# Technical Soaring



The Scientific, Technical and Operational Journal of the Organisation Scientifique et Technique Internationale du Vol à Voile (International Scientific and Technical Organization for Gliding)

#### **EDITOR**

Dr. Judah Milgram

### JOURNAL MANAGER

Prof. Emeritus Dr. Edward (Ward) Hindman

#### OSTIV PRESIDENT

Prof. Emeritus Ir. Loek M. M. Boermans

The Netherlands

### OSTIV VICE PRESIDENT

Dipl. Ing. Christoph Kensche *Germany* 

### MEMBERS OF THE OSTIV BOARD

Dipl. Ing. John Ashford — Australia
Dipl. Ing. Helmut Fendt — Germany
Prof. Dr. Edward Hindman — USA
Prof. Dr. Mark Maughmer — USA
Dipl. Ing. Ian Oldaker — Canada
Dr. Ing. Lukáš Popelka — Czech Republic

Dr. Hermann Trimmel — Austria

## CHAIR, SCIENTIFIC SECTION and ASSOCIATE EDITOR

Prof. Dr. Zafer Aslan — Turkey

## CHAIR, TECHNICAL SECTION and ASSOCIATE EDITOR

Prof. Dr. Mark Maughmer

### CHAIR, METEOROLOGICAL PANEL

Prof. Dr. Zafer Aslan

## CHAIR, SAILPLANE DEVELOPMENT PANEL and ASSOCIATE EDITOR

Dipl. Ing. Helmut Fendt

## CHAIR, TRAINING AND SAFETY PANEL and ASSOCIATE EDITOR

Dipl. Ing. Ian Oldaker

Copy editing/Layout — Judah Milgram Washington, DC USA

Printing — The Hub Print and Copy Center Ft. Lee NJ USA

Distribution — Pitney Bowes Itasca IL USA

© 2012 Organisation Scientifique et Technique Internationale du Vol à Voile All rights reserved ISSN#0744-8996

#### Volume 36, Number 3

From the Editor	67
OSTIV Congress XXXI	
Götz Bramesfeld	68
Measuring Wing Profile Drag using an Integrating	
Wake Rake	
Ellen Pifer and Götz Bramesfeld	74

The objective of *Technical Soaring (TS)* is to document recent advances in the science, technology and operations of motorless aviation.

TS is published quarterly by the Organisation Scientifique et Technique Internationale du Vol à Voile (International Scientific and Technical Organization for Gliding, OSTIV); Kluyverweg 1, NL-2629 HS Delft, The Netherlands, Tel: +31 15 278 6387, fax: +31 15 278 3533, email: 1.m.m.boermans@tudelft.nl, URL: www.ostiv.org. Subscription is restricted to OSTIV members but material can be submitted by anyone. Rates per calendar year are €25 for students under 25 years of age, €45 for Individual/Local Club Membership; €80 for Scientific/Technical Organization/Library Membership and €250 for Active Members (National Aero Club Members of FAI). Issues are sent by air overseas then surface bulk delivery.

are sent by air overseas then surface bulk delivery. Submitted research papers will be peer-reviewed. Guidelines for preparation and submission of manuscripts can be found on the OSTIV website in the 'editor' section. TS is in print (grey-shade) and online (full-color) at journals.sfu.ca/ts/. The print copy will continue indefinitely. Back issues, from Vol. 26, No. 1 to the current issue, are online; earlier issues will be put online as possible. OSTIV members have complete access to TS online; non-members access titles and abstracts. For members to obtain access, send your email address to the webmaster Jannes.Neumann@t-online.de. Back issues can be purchased from either the OSTIV Secretariat or, in the USA, by email from bernald@juggernaut.com. A quick-start guide to access TS online is on

An index of TS (Vol. 1 through Vol. 34) is at soaringweb.org/Soaring\_Index/
Technical\_Soaring. Issues are indexed by author, subject and issue. Additional information on TS and information on OSTIV Publications can be found ont he OSTIV website in the OSTIV Index. The Index can be searched by right-clicking on the first page, clicking on 'Search', typing in the keyword and clicking on the 'Search' button. The name Technical Soaring and its cover layout are fully rights-protected and belong to the Soaring Society of America; they are used by permission.

the OSTIV website.