

# Welcome to EWADE 2015

**G. La Rocca (TU Delft)**

**EWADE 2015**

**12<sup>th</sup> European Workshop on  
Aircraft Design Education  
Delft, The Netherlands**

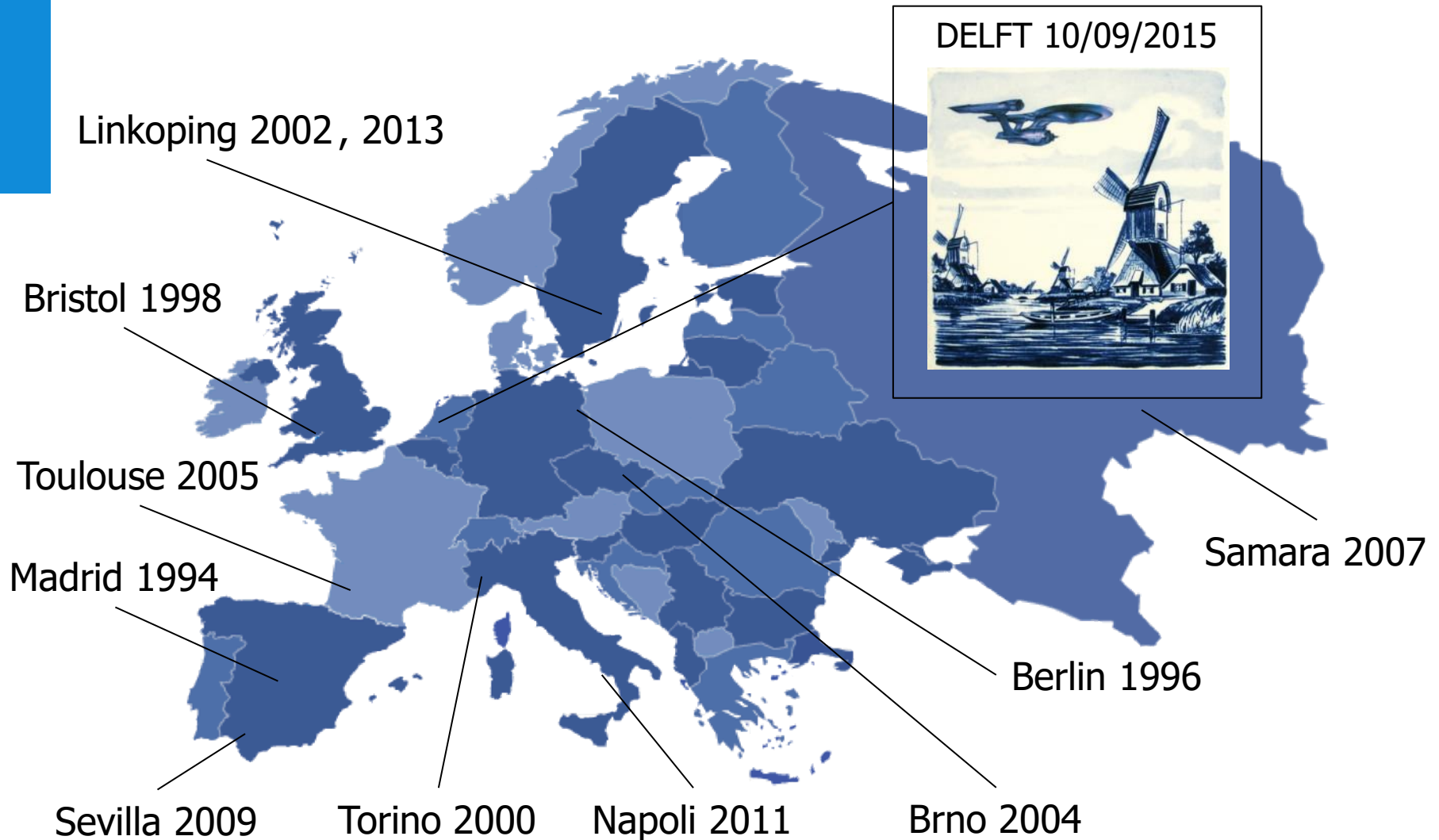
**September 2015**



# So, what about **EWADE 2015 in Delft?**



# Welcome to the 12<sup>nd</sup> EWADE edition



# 1<sup>st</sup> EWADE 1994 Madrid



First flight 777

# 2<sup>nd</sup> EWADE 1996 Berlin

[NEWS](#) > FOKKER BANKRUPT

## Fokker bankrupt

20 MARCH, 1996

Kevin O'Toole/LONDON

ON 15 MARCH Fokker finally admitted defeat in its attempts to stave off bankruptcy, ending 77 years of aircraft manufacturing in the Netherlands when bids from AVIC of China and Samsung of South Korea failed to materialise.

The collapse leaves question marks hanging over its backlog of more than 50 aircraft and the impact on residual values across the regional market.

The main assembly plant at Schiphol is to be closed as aircraft production ceases, with the loss of around 4,700 jobs. A skeleton staff of 350 will be left at the plant to finish aircraft close to completion.



Fokker goes bankrupt



# 3<sup>rd</sup> EWADE 1998 Bristol



<b>Role</b>	Surveillance UAV
<b>National origin</b>	United States
<b>Manufacturer</b>	Northrop Grumman
<b>First flight</b>	28 February 1998
<b>Status</b>	In service
<b>Primary users</b>	United States Air Force United States Navy NASA
<b>Number built</b>	42 RQ-4Bs as of FY2013 <sup>[1]</sup>
<b>Program cost</b>	US\$10 billion (USAF cost through FY2014) <sup>[1]</sup>
<b>Unit cost</b>	US\$131.4M (FY13) <sup>[1]</sup> US\$222.7M (with R&D) <sup>[1]</sup>
<b>Variants</b>	Scaled Composites Model 396
<b>Developed into</b>	Northrop Grumman MQ-4C Triton

UAV UAV UAV UAV.....

# 4<sup>th</sup> EWADE 2000 Torino



First flight X-35A. Lockheed Martin JSF demonstrator

# 5<sup>th</sup> EWADE 2002 Linköping



Embraer E-170



Pilatus PC-21



A318



Eclipse



# 6<sup>th</sup> EWADE 2004 Brno



Aermacchi M346 first flight



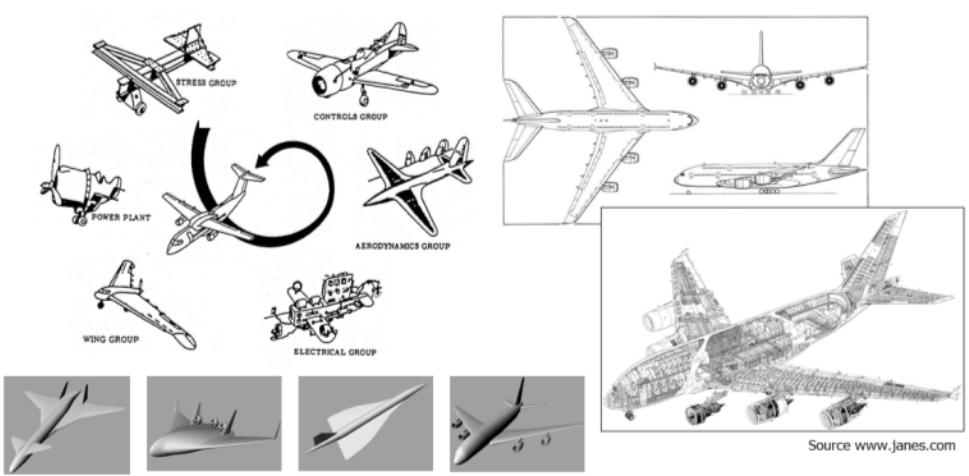
Virgin Atlantic GlobalFlyer

# 7<sup>th</sup> EWADE 2005 Toulouse



A380 first flight

**INTRODUCTION TO THE  
AIRCRAFT DESIGN COURSE**  
**Objectives, Structure and Organization**



The diagram illustrates the structure and organization of the Aircraft Design course. It features a central circular flow of arrows connecting various aircraft components: STRESS GROUP, CONTROLS GROUP, AERODYNAMICS GROUP, ELECTRICAL GROUP, WING GROUP, and POWER PLANT. To the right, there are three wireframe diagrams of aircraft: a side view, a top view, and a bottom view. Below these, there is a detailed cutaway diagram of an aircraft showing internal components. The source 'www.janes.com' is cited at the bottom right of the cutaway diagram. At the bottom left, there is a logo for 'DAR' (Delft Aircraft Research) and a small aircraft icon.

Source [www.janes.com](http://www.janes.com)

**Aircraft Design** **AE3-021** **TU Delft**

My first Aircraft Design course at TU Delft

# 8<sup>th</sup> EWADE 2007 Samara



First A380 delivered to  
re Airlines



Ronald Slingerland



Tecnam P2006T

# 9<sup>th</sup> EWADE 2009 Sevilla





# 10<sup>th</sup> EWADE 2011 Napoli



© All Nippon Airways

First 787 delivered to Nippon Airlines

The poster for the 10th EWADE Conference is light blue. At the top left is the seal of the University of Naples 'Federico II' and the text 'Università degli Studi di Napoli "Federico II"'. Below this is the 'DIAS' logo and 'Dipartimento di Ingegneria Aerospaziale'. To the right is a photograph of a city harbor with a volcano in the background, with an airplane flying over it. Below the photo is the EWADE logo and text: 'EWADE European Workshop on Aircraft Design Education'. In the center, it says 'INTERNATIONAL WORKSHOP 24-27 May 2011, Naples, Italy' and 'University of Naples "Federico II" - Faculty of Engineering' with the website 'WWW.DIAS.UNINA.IT/EWADE2011'. Below this is a box for the '200 BICENTENARIO SCUOLA INGEGNERIA NAPOLI'. At the bottom, under 'SPONSORS:', are logos for 'TECNAM', 'AR', 'PIAGGIO AERO', and 'AleniaAeronautica A Finmeccanica Company'.

My first EWADE ☺

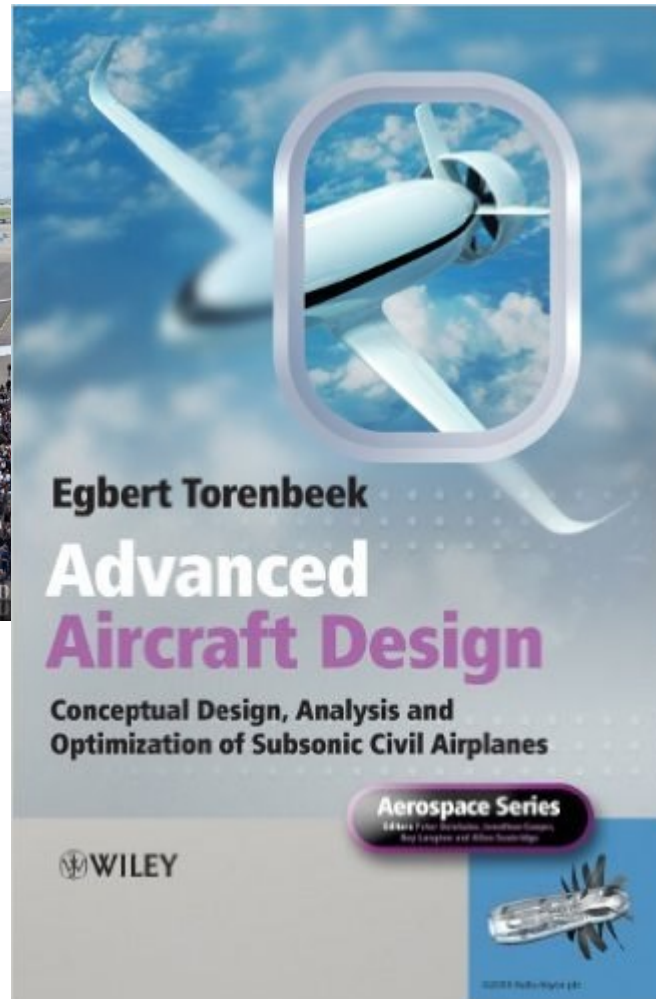


# 11<sup>st</sup> EWADE 2013 Linköping



A350 first flight

**EWADE's first  
landing on CEAS**



Education  
Sweden



session followed by an acclamation by hand  
Kazan, Russia in May/June 2013. In De-  
ember to be followed. So Prof. Petter Krus from  
EWADE 2013 into the CEAS European  
to 19<sup>th</sup> of September 2013 at Linköping

Space Societies"  
AS conference is  
place biannually  
ference of one of  
in Venice, Italy  
di Aeronautica e  
erence in Linköping, Sweden organized  
ation FTF - FlygTekniska Föreningen  
AS2013.org).



# 12<sup>th</sup> EWADE 2015 Delft



**Welkom**  
to  
**EWADE 2015, Delft**

# Program morning

9:00	9:10	Welcome and EWADE opening		Chair: E. Torenbeek
		Survey on aircraft design education in European academia curricula.	G. La Rocca; R. Vos (Delft University of Technology, The Netherlands)	
9:10	9:30	Role of concurrent design facilities in aerospace design education		
9:30	10:00	C. Bil (RMIT-Australia)		
		D. Scholz (UAS Hamburg, Germany)		
10:00	10:30	Flying low and slow		
coffee break				
		Hybrid propulsion applied to a general aviation aircraft. Perspectives for the future		Chair: G. La Rocca
11:00	11:30	Academic course in aircraft conceptual design and on-board system preliminary design at Politecnico di Torino	F. Oliviero (Pisa University, Italy)	
		M. Fioriti (Politecnico Torino, Italy)		
11:30	12:00	Transonic Aerodynamics in Conceptual Aircraft Design		
12:00	12:30	R. Vos (Delft University of Technology, The Netherlands)		

# Program afternoon

13:30	14:00	The importance of non-linearities in aircraft preliminary design	F. Nicolosi, A. de Marco, P. dalla Vecchia (University of Naples Federico II, Italy)	Chair: D. Scholz
14:00	14:30	The Re-Wright project. An HPA in the making	P. Berry (Linkoping University, Sweden)	
14:30	15:00	Very large PrandtlPlane aircraft: an application to freight transportation	A. Frediani (Pisa University, Italy)	
coffee break				
15:30	16:00	The HUULC project. Feasibility study of a hydrogen powered unmanned ultra large cargo aircraft	M. Gillis, M. de Feber, (Delft University of Technology, The Netherlands)	Chair: G. La Rocca
16:00	16:30	Modeling method of strength analysis for thin-walled structure	Z. Wang and L. Kang (Nanjing University of Aeronautics and Astronautics ) and A. Kretov and H. Sheng (Kazan National Research Technical University of Tupolev-KAI)	
16:30	16:40	A new textbook on advanced design methods: Multidisciplinary Design Optimization supported by Knowledge Based Engineering	G. La Rocca (Delft University of Technology, The Netherlands)	
16:40	17:00	Wrap up and next EWADE planning		