



*Aeronautics Days  
Wien - June 19-21, 2006*

## *The PEGASUS Network*

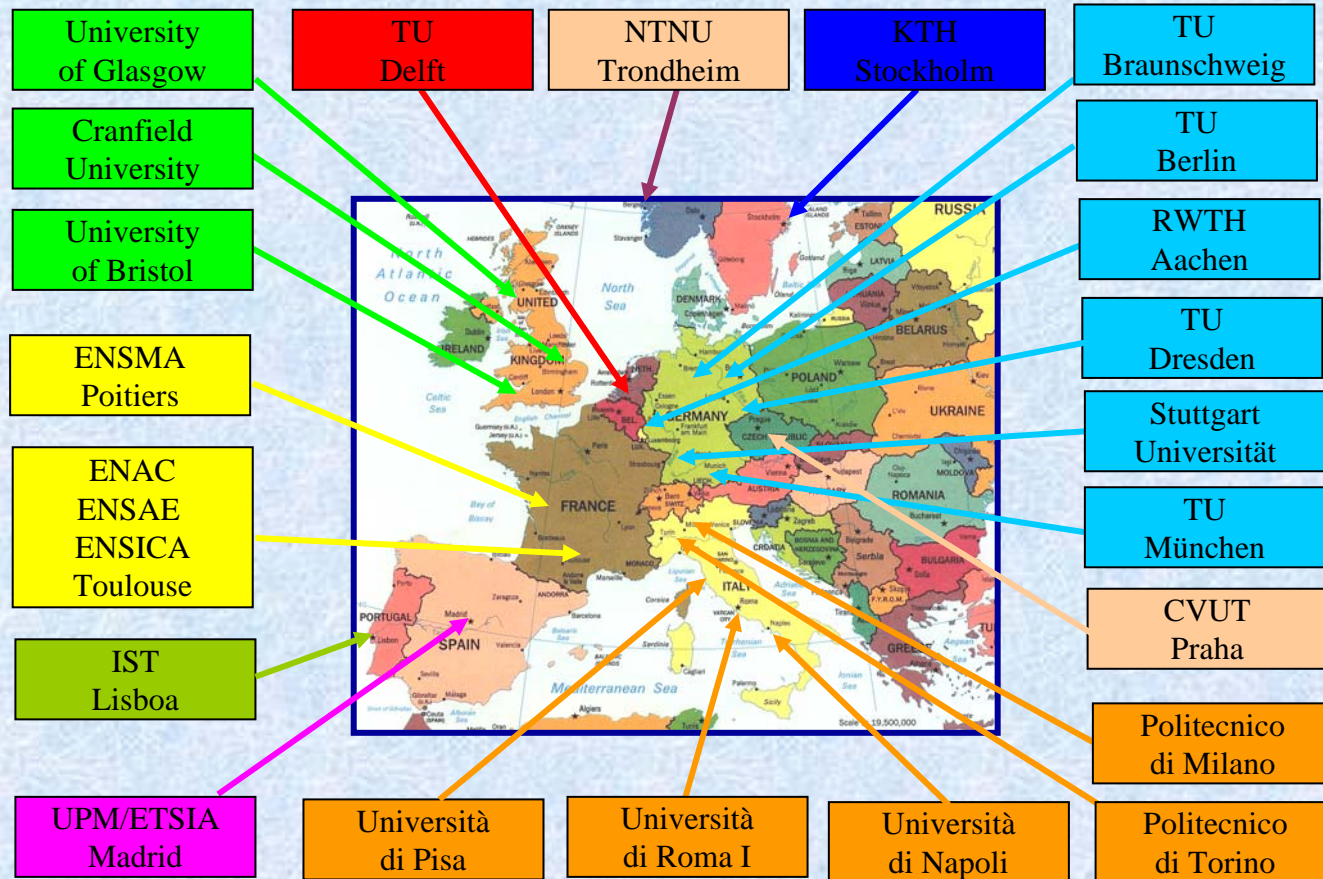
*Partnership of a European Group  
of Aeronautics and Space Universities*

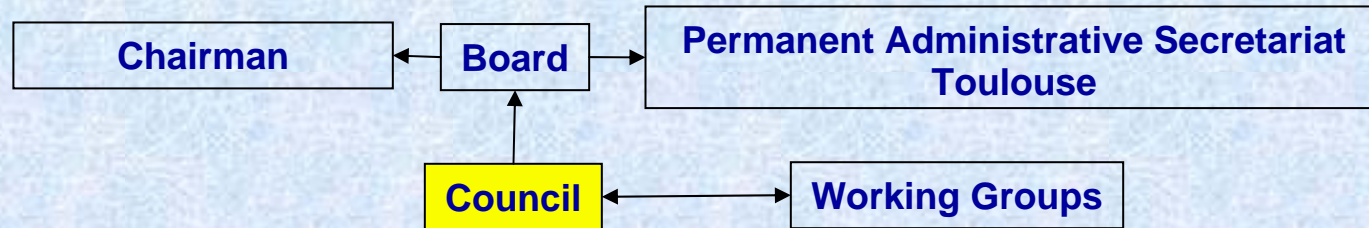
**Gianfranco Chiocchia**  
**PEGASUS Chairman**

## Founded in 1998 in Toulouse

- 20 Founding Members till 2002-03
- Presently 24 member Institutions
- 10 European countries represented
- Yearly output: more than 2500 BAC+5 graduates in aerospace engineering from the whole network
- website: [www.pegasus-europe.org](http://www.pegasus-europe.org)
- PEGASUS is open to all EU institutions providing a sufficiently qualified education in AS engineering (e.g.: Bac+5 curricula with a well balanced blend of subjects, education combined with research ...)

# The PEGASUS Network today





## Present PEGASUS Working Groups

- **WG1: Network, development and industrial relations**
- **WG2: Education and quality**
- **WG3: Continuing and distance education**
- **WG4: Research**
- **WG5: Communication**

- **Contribute to the development of a quality system for the European higher education in Aerospace Engineering**
- Improve educational process and curricula to specifically serve the needs of the aerospace industry
- Show similarities and differences of European curricula to the aerospace world
- Co-operate with other groups and networks to fulfil the EU policy lines in higher education
- Increase co-operation between partners and industry as well as national and European research agencies
- Contribute to attract non-European students and engineers through competitive curricula and continuing educational services
- **Be recognised as the most efficient channel to get university inputs at the integrated EU level**

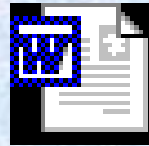
## Admission to PEGASUS follows an assessment based on a small set of established criteria



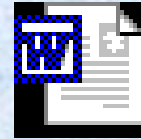
Admission criteria

- Both qualitative and quantitative criteria
- Excellence as well as international co-operation are considered
- Criteria include both input and outcome aspects
- No assessment of process in the admission procedure

## Reciprocal recognition of common quality: the PEGASUS labels Certificate and A.W.A.R.D.



Certificate



A.W.A.R.D.

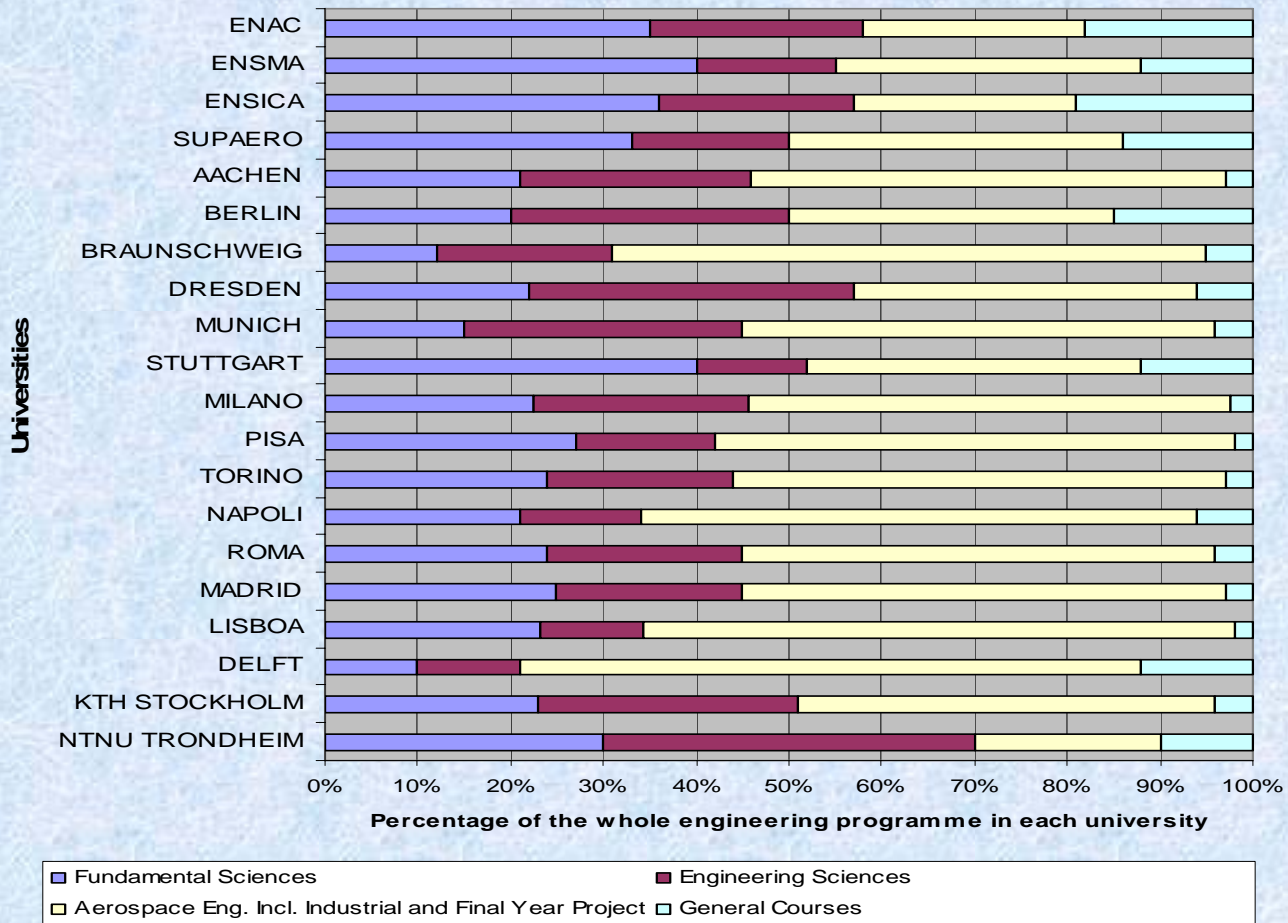
## The PEGASUS – AIAA Student Conference

- 1° edition 2005 in Toulouse
- 2° edition 2006 in Munich
- Next 2007 edition in Naples

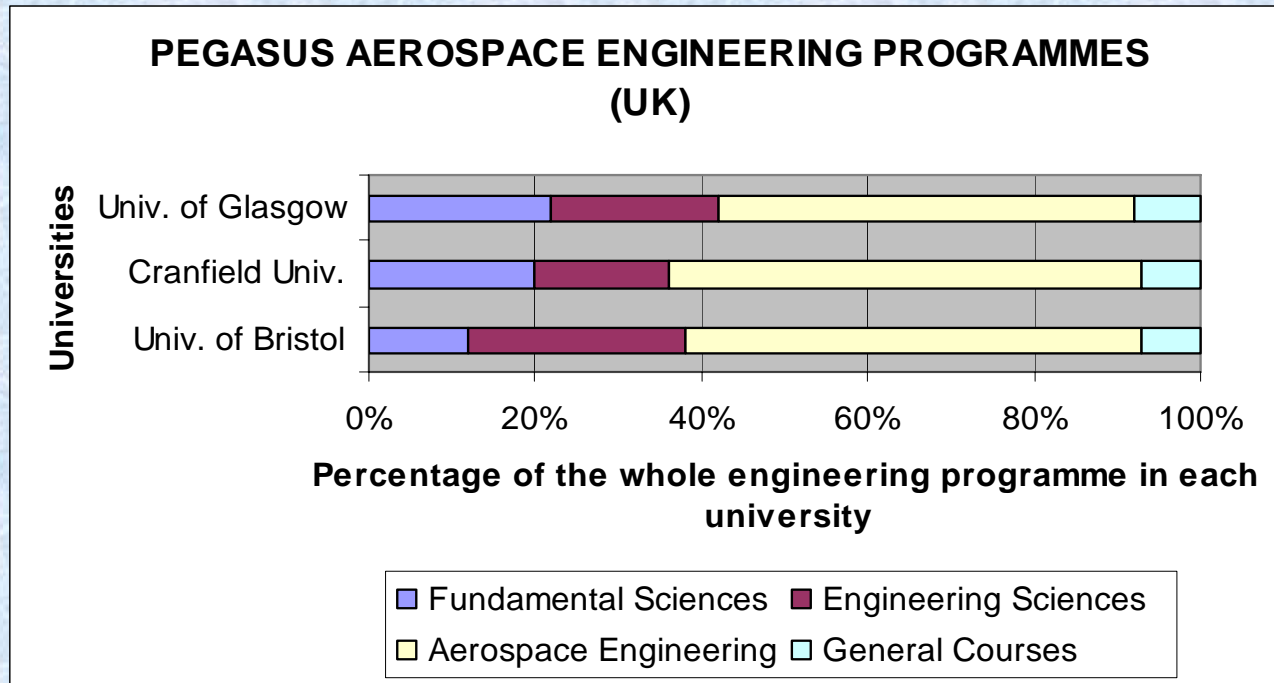
## Analysis of differences and similarities of the EU curricula in aerospace: the PEGASUS Course Catalogue (ed. 2005 in print)

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## PEGASUS AEROSPACE ENGINEERING PROGRAMMES (Continental Europe)







## Promoting students and graduates mobility: outgoing students from a PEGASUS partner to another

Year	Substitution years or semesters, including double degrees	Only projects	Overall inside PEGASUS
1998/99	31	41	72
1999/00	40	50	90
2000/01	69	76	145
2001/02	58	92	150
2002/03	99	92	191
2003/04	112	79	191
2004/05	136	88	224

- Overall student mobility, including projects: more than tripled from 1998/99 to now (10% of the overall PEGASUS output)
- Only substitution years or semesters (the most qualified activity): more than quadrupled (figures for 2004/05 are still partial !)

ENAC Toulouse	ENSICA Toulouse	ENSMA Poitiers	SUPAERO Toulouse	RWTH Aachen	TU Berlin	TU Braunschweig	TU München	Universität Stuttgart	TU Dresden	Politecnico di Milano	Politecnico di Torino	Università di Pisa	Università di Roma I	Università di Napoli I	Imperial Coll. London	Cranfield University	University of Bristol	University of Glasgow	KTH Stockholm	TU Delft	NTNU Trondheim	ETSIA Madrid	IST Lisboa	
	x	x	x	x						x	x		x				x	x	x	x		x		ENAC Toulouse
x				x		x	x	x		x	x				x	x	x	x	x	x		x	x	ENSICA Toulouse
								x		x	x		x				x			x	x			ENSMA Poitiers
	x			x	x					x	x	x	x	x				x	x				x	SUPAERO Toulouse
				x						x	x				x				x	x		x		RWTH Aachen
															x				x	x				TU Berlin
																x								TU Braunschweig
				x						x	x		x	x	x			x	x				x	TU München
				x						x	x	x					x		x	x				Universität Stuttgart
											x	x					x				x			TU Dresden
																		x	x					Politecnico di Milano
															x		x	x	x	x	x			Politecnico di Torino
																			x	x				Università di Pisa
																		x		x				Università di Roma I
																		x		x				Università di Napoli I
																						x	x	IC London
																				x				Cranfield University
																				x				University of Bristol
																				x				University of Glasgow
																						x		KTH Stockholm
																						x	x	TU Delft
																								NTNU Trondheim
																								ETSIA Madrid
																								IST Lisboa

**Presently active student mobility agreements inside PEGASUS**

## **Results of the increased mobility:**

- New “crossed” aerospace profiles emerge spontaneously
- Cross-breeding of curricula is slowly taking place during the implementation of the Sorbonne – Bologna 3+2 scheme

## **Implementation of the three-level scheme in PEGASUS**

- Fully accomplished by the Italian and Dutch partners
- Underway in Spain, Norway and others
- In Germany: started by the TU9 Group, formed by nine Technical Universities. All 6 German PEGASUS Partners are represented in TU9

## **In all, or nearly all, PEGASUS Institutions:**

- Student questionnaires on teaching quality and their evaluation
- Monitoring of students' careers, composition, provenance ...
- Discussions with local societal counterparts

**The network as a whole has established contacts with the European industry to discuss contents and methods of teaching aerospace engineering, e.g.**

- The “Airbus Roadshow” events 2002/03
- New set of events foreseen starting end 2006
- Industrial participations to the PEGASUS Councils and to the PEGASUS – AIAA Student Conferences

## **PEGASUS is confronting itself with the fundamental issue:**

*What is needed to assume as comparable the quality of two EU aerospace engineers who have studied in different EU universities, and this in spite of significant diversities in the curricula, educational profile philosophies, teaching methods, cultural environments ....?*

## ***PEGASUS can contribute to set up a European QA scheme for Higher Education in Aerospace Engineering by providing its experience and knowledge***

- to deliver a set of recommendations for a QA scheme specific for aerospace,
- which will also become a paragon for other technological domains

***Aerospace: the Avant-garde in Higher Education Quality ?***