

# Technical Soaring



The Scientific, Technical and Operational Journal of  
the Organisation Scientifique et Technique Internationale du Vol á Voile

## EDITOR

Prof. Dr. Mark Maughmer

## OSTIV

### PRESIDENT

Prof. Ir. Loek M. M. Boermans  
*The Netherlands*

### VICE PRESIDENT

Dipl. Ing. Christoph Kensche  
*Germany*

### MEMBERS OF THE BOARD

Dipl. Ing. John Ashford - *Australia*  
Dipl. Ing. Petr Kousal - *Czechia*  
Prof. Dr. Mark Maughmer - *USA*  
Dr. Ing. Michael Rehmet - *Germany*  
Dr. Hermann Trimmel - *Austria*

### CHAIRMAN,

### SCIENTIFIC SECTION METEOROLOGICAL PANEL

Dr. Hermann Trimmel

### CHAIRMAN,

### TECHNICAL SECTION

Prof. Dr. Mark Maughmer

### CHAIRMAN,

### SAILPLANE DEVELOPMENT PANEL

Dr. Ing. Michael Rehmet

### CHAIRMAN,

### TRAINING AND SAFETY PANEL

Dipl. Ing. Ian Oldaker

#### Publications staff:

Edward Hindman, Mark Maughmer, Bernald Smith

Layout/Printing - The Hub Print and Copy Center  
Ft. Lee NJ 07024 - USA

Distribution - Roadrunner Mailing Service  
Fremont CA 94538 - USA

© 2006 Organisation Scientifique et Technique  
Internationale du Vol á Voile  
All rights reserved  
ISSN #0744-8996

<b>Editor's comments</b> .....	1
<b>Flight Test of Gliders and Powered Gliders</b> Ronald Blume.....	2
<b>Research on Sailplane Aerodynamics at Delft University of Technology</b> L.M.M. Boermans.....	10
<b>Development of the Microlift Glider</b> Piero Morelli.....	13
<b>Glider Rescue Systems</b> W. Röger.....	20
<b>Aeroelasticity in Sailplane Design</b> Jan Schwochow.....	27
<b>A Thermal Activity Forecasting Scheme Suitable for Personal Computers</b> Dietrich S. Heimann.....	30
<b>Detection of Transition by Infrared Image Techniques</b> Armin Quast.....	33
<b>Experimental Investigation of the Crash-worthiness of Scaled Composite Sailplane Fuselages</b> R. John Hansman, Jr. and Edward F. Crawley.....	39
<b>A New Approach to the Climatology of Convective Activity</b> Olivier Liechti and Erland Lorenzen.....	46

**Volume 30, Number 1/2**

Printed January 2007

The objective of *Technical Soaring* is to document recent advances in the science, technology and operational aspects of motorless aviation.

*Technical Soaring* is published quarterly by the Organisation Scientifique et Technique Internationale du Vol á Voile (OSTIV); Kluyverweg 1, NL-2629 HS Delft, The Netherlands, tel:+ 31 15 278 6387, fax: + 31 15 278 3533, e-mail: l.m.m.boermans@lr.tudelft.nl

Subscription is restricted to OSTIV members only. Rates/calendar year, based upon surface bulk delivery, are Euro 45 for Individual/Local club membership; Euro 80 for Scientific/Technical Organisation/Library Membership and Euro 250 for Active Members (National Aero Club Members of FAI). First class or airmail delivery may be arranged for an extra fee.

Submitted papers will be subjected to a scientific, technical and/or operational review before being accepted for publication. Guidelines for preparation and submission of manuscripts can be found at [www.ostiv.fai.org](http://www.ostiv.fai.org)

The name *Technical Soaring* and its cover layout are fully rights-protected and belong to the The Soaring Society of America (SSA); they are used by permission.