Report on guest lectures

1. Mr. Utpal Manohar Parrikar

Date: 28th September 2025

On the 28th of September, Aryaans Institute had the honour of hosting Mr. Utpal Manohar Parrikar, Managing Director of Ayuron Medical Systems Pvt. Ltd., Verna, for an insightful and forward-looking guest lecture. Mr. Parrikar, an accomplished engineer with an M.S. in Electrical Engineering from Michigan State University, USA, brings with him years of industrial expertise and leadership in automation and high-tech manufacturing. His lecture, titled " Revolutionising Productivity: Harnessing Robotics and AI for Smarter Workflows," provided students with a clear and engaging understanding of how automation is reshaping modern industries. He began by tracing the evolution of automation from simple mechanical systems to the advanced robotics and artificial intelligence that industries rely on today. Through his explanation, students gained an appreciation of how machines have moved beyond performing repetitive tasks and are now capable of adaptive decision-making, precision control, and intelligent data processing. Mr. Parrikar shared examples from his own company, Ayuron Medical Systems, where robotics and automated platforms play a major role in manufacturing medical equipment and improving operational efficiency. He spoke about how automation reduces human error, enhances safety, increases productivity, and ensures consistent quality. His practical insights helped students connect classroom learning with real-world industrial processes, making the topic more relatable and inspiring.Throughout the session, he emphasised that the demand for skilled engineers who understand automation, coding, robotics, AI, and problem-solving is rapidly increasing. According to him, the engineers of tomorrow must be curious, adaptable, and willing to upskill regularly. He encouraged students to learn new tools, explore emerging technologies, and develop an innovative mindset. His words resonated strongly with the audience, reminding them that the future belongs to those who are ready to evolve with technology. The interactive portion of the session was particularly beneficial, as students asked questions about AI careers, robotics applications, ethical concerns in automation, and how industries are preparing for an AI-driven future. Mr. Parrikar answered each question with clarity and patience, making the students feel confident and motivated. Overall, the lecture was an enriching experience that helped students see the practical side of engineering beyond textbooks. It broadened their perspective on how robotics and AI are influencing industries worldwide and inspired them to embrace technological advancement with excitement and confidence. The session successfully achieved its aim of preparing students to think future-forward and understand the real meaning of innovation.

2. Dr. Chetan Kumar Jalihal

Date: 28th September 2025

Aryaans Institute was privileged to host Dr. Chetan Kumar Jalihal for an enlightening and intellectually

stimulating guest lecture on 28th September. Dr. Jalihal, a proud former Aryaanite, is currently an Assistant Professor at IIT Hyderabad. He is the only Aryaans student to have completed his Ph.D. at the prestigious Indian Institute of Science (IISc) Bengaluru, where he also completed his M.Tech before pursuing advanced research in Germany. His lecture, titled " Monsoon: A Challenging Problem in Mechanical Sciences," gave students a new appreciation for the complexity and beauty of the Indian monsoon system. He began by explaining how early scientists once believed that monsoons were simply gigantic sea breezes. Over time, however, research has revealed that monsoons are influenced by a much more intricate combination of atmospheric dynamics, land-sea thermal contrasts, climate physics, and what he described as the cosmic game of nature. This introduction helped students understand that monsoons are not just seasonal rains but part of a much larger climate puzzle. Dr. Jalihal discussed several important concepts in a simple and relatable manner. He explained the role of water vapour as a powerful greenhouse gas and how its presence leads to local radiative heating in the atmosphere. He also spoke about latent heat release during cloud formation and how this energy exchange is essential for sustaining monsoon circulation. These scientific explanations, delivered in easy-to-understand language, helped students see the connections between physics, environmental science, and climate behaviour. He also addressed current climate issues, such as why North-East India is experiencing drought this year. By highlighting how unpredictable and sensitive monsoon systems can be, he made students aware of the challenges scientists face in climate prediction. One of the most memorable parts of his talk was the fish tank experiment, where he explained how monsoon-like circulation can be recreated using simple temperature differences. This example showed students that even complex climate phenomena can be understood through small-scale models. Another important part of the lecture was his explanation of the land-sea thermal contrast theory, which forms the foundation of monsoon behaviour. Dr. Jalihal also introduced a simple equation, stating that rainfall can be described as energy flux divided by stability. This helped students grasp how energy drives rainfall and why atmospheric stability plays an important role in determining rainfall intensity. Throughout the session, his ability to simplify difficult topics and explain how atmospheric processes influence ocean dynamics impressed the audience. He concluded his talk with a powerful message: " Be a jack of all trades and master of one." He encouraged students to explore different fields, develop diverse skills, and eventually become experts in one area of passion and strength. The interaction that followed was lively and encouraging. Students asked questions about climate models, research opportunities, monsoon prediction errors, and the role of mechanical sciences in climate studies. Dr. Jalihal answered every question with patience, clarity, and genuine enthusiasm, inspiring many students to consider research as a career. Overall, his lecture was a memorable and enriching experience. It not only deepened students' understanding of the monsoon system but also motivated them to approach science with curiosity, openness, and interdisciplinary thinking. His journey from Aryaans to IISc and then IIT Hyderabad stands as a remarkable source of motivation for every student.

3. Kanaka Thakker

Date: 5th October 2025

Aryaans Institute had the privilege of hosting a distinguished online guest lecture on 5th October 2025 by Ar. Kanaka Thakker, a proud former Aryaanite and an accomplished architect with extensive global exposure. The session brought together students, parents, and faculty for an insightful exploration into the evolving world of architecture and design. Ar. Thakker holds a Bachelor' s degree in Architecture from the

Sinhgad Institute, University of Pune, a Postgraduate Degree in Housing and Urbanism from London, and a Master' s in Interior Architecture from the University of Westminster, where she currently serves as a faculty member. Her professional journey includes five years at RJB– CPL under the mentorship of renowned architect Ar. Ratan Batliboi, during which she contributed to prominent projects such as the rejuvenation of Marine Drive and the restoration of Mehrangarh Fort, Jodhpur. In 2016, she founded Design Katha in Goa, demonstrating her commitment to original, context-sensitive design. Her lecture provided a structured and comprehensive understanding of architecture as a discipline. Beginning with the foundational question, " What qualifies as architecture?" , she referenced principles from Vitruvius to explain that architecture encompasses any built form responding to human needs. She further enriched the session with global case studies, including the House in Minami Tanabe (Osaka), Silodam Housing (Amsterdam), Tadao Ando' s Church of Light, and the Acropolis Museum (Athens), illustrating how creativity, culture, and function converge in exemplary architectural works. A central component of her talk focused on adaptive reuse and sustainable urban development. Highlighting transformative projects such as the Battersea Power Plant and Mayfair Mercato in London, she demonstrated how existing structures can be reimagined into vibrant public spaces. She also presented socially impactful examples like the Caracas Metro Cable and the Spanish Library in Colombia, emphasizing architecture' s role in enhancing community life and addressing social challenges. Ar. Thakker concluded by outlining the diverse career opportunities within architecture— from urban design and interior styling to research, education, and policymaking— encouraging students to explore the field with curiosity and ambition. The session was highly interactive, with students actively engaging in discussions and receiving clear, thoughtful responses to their questions. The lecture was a valuable learning experience that expanded students' perspectives and provided meaningful insights into the profession. Aryaans Institute extends its sincere appreciation to Ar. Kanaka Thakker for her time and expertise.

4. Dr. Karthik Krishnamurthy

Date: 26th October 2025

On the 26th of October 2025, Aryaans Institute organized an insightful and enriching guest lecture delivered by Dr. Karthik Krishnamurthy, an accomplished professional from Mahindra Aerospace and a respected expert in the field of aircraft engineering. The session provided students with a rare opportunity to understand the world of aviation manufacturing from someone with exceptional expertise and industry exposure. Dr. Krishnamurthy began by introducing the fundamentals of aircraft structures, focusing on how complex and delicate the process of building airplanes truly is. He explained the importance of efficiency, safety, and innovation in aviation, highlighting how even the smallest component must meet strict precision standards. He also discussed the different types of aircraft, their unique features, and how functionality varies depending on purpose and design. One of the most engaging parts of the lecture was his detailed explanation of how Mahindra manufactures aircraft. He broke down the highly intricate, multi-layered production process into simple and understandable steps. He described how each part is designed, fabricated, assembled, and tested, ensuring it meets global aviation standards. Students were fascinated to learn that Mahindra uses nearly 95 percent green energy in their manufacturing facilities, demonstrating their commitment to sustainability and environmentally responsible engineering. Dr. Krishnamurthy further enhanced the session by showing real images of various aircraft parts, their internal

structures, and the stages of assembling an airplane. These visuals gave students a closer look into the complexity of aviation engineering and helped them appreciate the immense amount of skill, precision, and teamwork required in the industry. Towards the end, he shared valuable study advice with the students, encouraging them to stay curious, consistent, and passionate about learning. He patiently answered all questions, ensuring that every student left with clarity and deeper interest in the subject.The session was highly informative, inspiring, and eye-opening for all present. It provided a meaningful perspective on aerospace engineering and left students motivated to explore the field with greater enthusiasm.

5. Dr. Chetan Solanki

Date: 5th November 2025

On the 5th of November Aryaans Institute organized an insightful online guest lecture by Prof. Chetan Singh Solanki, former Professor at IIT Bombay, environmental educator, and widely known as the " Solar Man of India." The session aimed to create awareness about the growing challenges of climate change and the urgent need for sustainable living. Prof. Solanki began by explaining how climate change is accelerating at an alarming pace, even though most people remain unaware because they are deeply occupied with their routines. He shared that while climate change is often discussed lightly, the actual impact is far more serious and affects every aspect of life— our health, economy, water systems, and food systems. One of the most striking ideas he introduced was the concept of the " 6 P' s" — Parents, Professors, Professionals, Policy-makers, Politicians, and the Press. He emphasized that these major influencers of society often do not fully understand the severity of climate change, which results in slow action and poor awareness among the public. Prof. Solanki described climate change as the outcome of " invisible garbage" — greenhouse gases like carbon dioxide that cannot be seen but continue to accumulate. He highlighted that the CO_2 concentration has increased by nearly 53%, causing the Earth' s temperature to rise by around 2.5° C. He expressed this powerfully by saying that " the Earth has a fever," which is why the planet is becoming increasingly imbalanced compared to the stable, beautiful environment it once had. He also explained the deeper meaning behind sustainable living, reminding students that our economy can grow and science can progress, but our planet and our soul cannot grow or be rebuilt once destroyed. He encouraged everyone to reflect on this truth and make mindful choices in their daily lives. Throughout the session, Prof. Solanki stressed that climate action is not only the responsibility of governments or institutions, but of every individual. Small, consistent changes in lifestyle— such as reducing energy consumption, avoiding waste, and being conscious of environmental choices— can collectively create a meaningful impact. The lecture was highly informative, thought-provoking, and delivered with clarity and purpose. Students gained a deeper understanding of the urgency of climate change and the personal responsibility each one of us holds in protecting our planet. Aryaans Institute extends heartfelt thanks to Prof. Chetan Singh Solanki for sharing his knowledge and inspiring students to think beyond academics and prioritize the future of the Earth.

6. Mr. Yashovardhan Jha Azad

Date: 23rd November 2025

On the 23rd of November, Aryaans Institute organised an insightful and highly relevant online guest lecture delivered by Mr. Yashovardhan Jha Azad, retired IPS officer and former Special Director of the Intelligence Bureau. The central theme of the session was " Growing Terror in India and Ways to Tackle It," a topic of increasing national importance in the present era. The objective of the talk was to help students understand the evolving nature of terrorism, the emerging challenges faced by the country, and the responsibilities of citizens— particularly the youth— in safeguarding national security.Mr. Azad began the session by defining the concept of terror, explaining that it extends far beyond physical attacks. He emphasised that terrorism is also psychological warfare aimed at creating fear, uncertainty and division among people. He highlighted the shift in recent decades, noting that terrorism no longer enters solely through physical borders but has taken new forms through digital platforms and social media. The rise of online misinformation, manipulated narratives and targeted radicalisation has made cyberspace one of the most dangerous battlegrounds of modern times. To provide students with a clear understanding of ground realities, Mr. Azad referred to significant incidents such as the Parliament attack and the Red Fort attack. These examples illustrated how terror groups operate, plan and attempt to destabilise the nation. He also spoke about internal disturbances, including the situation in Manipur, explaining how social tensions can be exploited to magnify unrest. Through these examples, he highlighted that today' s terrorists are often well-educated, well-funded and technologically advanced, making the threat far more complex than before. Mr. Azad then discussed how India' s intelligence and security systems are adapting to these changes. He explained the use of modern tools such as smart border fencing, advanced drone surveillance, and specialised SWAT units to strengthen national protection. He pointed out that intelligence agencies now rely heavily on data, behavioural analysis and coordinated communication to detect and neutralise threats effectively. However, he firmly stated that technical advancements alone cannot defeat terrorism. The success of counter-terrorism efforts depends greatly on public cooperation, social unity and trust between communities and institutions. A major portion of the lecture focused on the vulnerability of the youth in the digital age. Mr. Azad stressed that young people are the prime targets of online propaganda and manipulative content. He urged students to maintain strong digital hygiene, think critically, verify information before believing or sharing it, and be aware of the psychological tactics used to mislead them. According to him, the nation remains secure when its young citizens are informed, vigilant and resistant to extremist ideologies. The session concluded with an engaging Q&A segment in which Mr. Azad addressed every student' s question with clarity, patience and real-world insight. His responses deepened the students' understanding of national security challenges and encouraged them to view the topic through a responsible and analytical lens. Overall, the lecture was extremely enriching, thought-provoking and timely. It provided students with a comprehensive overview of terrorism in India, the digital dangers of the modern world, and the essential role each citizen plays in building a safe and united nation. The session achieved its purpose of creating awareness, encouraging critical thinking, and inspiring students to remain responsible and informed members of society.

Prepared by

Sanika Takkekar