

## Submission of Manuscripts

All manuscripts should be submitted online at: <http://www.edmgr.com/aeroj>  
Any enquiries should be directed to Wayne J Davis at [aerjournal@aerosociety.com](mailto:aerjournal@aerosociety.com).  
The current set of instructions for authors are available at: <http://journals.cambridge.org/AER>

## Subscriptions

*The Aeronautical Journal* (ISSN 0001-9240) is published monthly in 12 issues each year.

### Non-Members

The subscription price (excluding VAT) to *The Aeronautical Journal* for volume 124 (2020), which includes print and electronic access, is £639 (USA, Canada and Mexico US\$958) and includes delivery by air; single parts are available at £61 (USA, Canada and Mexico US\$92) plus postage. The electronic-only price available to institutional subscribers is £533 (USA, Canada and Mexico US\$800). EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number. Orders, which must be accompanied by payment, may be sent to any bookseller or subscription agent or direct to the publishers: Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, or in the USA, Canada, and Mexico to Cambridge University Press, Journals Fulfillment Department, 1 Liberty Plaza, Floor 20, New York, NY 10006, USA. Japanese Prices for institutions are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo, Japan.

### RAeS Members

The subscription price for RAeS members is £105 for hardcopy and online access and £80 for online access only. Individual copies are £9. Orders are available from: Membership Department, Royal Aeronautical Society, No.4 Hamilton Place, London, W1J 7BQ, UK. Tel: +44 (0)20 7670 4304 or email: [subscriptions@aerosociety.com](mailto:subscriptions@aerosociety.com)

### RAeS Conference Proceedings

Details, prices and availability of Royal Aeronautical Society Conference Proceedings can be obtained from: RAeS Conference and Events Department, No.4 Hamilton Place, London, W1J 7BQ, UK. Tel: +44 (0)20 7670 4345, email: [conference@aerosociety.com](mailto:conference@aerosociety.com) or via [www.aerosociety.com/events/catch-up-on-events/conference-proceedings](http://www.aerosociety.com/events/catch-up-on-events/conference-proceedings)

### Advertising

All advertising enquiries should be sent to Neeral Patel  
[partners@aerosociety.com](mailto:partners@aerosociety.com)

### Internet Access

*The Aeronautical Journal* is included in the Cambridge Journals Online service and can be found at: <http://journals.cambridge.org/AER>.

*The Aeronautical Journal* now supports open access publications across its hardcopy and online platforms, and accepts papers to consider for publication under both the 'green' and 'gold' open access options.

Information contained within *The Aeronautical Journal* has been published in good faith and the opinions expressed do not represent those of the Royal Aeronautical Society.

The Royal Aeronautical Society is a registered charity: No 313708

© 2020 Royal Aeronautical Society

All rights reserved. No part of this publication may be reproduced in any form or by any means, electronic, photocopying or otherwise, without permission in writing from Cambridge University Press. Permission to copy (for users in the USA) is available from the Copyright Clearance Center, <http://www.copyright.com>.

This journal issue has been printed on FSC™-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see [www.fsc.org](http://www.fsc.org) for information.

Printed in Great Britain by Bell & Bain Ltd, Glasgow.



# CONTENTS

Volume 124 Number 1278

August 2020

- Optimising aircraft arrivals in terminal airspace by mixed integer linear programming model**  
R.K. Cecen and F. Aybek Çetek 1129
- Comparison and analyses of a variable span-morphing of the tapered wing with a varying sweep angle**  
M. Elelwi, M.A. Kuitche, R.M. Botez and T.M. Dao 1146
- Coordinated control of fuel flow rate and air flow rate of a supersonic heat-airflow simulated test system**  
C. Cai, L. Guo and J. Liu 1170
- Fault-tolerant control of hypersonic vehicles based on fast fault observer under actuator gain loss fault or stuck fault**  
P. Zhu, J. Jiang and C. Yu 1190
- Minimising induced drag with weight distribution, lift distribution, wingspan, and wing-structure weight**  
W.F. Phillips, D.F. Hunsaker and J.D. Taylor 1208
- Model for sectional leading-edge vortex lift for the prediction of rotating samara seeds performance**  
D. Rezgui, I.H. Arroyo and R. Theunissen 1236
- Effects of pylon geometry on mixing enhancement in a scramjet pylon-cavity flameholder**  
A. Oamjee and R. Sadanandan 1262

*Front Cover:* Delta Express/Skywest Embraer 175 landing at runway 24R LAX. (Bill Abbott/flickr)