

APPENDIX 1

Papers in International Journals

Accepted

1. **Optimisation of Fins to Minimise Directional Instability in Airships**, AIAA Journal of Aircraft, Accepted, co-authored by Suvarna, S. M., IITB-Monash Research Academy, and Chung, H, Monash University, Australia.

Appeared

2. **Multidisciplinary design approach for solar-powered tri-lobed High-Altitude Long Endurance Stratospheric Airship**, Elsevier Energy Conversion and Management, Volume 245, October 2021, 114616 Online Access 19th August 2021, <https://doi.org/10.1016/j.enconman.2021.114616>, co-authored by Manikandan, M., MIT Manipal.
3. **A comparative study of Conventional and Tri-lobed Stratospheric Airships**, The Aeronautical Journal, UK, Online Access 12th April 2021, <https://doi.org/10.1017/aer.2021.24>, co-authored by Manikandan, M.
4. **Research and Advancements in Hybrid Air Vehicles – A Review**, Elsevier Journal of Progress in Aerospace Sciences, co-authored by Manikandan, M., corrected proof available online from 16 June 2021, <https://doi.org/10.1016/j.paerosci.2021.100741>
5. **A review of Lighter-than-Air systems for exploring the atmosphere of Venus**, Elsevier Journal of Progress in Aerospace Sciences, Vol. 112, Jan 2020, <https://doi.org/10.1016/j.paerosci.2019.100587>, co-authored by Kiran Babu, K. M.
6. **A Study on Wrinkling Characteristics of NBR Material**, Lecture Notes in Mechanical Engineering, B. N. Singh et al. (eds.), Recent Advances in Theoretical, Applied, Computational and Experimental Mechanics, pp. 109-117, Springer Nature Singapore Pte. Ltd., 2020, co-authored by Pawar, V. S., and Guruprasad, P. J., IIT Bombay.
7. **Estimation of volumetric drag coefficient of two-dimensional body of revolution**, Technical Note, AIAA Journal of Aircraft, Vol. 56, No. 5, pp. 2080-82, Sep-Oct 2019, <https://doi.org/10.2514/1.C034887>, co-authored by Alam, M. I., IIT Bombay.
8. **Design Optimization of a Tri-lobed Solar Powered Stratospheric Airship**, Elsevier Journal of Aerospace Science and Technology, Vol. 91, pp. 255-262, August 2019, <https://doi.org/10.1016/j.ast.2019.05.016>, co-authored by Manikandan, M., IIT Bombay.
9. **Experimental and numerical studies on the effect of elongation rate and temperature on the mechanical behavior of high strength NBR**, Plastics, Rubber and Composites, Vol. 48, No. 7, pp. 281-292, July 2019, <https://doi.org/10.1080/14658011.2019.1611254>, co-authored by Pawar, V. S., and Guruprasad, P. J., IIT Bombay.
10. **Optimization of the Spanwise Twist of a Flapping Wing for Bird-sized Aircraft using a Quasi-Steady Aerodynamic Model**, International Journal of Aeronautical & Space Sciences, Vo. 20, pp. 571-583, 2019, <https://doi.org/10.1007/s42405-019-00154-9>, co-authored by Bhattacharjee, D., and Paranjape, A., IIT Bombay.
11. **Multi-Objective Multidisciplinary Design Analyses and Optimization of High-Altitude Airships**, Elsevier Journal of Aerospace Science and Technology, Vol. 78, Pages 248-259, July 2018, <https://doi.org/10.1016/j.ast.2018.04.028>, co-authored by Alam, M. I., IIT Bombay.
12. **Multidisciplinary approach for Solar Area Optimization of High Altitude Airships**, Energy Conversion and Management, Elsevier, Vol. 164, pp. 301-310, 2018, <https://doi.org/10.1016/j.enconman.2018.03.009>, co-authored by Alam, M. I.

13. **A multi-node Model for Transient Heat Transfer Analysis of Stratospheric Airships**
Advances in Space Research, Elsevier Advances in Space Research, Volume 59, Issue 12, June 2017, pp. 3023-3035, <http://dx.doi.org/10.1016/j.asr.2017.03.012>, co-authored by Alam, M. I.
14. **Branch & Bound Global-Search Algorithm for Aircraft Ground Movement Optimization**,
AIAA Journal of Aerospace Information Systems, Vol. 14, No. 6, 2017, pp. 316-326, <http://dx.doi.org/10.2514/1.I010344>, co-authored by Godbole, P. J., and Ranade, A. G., IIT Bombay.
15. **An Emergency Deflation Device for Remotely Controlled Airships**, The Journal of The Airship Association, No. 185, pp. 11-16, September 2014, co-authored by Vivek, P., and Sharma V., IIT Bombay.
16. **Design, Fabrication And Flight Demonstration of A Remotely Controlled Airship For Snow Scientists**, Journal of Aerospace Technology and Management (JATM), Vol. 6, No. 1, pp. 19-27, January-March 2014, doi: 10.5028/jatm.v6i1.313, ISSN 2175-9146, São José dos Campos, Brazil.
17. **Evaluation of the assumed-transition-point criterion in context of RANS simulations around Lighter-Than-Air vehicles**, AIAA Journal of Aircraft, Vol. 50, No. 2, pp. 450-456, March 2013, doi: 10.2514/1.C031880, Co-authored by Suman, S., Texas A&M University, USA and Lakshmipathy, S., DLR, Germany.
18. **Winged Aerostat Systems for better station keeping for aerial surveillance**, Advanced Materials Research, Vols. 433-440, pp. 6871-6879, January 2012, co-authored by Kanoria, A., Sardar Vallabhbhai Institute of Technology, Vasad, India.
19. **An Architecture Using Lighter-Than-Air Platforms for Retail Power Beaming and Communications**, Journal of Low Power Electronics, Vol. 8, No. 3., pp. 261-269, June 2012, co-authored by Komerath, N.M., School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, USA and Kar, A., College of Optics, University of Central Florida, Orlando, USA.
20. **Improving the Aerospace Capstone Design Experience Through Simulation Based Learning**, International Journal of Engineering Education Vol. 28, No. 2, pp. 492-500, 2012, co-authored by Butler, Wh. M, Department of Engineering Education, Virginia Tech, USA, Terpenney, J., Department of Mechanical Engineering, Virginia Tech, USA, Goff, R. M., Department of Engineering Education, Virginia Tech, USA and Steinhauer, H. H., Department of Freshmen Engineering, Embry Riddle Aeronautical University, USA.
21. **Dynamic Stability Analysis of a Tethered Aerostat**, AIAA Journal of Aircraft, Volume 47, Number 5, pp. 1531-1538, September-October 2010. Co-authored by Rajani A., and Sudhakar, K., IIT Bombay.
22. **Multi-disciplinary Shape Optimization of Aerostat Envelopes**, AIAA Journal of Aircraft, Vol. 47, No. 3, pp. 1073-1076, May-June 2010. Co-authored by Vijayram, C., IIT Bombay.
23. **A methodology for arriving at the baseline specifications of a non-rigid airship**, Technical Note, AIAA Journal of Aircraft, Vol. 45, No. 6, pp. 2177-2182, Nov-Dec 2008.
24. **Constraint Analysis and Initial Sizing of a Transport Aircraft by Simulated Annealing**, Journal of Iranian Aerospace Society, Vol. 2, No. 2, June 2005, pp. 43-47
25. **Aircraft Configuration and Flight Profile Optimization using Simulated Annealing**, Aircraft Design, Vol. 2, 1999, pp. 239-255, Elsevier Science Limited, UK, Co-authored by Fielding, J. P., Cranfield University, UK.
26. **CRISTO: A Code for Integrated Synthesis and Trajectory Optimization of Commuter and Regional Aircraft**, Paper 975542, Journal of Aerospace, Section 1, Transactions of SAE, pp 1504-1514, ISBN 0-7680-0296-6. Co-authored by Fielding, J. P., and Snow, J., College of Aeronautics, Cranfield University, UK, 1997.

27. **Economic Parameters in the Conceptual Design Optimization of an Air-Taxi Aircraft**, AIAA Journal of Aircraft, Vol. 32, No. 4, pp. 696-702, July-August 1995. Co-authored by Gogate, S. D., IIT Bombay and Arora, P., Tata Consultancy Services, India.

Papers in National Journals

28. **Design and Fabrication of a High Endurance, Cost-Effective, Auto-Stabilised Airship**, Annual Technical Volume of Aerospace Engineering Division Board, pp. 66-72, The Institution of Engineers, India, Vol. IV, 2019-20, ISBN 978-81-950662-4-7, co-authored by Suvarna, S., Joshi, A. S., Dubey, A., IIT Bombay.
29. **Hybrid Airship: More of a Faster Ship Than a Slower Aircraft**, Annual Technical Volume of Aerospace Engineering Division Board, pp. 79-86, The Institution of Engineers, India, Vol. IV, 2019-20, ISBN 978-81-950662-4-7, co-authored by Bagare, S. V., IIT Bombay.
30. **Design and Fabrication of a Test Rig to Determine Helium Permeability Through Fabrics**, Journal of Aerospace Sciences and Technologies, The Aeronautical Society of India, Vol. 72, No. 2, pp. 114-120, May 2020, co-authored by Tanwar, L., PEC Chandigarh.
31. **Experimental Investigation of Inflatable Wings for a Hand Launched Unmanned Aerial Vehicle**, Annual Technical Volume of Aerospace Engineering Division Board, pp. 32-35, The Institution of Engineers, India, Vol. III, 2018-19, co-authored by Pandey, T. P., IIT Bombay.
32. **CFD analysis of axi-symmetric bodies of revolution using *OpenFOAM*TM**, Annual Technical Volume of Aerospace Engineering Division Board, Vol. II, pp. 65-71, The Institution of Engineers, India, 2017-18, co-authored by Reddy, M., IIT Bombay.
33. **Tethered Aerostat Systems for Agricultural Application in India**, Annual Technical Volume of Aerospace Engineering Division Board, Vol. I, pp. 82-88, The Institution of Engineers, India, 2015-16.
34. **Design and Fabrication of a Portable Semirigid Airship**, Annual Technical Volume of Aerospace Engineering Division Board, Vol. I, pp. 45-53, The Institution of Engineers, India, 2015-16, co-authored by Loharkar, S. A., and Kshirsagar, A., IIT Bombay.
35. **Design and Fabrication of Slipstream Deflection Mechanism for a Remotely Controlled Airship**, Annual Technical Volume of Aerospace Engineering Division Board, Vol. I, pp. 39-44, The Institution of Engineers, India, 2015-16, co-authored by Kapse, P. S., Ahire, D., Borhade, G. and Murugkar, M., KKWIEER, Nasik, India.
36. **Design, Fabrication and Testing of Mooring Masts for Remotely Controlled Indoor and Outdoor Airships**, Journal of the Institution of Engineers (India): Series C, Mechanical, Production, Aerospace and Marine Engineering, Springer, Volume 97, Issue 2, pp. 257-277, April 2016, ISSN: 2250-0545, Co-authored by Bhardwaj, U and Syed, K., IIT Bombay.
37. **Enhanced Model for Terminal Airspace Capacity Estimation**, Journal of Aerospace Sciences and Technologies, The Aeronautical Society of India, Vol. 66, No. 3, August 2014, Co-authored by Bagg, D., Sharma, K., and Chaugule, V., IIT Bombay.
38. **Conceptual Design Sizing and Thermal Analysis of an Alerting System for Manned Airships**, Journal of Aerospace Sciences and Technology, Vol. 66, No. 4, pp. 267-281, November 2014, co-authored by Bhardwaj, U., IIT Bombay.
39. **Conceptual Sizing and Multicriteria Optimization of UAV for snow studies**, Journal of Aerospace Sciences and Technology, Vol. 65, No. 3, pp. 262-272, August 2013, co-authored by Dineshkumar, M., IIT Bombay.
40. **Optimal Aircraft Conflict Resolution in Free Flight Using Simulated Annealing and Genetic Algorithms**, Journal of Aerospace Sciences and Technologies, Vol. 64, No. 2, pp. 97-107, May 2012, The Aeronautical Society of India, co-authored by Chaugule, V., IIT Bombay and Gomez, S, Institute for Research in Applied Mathematics & Systems, National University of Mexico, Mexico.
41. **Cognitive Workload of Air Traffic Controllers in Area Control Centre of Mumbai Enroute Airspace**, Journal of Psychosocial Research, July-Dec 2012, co-authored by Taukari, A., K. J. Somaiya College, Mumbai.

42. **A Comparative Study of Cognitive Strategies Used to Resolve Air Traffic Conflict between Air Traffic Controllers and General population using Eye Tracking Machine**, Journal of Psychosocial Research, July-Dec 2010, co-authored by Taukari, A., K. J. Somaiya College, Mumbai, and Amit Kumar Garg, IIT Bombay.
43. **Flow Visualisation of an Upper Surface Blown Unmanned Aircraft**, Journal of the Aeronautical Society of India, Vol. 52, No. 4, November 2000, pp. 239-245. Co-authored by Sharma, S. D., IIT Bombay.
44. **A Model for Estimation of Airport Related Costs of Commuter and Regional Aircraft**, Journal of The Aeronautical Society of India, Vol. 51, No. 2, May 1999, pp. 83-92.

APPENDIX 2

Papers in International Conferences

2021 (08)

Appeared in Conference Proceedings / Presented

1. **Methodology for Obtaining an Optimized Baffled Airfoil for an Inflatable Wing**, accepted for presentation at 32nd International Council of the Aeronautical Sciences, 06-10 September 2021, Shanghai, China, co-authored by Mistri, S. R., Yerramalli, C. S., and Guha, A, IIT Bombay.
2. **Conceptual Design and Sizing of Relocatable High-Altitude Long Endurance Solar Powered Hybrid Airship**, AIAA-2021-2990, AIAA AVIATION Forum and Exposition, 2–6 August 2021, Washington, D.C. USA, Published Online: 28 Jul 2021, <https://doi.org/10.2514/6.2021-2990>, co-authored by Uddin N., IIT Bombay.
3. **Surrogate Based Aerodynamic Shape Optimization of Tri-lobed Hybrid Airship Envelope**, AIAA-2021-2989, AIAA AVIATION Forum and Exposition, 2–6 August 2021, Washington, D.C. USA, Published Online: 28 Jul 2021, <https://doi.org/10.2514/6.2021-2989>, co-authored by Manikandan, M., IIT Bombay
4. **Aerodynamic Analysis of ZHIYUAN-I airship using OpenFOAM**, AIAA-2021-2987, AIAA AVIATION Forum and Exposition, 2–6 August 2021, Washington, D.C. USA, Published Online: 28 Jul 2021, <https://doi.org/10.2514/6.2021-2987>, co-authored by Tripathi, M., IIT Bombay, and Gupta, P., MIT Manipal.
5. **A Methodology for Sizing of a Mini-Aerostat System**, AIAA-2021-2986, AIAA AVIATION Forum and Exposition, 2–6 August 2021, Washington, D.C. USA, Published Online: 28 Jul 2021, <https://doi.org/10.2514/6.2021-2986>, co-authored by Bagare, S., and Joshi, A. S., IIT Bombay
6. **Trajectory Modeling of Phase Change Lighter-Than-Air Systems for Venus Exploration: A Multi-Disciplinary Approach**, AIAA-2021-2985, AIAA AVIATION Forum and Exposition, 2–6 August 2021, Washington, D.C. USA, Published Online: 28 Jul 2021, <https://doi.org/10.2514/6.2021-2985>, co-authored by Babu, K. M., and Gulawani, S. S., IIT Bombay.
7. **Study of Distributed Architectures for Multi-Disciplinary Optimization using OpenMDAO**, Presentation at ECCOMAS Thematic Conference on Multidisciplinary Design Optimization of Aerospace Systems (*AeroBest 2021*), Lisbon, Portugal, (Online), July 21-23, 2021, Co-authored by Babu, K. M., and Gulawani, S. S., IIT Bombay.
8. **Conceptual Design and Sizing of LIDAR Equipped Solar Powered HALE UAV for Coastal Surveillance in India**, International Symposium on Aircraft Technology, MRO & Operations, 28-30 June 2021, Budapest, Hungary, (Online), co-authored by Uddin N., IIT Bombay.

2020 (02)

9. **Sizing and Mission Analysis of Multirole Short-Haul All-Electric Seaplane for Sustainable Aviation**, Proceedings of 2020 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE), pp. 1-5, doi: 10.1109/CSDE50874.2020.9411375, 2020, Co-authored by Uddin, N., and Singh, D. (**Awarded the Best Paper Prize**).
10. **Conceptual Design and Mission Analysis of Hybrid-Electric Short-Haul Amphibian Aircraft for Sustainable Aviation**, Proceedings of International Symposium on Sustainable Aviation, 9th to 12th November 2020, University Putri Malaysia, co-authored by Co-authored by Uddin, N., and Singh, D.

2019 (06)

11. **Design, Fabrication and Testing of an Aerostat System for Last Mile Communication**, Paper AIAA 2019-2979, Proceedings of AIAA Aviation and Aeronautics Forum and Exposition, Dallas, Texas, 17-21 June 2019, co-authored by Sharma, V., Dusane, C. R., and Verma, R., IIT Bombay.
12. **Analytical Modeling of Baffled Inflatable Wing for Failure Prediction**, Paper AIAA 2019-3366, Proceedings of AIAA Aviation and Aeronautics Forum and Exposition, Dallas, Texas, 17-21 June 2019, co-authored by Rakshith, K., Dusane, C. R., and Mistri, S., IIT Bombay.
13. **Design Methodology of a Small Unmanned Airship with Optimized Fins**, 2019 International Conference on Unmanned Aircraft Systems (ICUAS) Atlanta, GA, USA, pp. 1136-1142, June 11-14, 2019, co-authored by Suvarna, S., and Chung, Hoam, Monash University, Australia.
14. **Re-locatable Aerostat System for Swift Deployment of Communication Equipment in Disaster Struck Zones**, 4th World Congress on Disaster Management, 29 Jan-1 Feb 2019, IIT Bombay.
15. **Conceptual Design and Sizing of a Wing-Tip Extension Mechanism for HALE UAV**, 3rd Biennial International Conference on Nascent Technologies in Engineering (ICNTE 2019), Navi Mumbai, India, 4-5 January, 2019, co-authored by Joshi, T., Dhameliya, J., Prakash, T., Mistri, S., Yerramalli, C. S., and Guha, A, IIT Bombay.

2018 (02)

16. **Numerical Investigation of Laminar to Turbulent Boundary Layer Transition over Airship Envelopes**, 7th International Fluid Mechanics and Fluid Power Conference, Mumbai, 10-12 December 2018, co-authored by Magar, A. and Kiran Babu, K M, ADCET, Kolhapur, Maharashtra, India.
17. **CFD analysis of axisymmetric bodies of revolution using OpenFOAM™**, Paper AIAA 2018-3334, Proceedings of AIAA Aviation and Aeronautics Forum and Exposition, Atlanta, GA, USA during 26-29 June 2018, co-authored by D. Manideep Reddy, IIT Bombay.

2017 (22)

18. **A comparative evaluation of actuation methods for telescopic span extension of HALE UAV**, Proceedings of International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM-2017), December 28- 30, 2017, Kharagpur, India, co-authored by Prakash, T., and Kakar, H., IIT Bombay.
19. **Aerostat for avian deterrence in agricultural practices**, Proceedings of International Conference & Expo on Agriculture & Veterinary Sciences: Research and Technology, Hyderabad, India, 23-25 October 2017, co-authored by Chaitanya Kumar, B., IIT Bombay.
20. **Shape Optimization of a Multi-Element Airship Envelope for maximizing Payload**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Viswam, A. Salehbhai, F., and Alam, I., IIT Bombay.
21. **Conventional and Multi-lobed Lifting-body Hybrid Airships: A Comparative Study in Sizing**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Khurana, P., IIT Bombay and Manikandan, M., MIT Manipal.
22. **Multi-functional tether for hot air aerostats**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Raina, A. Kolloch, M., Münch, P., Reimer, V. and Gries, T., Institut für Textiltechnik, RWTH, Aachen, Germany.
23. **Conceptual Design of Non-Body-of-Revolution type Stratospheric Airship**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Bano, S., and Alam, I., IIT Bombay.
24. **Feasibility study of a Hot-Air Tethered Aerostat System**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Mahto, N., IIT Bombay.

25. **Conceptual Design of a Full-Scale Hot Air Aerostat System**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Raina, A., and Gries, T, Institut für Textiltechnik, RWTH, Aachen, Germany.
26. **Design and Development of an Easily Deployable Indoor Finless Airship**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Suvama, S., and Adeel, S. A., IIT Bombay.
27. **A Smartphone Operated Indoor Autonomous Airship**, Proceedings of 11th International Airship Convention and Regatta of the Airship Association held at Bedford, UK, 19-21 October 2017, co-authored by Biju, M., Nanyang Technological University, Singapore.
28. **Conceptual Sizing of a Long Range Transport Aircraft**, Proceedings of XXIV International Conference of Italian Association of Aeronautics and Astronautics, held at Palermo & Enna, Italy, 18-22 September 2017, co-authored by Mukhopadhyay, S. and Droch, M., IIT Bombay
29. **Studies in Telescopic Span Morphing of HALE UAV**, Proceedings of 8th International Conference on Mechanical and Aerospace Engineering, (ICMAE 2017) held in Prague, Czech Republic, 22-25 July 2017, co-authored by Tanvi, P., IIT Bombay.
30. **Critical Review of Helium Purification Techniques for Lighter-than-Air Systems**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017. Co-authored by Voleti, S. R., IIT Bombay, and Singhal, N., TUM Asia, Singapore.
31. **Design and Development of an Indoor Autonomous Airship**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017, co-authored by Manas. B., NTU Singapore.
32. **System Identification Approach for a Tethered Airship**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017, co-authored by Santos, J. S. A., Stevanovic, S. & Kondak, K., DLR, Germany, Holzapfel, F., TUM, Germany, and Góes, L.C.S., ITA Brazil.
33. **Surrogate Based Shape Optimization of Stratospheric Airship Envelopes**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017, co-authored by Alam, M. I., IIT Bombay.
34. **Guidance, Navigation and Control Algorithm for a Tethered Airship**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017, co-authored by Stevanovic, S., DLR, Germany, Santos, J. S. A., ITA Brazil, Kondak, K., DLR, Germany, Holzapfel, F., TUM, Germany, and Góes, L.C.S., ITA Brazil.
35. **An Elevated Balloon-Kite Hybrid (Helikite) platform for Surveillance**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017, co-authored by Dusane. C. R., Wani. A. V., Chakraborty, D., and Chakravarthy, B. K., IIT Bombay.
36. **Design and Fabrication of a Winch for Aerostat**, Proceedings of 23rd AIAA Lighter-Than-Air Systems Technology Conference, being held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition held in Denver, Colorado, 5-9 June 2017, co-authored by Shah, H., Katare, B., Rane, V., Chawda, U., and Sonawane, B., SJCT, Palghar, Maharashtra, India.
37. **Design of Glider and Low Variability Model Launcher for Teaching Principles of Flight to Students**, Proceedings of 17th AIAA Aviation Technology, Integration, and Operations Conference, held as part of 2017 AIAA Aviation and Aeronautics Forum and Exposition in in Denver, Colorado, 5-9 June 2017, co-authored by Kerimani, Chandraouli, V, and Ghate, D., IIST, Thiruvananthapuram.
38. **Conceptual Design, Initial Sizing and Sensitivity Analyses of a High Altitude Airship using revised Volumetric Drag Analyses**, Proceedings of 57th Israel Annual Conference on Aerospace Sciences, Tel-Aviv & Haifa, Israel, March 15-16, 2017, co-authored by Subhani, S., Technion-Israel Institute of Technology, Israel.

39. **Design of a Tethered Aerostat System for Animal and Bird Hazard Mitigation**, International Conference on Recent Advances in Aerospace Engineering (ICRAAE-2017), Karunya University, Coimbatore, 3-4 March 2017, co-authored by Mahto, N., RVCE Bengaluru, Bajoria, A., MIT Manipal and Chaitanya Kumar, B., IIT Bombay.

2016 (07)

40. **Design-Build-Fly Projects of Lighter-Than-Air Systems for Enhanced Learning of Aircraft Design Principles**, Proceedings of First Seminar of Asian Workshop on Aircraft Design and Education (AWADE 2016), pp. 70-79, Nanjing, PRC, 8-11 October 2016.
41. **Modeling and Simulation of Highly Flexible Structures**, Proceedings of 6th International Congress on Computational Mechanics and Simulation (ICCMS 2016), Mumbai, India, 27 June-1 July 2016, co-authored by Pawar, V. and Guruprasad, P. J., IIT Bombay.
42. **Modeling Transient Heat Transfer in Stratospheric Airships**, AIAA-2016-4222, Proceedings of 16th AIAA Aviation Technology Integration and Operations Conference, Washington, DC, USA, 13-17 June 2016, co-authored by Alam, M. I., IIT Bombay
43. **Stability Augmentation System for a Tethered Airship**, AIAA-2016-4224, Proceedings of 16th AIAA Aviation Technology Integration and Operations Conference, Washington, DC, USA, 13-17 June 2016, co-authored by Santos, J. and Goes, L., ITA Brazil, Stevanovic, S, Kondak, K., and Holzapfel, F., DLR.
44. **Dynamic Simulation of Breakaway Aerostat with Emergency Deflation Valves**, AIAA-2016-4225, Proceedings of 16th AIAA Aviation Technology Integration and Operations Conference, Washington, DC, USA, 13-17 June 2016, co-authored by Kshirsagar, A. and Bodi, K., IIT Bombay
45. **Design and fabrication of a quick dismantle-able remotely controlled semi-rigid finless airship**, Paper IDAD2016/70, Proceedings of 2nd International Conference on Innovative Design and Development of Aeronautical and Automobile Engineering (IDAD 2016), 22-24 February 2016 at Avadi, Tamil Nadu, India, co-authored by Mistri, S. R., IIT Bombay.
46. **A Spring-activated Quick-response Mechanism for Legs of a Mooring Mast: Conceptual Design and Analysis**, Proceedings of 2nd International Conference on Innovative Design and Development of Aeronautical and Automobile Engineering (IDAD 2016), 22-24 February 2016 at Avadi, Tamil Nadu, India, co-authored by Bhardwaj, U. and Syed, K., IIT Bombay.

2015 (11)

47. **Design and Flight Testing of an Autonomous Airship**, AIAA-2015-3352, Proceedings of 22nd Lighter-Than-Air Systems Technology Conference, 22-26 June, Dallas, TX, USA 2015, co-authored by Santos, J, Garcia, D., Cunha, M. L., and Goes, L., ITA Brazil.
48. **A Simplified Thermal Model for Design of Stratospheric Airships**, Proceedings of the 10th International Convention of Airship Association, 17-19 April 2015, Friedrichshafen, Germany, co-authored by Bichkar, O. V., IIT Bombay.
49. **An Improved Methodology for Multidisciplinary Design Analysis and Optimization of High Altitude Airship Configurations**, Proceedings of the 10th International Convention of Airship Association, 17-19 April 2015, Friedrichshafen, Germany, co-authored by Alam, M. I., IIT Bombay.
50. **Design and Development of a Semi Rigid Remotely Controlled Airship**, Proceedings of the 10th International Convention of Airship Association, 17-19 April 2015, Friedrichshafen, Germany, co-authored by Kshirsagar, A., and Sharma V., IIT Bombay.
51. **Design of an Autonomous Control System for an Indoor Airship**, Proceedings of the 10th International Convention of Airship Association, 17-19 April 2015, Friedrichshafen, Germany, co-authored by Vivek, P., and Dharawath, P., IIT Bombay.
52. **Design of a Tethered Aerostat System for providing Wireless Communications in a University Campus**, Proceedings of the 10th International Convention of Airship Association,

17-19 April 2015, Friedrichshafen, Germany, co-authored by Jadhwar, J. H., and Sharma V., IIT Bombay.

53. **Challenges in Inflatable Wings for Morphing UAV**, Proceedings of the 1st International Conference on Innovative Research Techniques in Mechanical, Aeronautical, Management and Electrical Systems (IRTMAMES-2015), 12-13 February 2015, Coimbatore, Tamil Nadu, India, co-authored by Dusane, C. and Wani, A., IIT Bombay.
54. **Conceptual Design of Oblate Spheroid Aerostat**, Proceedings of the 1st International Conference on Innovative Research Techniques in Mechanical, Aeronautical, Management and Electrical Systems (IRTMAMES-2015), 12-13 February 2015, Coimbatore, Tamil Nadu, India, co-authored by Jadhwar, J. H., IIT Bombay.
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APPENDIX 3

Papers presented in National Conferences

Accepted for Presentation

1. **Multidisciplinary Design Optimization of Tri-Lobed Airship Configuration using PSO**, accepted for presentation at 4th National Conference on Multidisciplinary Analysis and Optimization (NCMDAO-4), 7th to 9th October 2021, co-authored by Manikandan, M., IIT Bombay
2. **Multi-Disciplinary System Design and Optimization of Phase Change Lighter-Than-Air Systems for Venus Exploration**, accepted for presentation at 4th National Conference on Multidisciplinary Analysis and Optimization (NCMDAO-4), 7th to 9th October 2021, co-authored by Kiran Babu, K. M., and Gulawani, S., IIT Bombay.

Presented/Appeared in Conference Proceedings

3. **A review of UAV configurations for exploration of Mars**, 2nd National Conference on Innovation Global trends in Technology, Architecture and Management, 4th to 6th May 2021, co-authored by Uddin, N, IIT Bombay.
4. **Feasibility Study of Multi-Disciplinary Design Optimization of a Phase Change Lighter-than Air System for Exploring Venusian Atmosphere**, Proceedings of 3rd National Conference on Multidisciplinary Analysis and Optimization (NCMDAO-3), 21st to 25th October 2020, co-authored by Kiran Babu, K. M., and Gulawani, S., IIT Bombay.
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