Aerospace Forum Webinar Series

1. Speaker Name: Mr. Divakaran V. N.

1	Topic	Overview of Landing Gear Design & Development
2	Organization	Infosys
3	Speaker Information/Profile	Divakaran VN has worked in the Aircraft Research and Design Centre of Hindustan Aeronautics Limited for over 35 years and was engaged in Design and Development of mechanical systems like Landing Gear, Brake, Hydraulics systems etc. for military fighters, trainers, helicopters and light transport aircrafts. He has worked in many projects and was responsible for design of landing gears for Light Combat Aircraft Tejas, Advanced Light Helicopter, Intermediate Jet Trainer, Saras Light Transport Aircraft etc. He holds two patents on the landing gear system design. He is a recipient of Dr Ghadge Award for Design and Development of aircraft systems. After graduating in mechanical engineering from NITC, he has completed two semesters of post graduate course in Aeronautical engineering at Indian Institute of Science Bangalore. Presently he is a Consultant to Infosys, Bangalore in the Aerospace domain for the past 13 years. In this seminar he will be giving an overview of Aircraft Landing Gear Design and development activity.
4	Topic Overview	An overview of Design and Development of Aircraft Landing Gears covering the following: • Requirements, Functions, Design Criteria • General Arrangement, Components • Design and Analysis methods, Materials • Manufacturing, Assembly • Qualification testing aspects and Certification • Challenges and Future Trends
5	Email ID	vndivakaran@gmail.com

Aerospace Forum Webinar Series

2. Speaker Name: Mr. Sastry V S R S

1	Topic	Industry 4.0 in Aerospace
2	Organization	Infosys
3	Speaker Information/Profile	**Sastry Veluri** is a reputed technocrat and leader in aerospace. Has a master's degree in Structural Engineering and over 29 years of research, industrial and product design experience in prestigious Indian Space & Defense Research organizations and at Infosys. He is part of Infosys for 14 years now and currently working on Industrial Internet of Things (IIoT), Industry 4.0, Model Based Systems Engineering, Reliability based Frameworks and digitalization initiatives across manufacturing and process industries. Developed and mentored large teams and successfully guiding them to deliver quality products to Tier1/OEMs in aerospace. Built competent engineering teams in aerospace domain leading to high performing and motivated teams. Has experience in design and static testing of Polar synchronous (IRS class) and Geo synchronous (INSAT class) of satellites. Rich experience in defense, commercial aircraft industry and in design of business jets. Worked in airframe design and analysis of prestigious aircraft programs like Indian Light Combat Aircraft (LCA) and US major aircraft OEMs and Tier 1 suppliers. Setting new benchmarks in delivering AS9100 Standards to clients all round the world by establishing processes and deliver value in aerospace domain
4	Topic Overview	In the age of 4th industrial revolution, operational and information technologies are increasingly getting converged to help organizations improve their topline through new innovative products and services and improve bottom line by improving efficiencies. This transformation is driven by convergence of many advanced technologies such as advanced sensor and communication technologies, big data, advanced analytics, Artificial Intelligence (AI), robotics, additive manufacturing, virtual and augmented reality (VR/AR). Enterprises digitization journey continues to adopt advanced technologies through multi-pronged approach to achieve their near-term and long-term goals. This talk summarizes Industry 4.0 journey, its relevance and applications to aerospace. It also summarizes how Industry 4.0 concepts can be applied to a practical use case.
5	Email ID	Sastry_veluri@infosys.com

Aerospace Forum Webinar Series

3. Speaker Name: Dr. Shama Rao N.

1	Topic	Advanced Composites in Aerospace - Overview
2	Organization	Infosys
3	Speaker Information/Profile	Dr. Shama Rao N. is a Principal Consultant with Infosys since 2012. Prior to this he worked over 24 years in various capacities in Aeronautical Development Agency (ADA) Bangalore and retired as outstanding scientist and project director. He also served over ten years in ISRO satellite center, Bangalore and over seven years at National Aerospace Laboratories (NAL) Bangalore. He obtained his doctoral degree in aerospace engineering from IIT Bombay. His areas of interest are advanced composites technology, tooling, aircraft structures, assembly, costing among others. He is receipt of DRDO scientist of the year 2009 award from Prime Minister for his pioneering work in composite technology for Light Combat Aircraft, Tejas.
4	Topic Overview	This webinar will present overview of composite materials, its processes and technologies covering the following aspects: • Application of composites • Typical uses of fiber matrix composites • Composites in Aircraft programs • Basic concepts of composites • Advantage and disadvantages • Basic design concepts • Raw materials and forms • Basic routes of manufacturing • Overview of tooling • Autoclave processing of composites-wing skin • Quality assurance-DT and NDT • Finishing • Conclusion
5	Email ID	Shama_229977@infosys.com

Aerospace Forum Webinar Series

4. Speaker Name: Mr. Sastry V S R S

1	Topic	Model Based Systems Engineering in Aerospace
2	Organization	Infosys
3	Speaker Information/Profile	**Sastry Veluri** is a reputed technocrat and leader in aerospace. Has a master's degree in Structural Engineering an over 29 years of research, industrial and product design experience in prestigious Indian Space & Defense Research organizations and at Infosys. He is part of Infosys for 14 years now and currently working on Industrial Internet of Things (IIoT), Industry 4.0, Model Based Systems Engineering, Reliability based Frameworks and digitalization initiatives across manufacturing and process industries. Developed and mentored large teams and successfully guiding them to deliver quality products to Tier1/OEMs in aerospace. Built competent engineering teams in aerospace domain leading to high performing and motivated teams. Has experience in design and static testing of Polar synchronous (IRS class) and Geo synchronous (INSAT class) of satellites. Rich experience in defense, commercial aircraft industry and in design of business jets. Worked in airframe design and analysis of prestigious aircraft programs like Indian Light Combat Aircraft (LCA) and US major aircraft OEMs and Tier 1 suppliers. Setting new benchmarks in delivering AS9100 Standards to clients all round the world by establishing processes and deliver value in aerospace domain
4	Topic Overview	The need for the aerospace and defense (A&D) industries to comply with strict regulations is driving the shift from document-based systems engineering to model-based engineering. However, the application of model-based systems engineering (MBSE) is yet to be institutionalized across the industry. The digital paradigm of MBSE coupled with better standardization of methods, model/data exchanges and intellectual property rights can accelerate the product development cycle. It can help various stakeholders view concepts by collating multiple threads of digital information and connecting different models. This interdisciplinary connectivity and collaboration will ensure greater integrity of the final product. But, transitioning to digital MBSE presents several challenges apart from financial ones. This talk will detail out a framework to help A&D companies shift from paper-based requirements management to MBSE based digital requirements management
5	Email ID	Sastry_veluri@infosys.com

Aerospace Forum Webinar Series

5. Speaker Name: Dr G. V. V. Ravi Kumar

1	Topic	Overview of Digital Data Standards in Aircraft Life Cycle
2	Organization	Infosys
3	Speaker Information/Profile	**Dr. Ravi Kumar G. V. V.** is Associate Vice President and Head Advanced Engineering Group (AEG) of Engineering Services, Infosys. He has led numerous innovation and applied research projects over the past 20 years. His areas of expertise include mechanical structures and systems, knowledge-based engineering, composites, artificial intelligence, robotics, autonomous systems, AR, VR and Industry 4.0. He is involved in the development of commercial products like AUTOLAY (CADDS-COMPOSITES) - a spin-off Indian LCA(Tejas) program, Nia Knowledge - a knowledge-based engineering platform and KRTI 4.0 - an operational excellence framework. He contributed to many Industry 4.0 implementation projects and played a key role in the development of Industry 4.0 maturity index under the umbrella of Acatech, Germany. He is also involved in various initiatives of the World Economic Forum (WEF) fourth industrial revolution technologies in production. He is a member of the HM 1 and G31 technical committees of SAE International contributed to aerospace standards development. Dr. Ravi Kumar has published over fifty technical papers, three patents - two granted and one filed. He has a Ph.D. and an M.Tech in Applied Mechanics from IIT Delhi, and a BE (Honors) from BITS Pilani, India.
4	Topic Overview	The aerospace ecosystem is complex with many stakeholders exchanging technical, operational and maintenance data across lifecycle stages of aircraft from engineering, manufacturing, operations and maintenance to disposal. Many standards have been developed to standardize and improve effectiveness, efficiency and security of the data transfer process. There are still challenges in data transfer due to non-availability of standards in certain areas or lack of awareness and implementation of some standards. This talk presents a review of the data being exchanged between various stakeholders in aerospace asset lifecycle and the availability of standards for the data transfer. Further, the talk identifies gaps and non-availability of data standards. The current focus of this document is limited to aircraft operations, maintenance, transfer and disposal processes post build stage and does not include the detailed interactions during aircraft build phase. The scope of the talk is limited to key stakeholder interactions throughout the stages of aircraft operations, maintenance and disposal
5	Email ID	ravikumar_gvv@infosys.com

Aerospace Forum Webinar Series

6. Speaker Name: Dr G. V. V. Ravi Kumar

1	Topic	Blockchain in Aerospace
2	Organization	Infosys
3	Speaker Information/Profile	**Dr. Ravi Kumar G. V. V.** is Associate Vice President and Head Advanced Engineering Group (AEG) of Engineering Services, Infosys. He has led numerous innovation and applied research projects over the past 20 years. His areas of expertise include mechanical structures and systems, knowledge-based engineering, composites, artificial intelligence, robotics, autonomous systems, AR, VR and Industry 4.0. He is involved in the development of commercial products like AUTOLAY (CADDS-COMPOSITES) - a spin-off Indian LCA(Tejas) program, Nia Knowledge - a knowledge-based engineering platform and KRTI 4.0 - an operational excellence framework. He contributed to many Industry 4.0 implementation projects and played a key role in the development of Industry 4.0 maturity index under the umbrella of Acatech, Germany. He is also involved in various initiatives of the World Economic Forum (WEF) fourth industrial revolution technologies in production. He is a member of the HM 1 and G31 technical committees of SAE International contributed to aerospace standards development. Dr. Ravi Kumar has published over fifty technical papers, three patents - two granted and one filed. He has a Ph.D. and an M.Tech in Applied Mechanics from IIT Delhi, and a BE (Honors) from BITS Pilani, India.
4	Topic Overview	This talk presents an overview of blockchain in aerospace addressing the following questions: • What blockchain use cases are most viable for aerospace? • Current challenges in adopting Blockchain in aerospace • When a centralized Blockchain to be used in aerospace? • When a decentralized Blockchain to be used in aerospace? • What are the greatest benefits of using Blockchain technology? • How to decide on what data to store in the Blockchain? • Where do we see Ethereum as the better Blockchain technology for aerospace? • Where do we see Hyperledger as the better Blockchain technology for aerospace? • What organizations are best suited to have governance over a Blockchain in aerospace? • What technologies do we see disrupting Blockchain technology?
5	Email ID	ravikumar_gvv@infosys.com

Aerospace Forum Webinar Series

7. Speaker Name: Dr Ravi Prakash G.

1	Topic	AI in Aerospace
2	Organization	Infosys
3	Speaker Information/Profile 	Dr. Raviprakash is working in the Advanced Engineering Group taking care of AI, ML and Engineering Data Analytics areas. His areas of interest are AI, Engineering Data Analytics, Numerical Methods, Heat Transfer and CFD, and has worked on several projects. He has spent significant time in aerospace related projects. He has worked on Thermal and Computational Fluid Dynamics (CFD) analyses for the hardware development to meet Space Shuttle and International Space Station requirements. He developed a method and user-friendly software package to analyse fan noise from turbofan engine inlets. Dr Raviprakash obtained his Bachelor's degree in Mechanical Engineering from Bangalore University. He joined the University of Tennessee Space Institute as a Graduate Research Assistant and graduated with his M.S and Ph. D. degrees. Prior to joining Infosys he worked at Lockheed Martin, Jacobs and UTSI.
4	Topic Overview	Artificial Intelligence plays an important role in the enhancement of safety, predictive maintenance, reduction of manufacturing cost, reduction of design cycle time and analysis/simulation time in the aerospace industry. It includes application to autonomous vehicles and drones. This needs the analysis of time series data as well as image and video data using various algorithms to address these problems. This talk covers the role of AI in Aerospace and the application to several use cases.
5	Email ID	raviprakash@infosys.com