







RECENT RESEARCH AND DESIGN PROGRESS IN AERONAUTICAL ENGINEERING AND ITS INFLUENCE ON EDUCATION

Research, Education and European Projects - the role of RRDPAE

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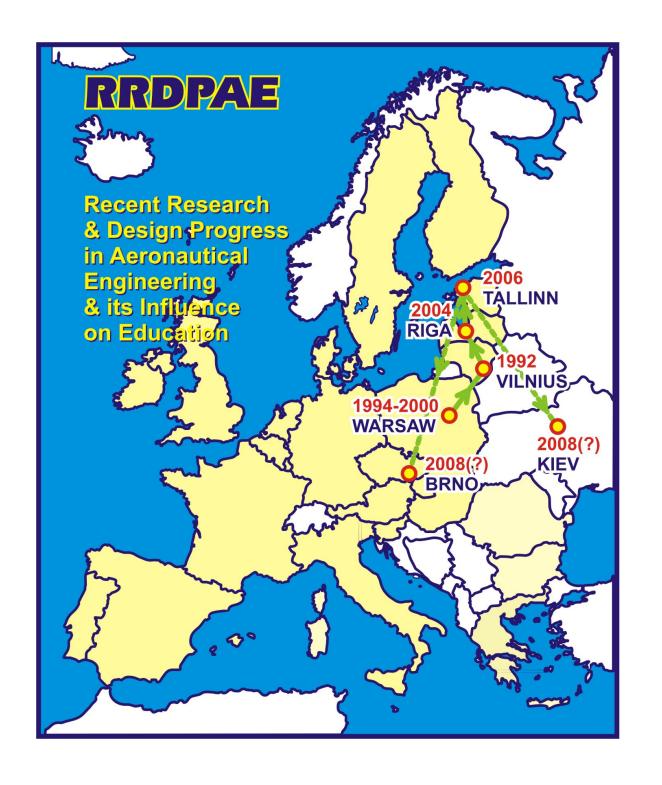
Warsaw University of Technology



Brno – Czech Republik, 16-17 October 2008

Crossing the borders

The aeronautical sciences and aerospace industry are by nature international. Coming from this thesis we decided in 1994 to organise the international meetings, called further Seminars and devoted to "RECENT RESEARCH AND DESIGN PROGRESS IN AERONAUTICAL ENGINEERING AND ITS INFLUENCE ON EDUCATION"



Travelling Seminar

Short history of Seminars

location	year	number of participants/foreign participants	number of presentations	papers published in proceedings or regular journals
Warsaw	1994	82/17	31	26
Warsaw	1996	200/80	105	87
Warsaw	1998	150/74	90	66
Warsaw	2000	185/110	144	79
Vilnius	2002	72/52	60	18
Riga	2004	65/39	54	13
Tallinn	2006	81/51	46	?
<u>Brno</u>	2008	80/41	64	?
		$\Sigma = 915/464$	$\Sigma = 594$	$\Sigma > 289$

Participants
(on example
of Seminar 2000)

Country	Presentations	Participants
·	(non academic:	(non academic:
	from industry,	from industry,
	military or	military or
	governmental	governmental
	institutions)	institutions)
Czech Republik	7	8
France	0.5 (0.5)	1 (1)
Germany	1.5	1
Italy	1	1
Lithuania	3 (3)	4 (4)
Poland	52.5 (9)	75 (14)
Romania	2	2
Russia	57.5 (10)	67 (12)
Spain	1.5	1
Sweden	2.5 (2.5)	5 (5)
UK	5 (2)	6 (3)
USA	10 (7.5)	14 (12)
Σ	144 (24.5)	185 (51)

Selected photos 1







Role of RRDPAE ...

Tallinn 2006 – RRDPAE-2006

From the left:

Prof. Martinsh Kleinhofs,

Prof. Zdobyslaw Goraj,

Prof. Antonin Pistek,

Prof. Villu Mikita and

Prof. Jonas **Stankunas**



Objectives

- •The objective of Seminar is to organise on multinational basis, a forum for discussion and interchange of aeronautical problems and subjects with special stress to their influence on university education.
- •Then, to <u>promote international co-operation</u> in the study of such problems in aeronautical science and technology where there is a common interest.
- •Also, to <u>facilitate personal contacts</u> between sciences, university lecturers and industry engineers. The area of our interest is the wide-understood aeronautical technology.

Topics

The special effort of the past Seminars was concentrated on

- Aircraft Design
- Aerodynamics (aircraft oriented)
- •Flight Dynamics
- Helicopter Dynamics
- Computational Fluid Dynamics
- Materials and Structures
- Control and Flight Tests
- •Flight Safety
- Education

Research \(\Display Education

All these topics are considered including their influence on the teaching process at the technical university — what we believe is the specific feature of our seminars. We notice a mutual influence between contemporary research and education — it is impossible to deliver modern university lecture not conducting own, serious research or design and it is almost impossible to become a serious, successful researcher or designer not being the graduate of good, contemporary university.



Student session

The other specific feature of our Seminar is Student Session. An international Jury of Professors, very often Deans of selected Aerospace Faculties from over the world has observed the session and sometimes awarded the best student papers. I am personally very grateful to our hosts that also during this seminar in Brno this nice tradition will be continued. We believe that the student session promotes personal contacts between students and foreign lecturers and encourage them to work even harder in the future.

For all of us it is the promise of a new generation of specialist engineers, designers and scientists.

Looking for research partners (1/3)

- •Our meeting is a natural forum where we can look for partners for joint projects, research grants and various scientific activities on international basis.
- •European Union through their commissions in Brussels encourages scientists to organise international teams and to apply for European founding.
- •I personally believe that RRDPAE Seminars had played a positive role in preparation of Polish teams to compete for the projects in FP5/FP6.

Looking for research partners (2/3)

One of many successful examples was VI European Framework and first 2 calls of VII Framework. Its philosophy is very simple – mutual relations create an additional value, a kind of synergy and can accelerate the overall progress in Aeronautics.

I ask all of you — do not miss this occasion, establish new friendships and partnerships for future activity.

Why in Poland, Baltic Countries, Czech?

We are conscious that over the world there are organized various, sometimes very prestigious, international conferences in the area of Aeronautics. Some of them are very specialized and gathers many outstanding, over the world recognised experts. Our intention is rather to invite a few outstanding persons, specialist in the selected fields of Aeronautics and discuss only selected topics. The advantage of such approach is that many scientists and young engineers from our countries are able to take part in this event because of comparatively lower cost in comparison to that of in Western Countries. Is it still true?

What in the future? (1/4)

Our first meeting was in 1994. Another group of people involved with aircraft design, mainly from Western Europe, met the same year in Madrid and decided to organise the so-called European Workshop for Aircraft Design Education (EWADE). Since then they have met regularly every two years (in Berlin, Bristol, Torino, Linkoping, Brno, Toulouse and Hamburg, Samara and Seville 2009) and in some sense they act parallel to us.



What in the future? (2/4)

2007 Samara

What in the future? (3/4)

Nobody has monopoly on any aircraft design activity. Maybe we need to establish an agreement with EWADE group and jointly organise a wider forum? We live in one Europe, now 27 members. Please think about it and if you decide that it is worthy of considering, may be we can return to this subject during Round Table Discussion



What in the future (4/4)



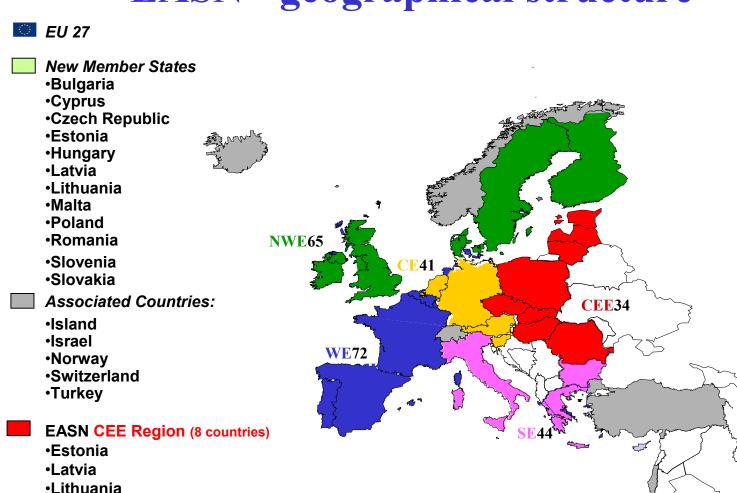
Regular journals, proceedings or just abstracts?

All our university Colleagues are pressed by their university authorities to produce papers, especially for regular journals. I would like to recommend you three international journals, looking for design-oriented papers:

- Aviation (editor Prof.J.Stankunas, Vilnius)
- •Journal of Aerospace Engineering (editor J.Hodgkinson, London)
- •Aircraft Engineering and Aerospace Technology (editor T.Savage, London)

If you fill that the paper you present at our Seminar is worthy to publish in regular journal, please submit it for consideration.

EASN - geographical structure



Members (March 10, 2009): 256 (March 22, 2009): 333

•Hungary

Slovakia

Poland

•Romania

Czech Republic