

# **JOURNAL OF AEROSPACE SCIENCES AND TECHNOLOGIES**



ISSN 0972-950x

Volume 63

Number 3

August 2011



**PSLV-C17 Successfully Launched GSAT-12 in Orbit**

See Page No. 193

<b>EDITORIAL COMMITTEE</b>	<b>CONTENTS</b>	
<p><b>Editor :</b> Dr. R. Balasubramaniam, Ae.S.I</p> <p><b>Associate Editors :</b> Dr. S. Kishore Kumar, GTRE Dr. P. Raghothama Rao, Ae.S.I</p> <p><b>Members :</b> Prof. Ron Barrett, U S A Prof. Christian Boller, Germany Prof. M.G Prasad, U S A Dr. Ravi Deo, USA Dr. A.C.R. Pillai, ADE Dr. Satish Chandra, NAL Dr. V. Adimurthy, I I S T Prof. B. Dattaguru, I I Sc Dr. K.P. Singh, ADA Prof. C. Venkatesan, IIT (K) Ashok Bhushan, Ae.S.I Lalit Gupta, Ae.S.I</p> <p><b>Publication Support :</b> Chandrika R Krishnan, Ae.S.I</p> <p><b>Published by :</b> <b>The Aeronautical Society of India</b> 13-B, Indraprastha Estate New Delhi - 110 002, India Tel: ++ 91 11 23370516 Fax: ++ 91 11 23370768 e-mail: aerosoc@bol.net.in</p> <p><b>Printer :</b> Mr. V. Krishnamoorthy, Director Repromen Offset Printers Pvt Ltd Bangalore</p> <p><b>Publisher :</b> Mr Yatindra Kumar Secretary(Adm) for the Aeronautical Society of India, New Delhi Registered with the Registrar of Newspapers for India No. R. N.4767/57</p>	<p><b>Volume 63</b></p>	<p><b>Number 3</b></p>
	<p><b>R. C. Mehta:</b> Numerical Flowfield Visualization over Heat Shield of Satellite Launch Vehicle at Mach 0.8 - 3.0</p>	<p>183</p>
	<p><b>Rakesh Kumar and A. K. Ghosh:</b> Nonlinear Aerodynamic Modeling of HANSA -3 Aircraft Using Neural-Gauss-Newton Method</p>	<p>194</p>
	<p><b>R. Prabhakaran:</b> Lightning Strikes on Metal and Composite Aircraft and their Mitigation</p>	<p>208</p>
	<b>TECHNICAL NOTES :</b>	
	<p><b>S. Thirunavukkarasu, B. P. C. Rao, T. Jayakumar, N. Naryanankutty and P. V. Prabhakaran</b> Eddy Current Methodology for Nondestructive Assessment of Thickness of Silicon Carbide Coating on Carbon-Carbon Composites</p>	<p>223</p>
	<p><b>D. P. Sudhakar, V. Vinodh Babu, Abhay K. Jha M. Rajmohan and A. E. Muthunayagam:</b> Optimisation of Vacuum Brazing Conditions for Joining Stainless Steel 321 Sheets by Nickel Based Braze Foil for Regenerative Rocket Nozzle Applications by Taguchi Method</p>	<p>230</p>
	<b>ENGINEERING NOTE :</b>	
	<p><b>R. K. Mishra, K. S. Jayasimha, A. Iftekar and J. K. K. George:</b> Fretting Failure of Turbine Blades in a Turbojet Engine : A Case Study</p>	<p>238</p>
	<b>TECHNOLOGY APPLICATION NOTE :</b>	
	<p><b>R. Guruprasad, Khaiser Nikam and P. Marimuthu:</b> A Cross-Association Analysis of Scientific Designations (Grades) with the 'Extent of Use of Electronic Information Resources' and the 'Purpose of Use of the Internet' Amongst the Indian Aerospace Scientists and Engineers of Bangalore</p>	<p>243</p>

<b>Address for Correspondence</b>	<b>Annual Subscription (4 Issues)</b>	<b>Advertisement Tariff (4 Issues)</b>
<p>The Editor Journal office, 2nd Floor Aeronautical Society of India Suranjandas Road New Thippasandra Post Bangalore - 560 075, India Telefax: ++ 91 80 25273851 e-mail: <a href="mailto:editoraesi@dataone.in">editoraesi@dataone.in</a> or <a href="mailto:editoraesi@yahoo.com">editoraesi@yahoo.com</a></p>	<p>Inland ₹ 1000/- Overseas US \$ 200/ (Including Airmail Charges)</p>	<p>Back Cover (Multi Colour) ₹ 1,00,000/- US \$ 4,000/- Inside Full Page (Multi Colour) ₹ 60,000/- US \$ 2,000/- Inside Full Page (Black &amp; White) ₹ 40,000/- US \$ 1,200/-</p>

# WINGS THAT RULE THE SKY



**Advanced Light Helicopter (Dhruv)**



**Light Combat Aircraft (Tejas)**



**Intermediate Jet Trainer (IJT)**



**Light Combat Helicopter (LCH)**



**HINDUSTAN AERONAUTICS LIMITED**

Visit : [www.hal-india.com](http://www.hal-india.com)  
email : [marketing@hal-india.com](mailto:marketing@hal-india.com)