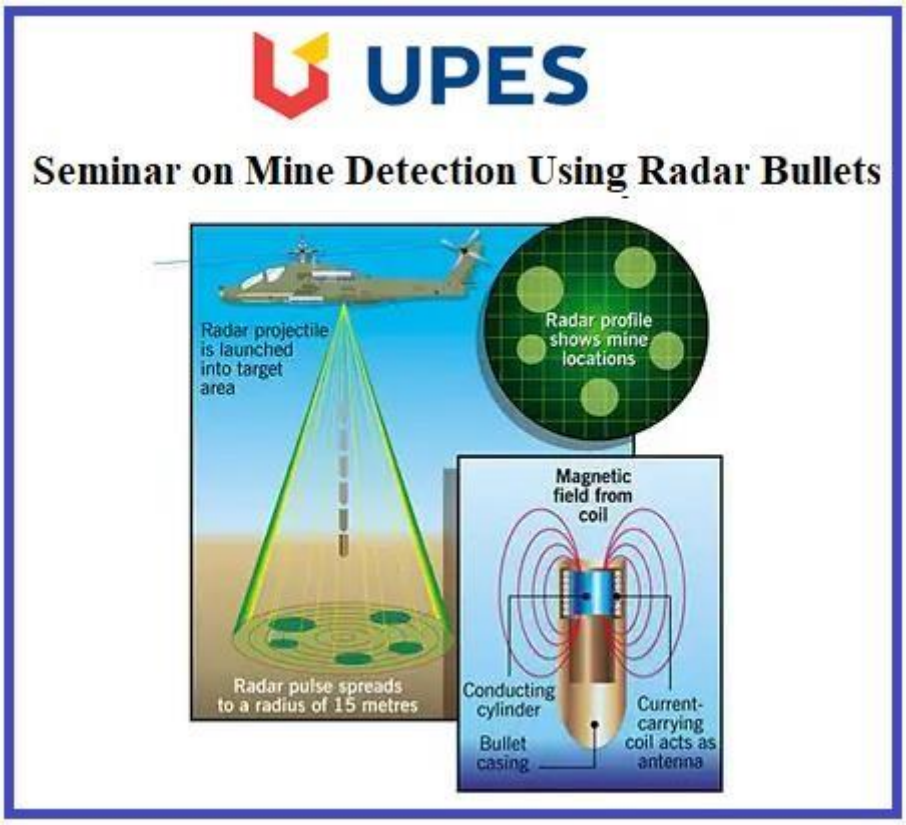
BRIEF REPORT ON "SEMINAR ON MINE DETECTION USING RADAR BULLETS"

1) Slide/Banner/Photos



2) Date, Venue and Topic

"Seminar on Mine Detection Using Radar Bullets" is organized by department of Aerospace Engineering, School of Engineering *at UPES* under Aerospace club and IEEE student chapter of the University on 15th April 2017.

3) Speaker(s) and their profiles (1-2 lines)

Dr. S. Senthilkumar, Department of Aerospace Engineering, SRM Institute of Science and Technology, Kattankulathur Campus. He is Dublin City University, Dublin, Ireland, M.S in Aerospace Engineering, Indian Institute of Technology Madras.

4) Attendees Details (Nos/Schools/Departments/ Teaching or Non-Teaching)

A total of 75 people participates in this. The faculty members (8 in numbers) are from the department of Aerospace Engineering, Electrical and Electronics Engineering department. There were 4 non-teaching staff and 63 students from B.Tech Aerospace Engineering Electronics Engineering.

5) Brief report about the event.

The radar bullet is a special type of bullet. The main use of radar bullet is to find landmines without setting foot on the ground. This consists of firing a special bullet in to the ground from a helicopter, which could pinpoint buried land mines. The Seminar presented different aspects of radar bullets. Bullets fire from helicopter emits radar pulses as it grinds to the halt these radar pulses reflects from landed mines due to that reflection landmines can be estimated approximately. This is the method in which special type of radar bullet is used to find landmines without setting foot into the ground offering safe and efficient way of landmine detection. The seminar presented the methods for detection of land mines, such Metal detector method, Biological method and mechanical method.

BRIEF REPORT ON "SEMINAR ON SPACE SHUTTLES AND ITS ADVANCEMENTS"

1) **Slide/Banner/Photos**

2) **Date, Venue and Topic**

"Seminar on Space Shuttles and its Advancements" is organized by department of Aerospace Engineering, School of Engineering *at UPES* under Aerospace club and IEEE student chapter of the University on 15th April 2017.

3) **Speaker(s) and their profiles (1-2 lines)**

Prof. Ashok Joshi, Department of Aerospace Engineering, Indian Institute of Technology, Bombay.

4) **Attendees Details (Nos/Schools/Departments/ Teaching or Non-Teaching)**

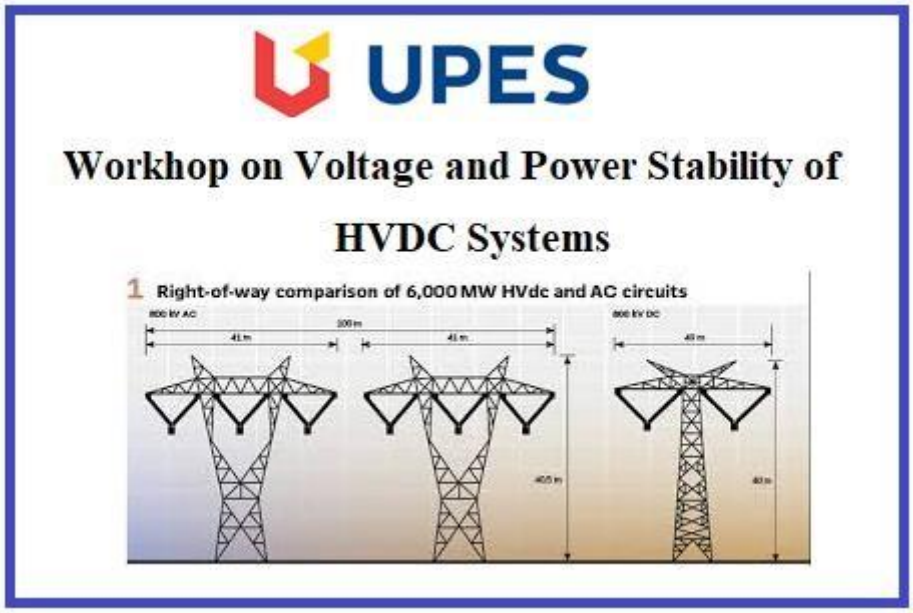
A total of 68 people participates in this. The faculty members (5 in numbers) are from the department of Aerospace Engineering, Electrical and Electronics Engineering department. There were 5 non-teaching staff and 58 students from B.Tech Aerospace Engineering and Electronics Engineering.

5) Brief report about the event

The seminar presented the exploration of space requires a system that will reliably transport payloads into space and return back to earth; without subjecting them an uncomfortable or hazardous environment. In other words, the spacecraft's and its payloads have to be recovered safely into the earth. The space shuttle used in older times were not re-usable. The initiatives of NASA were also discussed in the seminar. NASA invented, re-usable space shuttle that could launch like a rocket, deliver and leaned back like an aeroplane. Now NASA is planning to launch a series of air-breathing planes that would replace the space shuttle. Satellite Launch Vehicle (PSLV), Geo- stationary Launch Vehicle (GSLV MkII), Indian Remote Sensing Satellite (IRS), the Indian National Satellite (INSAT) and the structures & welded tanks for the Cryogenic upper stage of GSLV MkII, structures & welded tankages for a larger GSLV MK III vehicle with enhanced capabilities also discussed.

BRIEF REPORT ON "WORKHOP ON VOLTAGE AND POWER STABILITY OF HVDC SYSTEMS"

1) Slide/Banner/Photos



2) Date, Venue and Topic

"Workshop on Voltage and Power Stability of HVDC Systems" is organized by department of Electrical & Electronics Engineering, School of Engineering *at UPES* under the IEEE student chapter of the University on 21st April 2017.

3) Speaker(s) and their profiles (1-2 lines)

Prof. Ranjan Bose is working with the Electrical Engineering department, Indian Institute of Technology, IIT Delhi. He received his B.Tech. degree in electrical engineering from the Indian Institute of Technology (IIT), Kanpur, India in 1992 and the M.S. and Ph.D. degrees in electrical engineering from the University of Pennsylvania, Philadelphia, USA in 1993 and 1995, respectively.

4) Attendees Details (Nos/Schools/Departments/ Teaching or Non-Teaching)

A total of 96 people participates in this. The faculty members (8 in numbers) are from the department of Electrical and Electronics Engineering. There were 4 non-teaching staff and 84 students from B.Tech Electrical Engineering, Electronics Engineering and M.Tech Robotics Engg, Energvy System and Renewable Engineering.

5) Brief report about the event

Traditionally HVDC links have been built as single point-to-point AC/DC interconnections or single-infeed HVDC systems as they are commonly known. However, in recent years, as the use of HVDC transmission continues to develop situations have arisen where multiple HVDC links terminate in close proximity in a common AC system area. These emerging system configurations, generally known as multi-indeed HVDC systems, are particularly inherent in regional power systems predominantly interconnected by HVDC links. The Workshop focused on introduction to HVDC, Principles of HVDC Conversion, HVDC Lines, HVDC Sub Stations, Reactive Power Management in HVDC Stations, AC & DC harmonics and filtering, HVDC System operation, Insulation Coordination, Emergencies and case studies and HVDC System operation Control and maintenance.