



44th European Rotorcraft Forum

GENERAL INFORMATION AND PRELIMINARY PROGRAMME

www.erf2018.org

DELFT - THE NETHERLANDS

18-21 SEPTEMBER 2018

About ERF

The European Rotorcraft Forum is one of the premier events in the rotorcraft community's calendar bringing together manufacturers, research centres, academia, operators and regulatory agencies to discuss advances in research, development, design, manufacturing, testing and operation of rotorcraft. The Forum takes place annually across Europe, rotating around the United Kingdom, Germany, France, Italy, the Netherlands and Russia. The first ERF was held in Southampton, England, in 1975. In 2018 the 44th European Rotorcraft Forum will be organised in Delft, The Netherlands from September 18-20.

Partners, exhibitors and sponsors

The combination of a Technical University, a pleasant old town, good accessibility and perfect equipment, makes the Aula Conference centre an outstanding location for this event. A variety of (inter)national companies, institutions and other relevant organizations will present themselves at the very spacious Foyer and support the conference.

If you're Interested to join the already confirmed exhibitors and sponsors at the 44th European Rotorcraft Forum in Delft, please visit www.erf2018.org.



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DELFT - THE NETHERLANDS 18-21 SEPTEMBER 2018

Welcome at the European Rotorcraft Forum in Delft!

It is a great pleasure to welcome you to the 44th ERF on behalf of the International Committee and our national partners. Like the seven previous events in the Netherlands, again this year's forum is hosted by the Netherlands Association of Aeronautical Engineers (NVvL) as a member of the Council of European Aerospace Societies CEAS and with great support and contributions from the Netherlands Aerospace Centre (NLR) and the Delft University of Technology (TU Delft).



I'm glad that distinguished guests and more than 130 speakers are willing to share their views with you. We will offer you an attractive conference program with high quality papers on relevant topics, the latest developments, innovative concepts and smart technical solutions to the challenges of our sector. The importance of safety for rotary wing operations will be explicitly addressed during the Helicopter Safety Workshop, in association with the European Safety Promotion Network Rotorcraft ESPN-R, on the third conference day.

I'm sure the forum at the university campus will provide you with the opportunity to broaden your network of contacts, share best practices and exchange your experiences with others during this premier event of the European rotorcraft community. Information about the event and practical matters can be found on the conference website (www.erf2018.org).

Welcome at the 44th European Rotorcraft Forum and enjoy your stay in the beautiful city of Delft!

Christophe Hermans
Chairman of the local organizing committee and
president of the Netherlands Association of Aeronautical Engineers NVvL

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Venue

City of Delft

Delft has a lot to offer! The city is well-known for its ties with the Dutch Royal family (tombs of William of Orange and members of the Royal family) and the famous painter Vermeer. Delft is also world renowned for its Delft Blue earthenware and its lovely canals. Delft has a pleasant, well-preserved, lively historical centre, with characteristic canals, ancient merchant houses, old churches and the splendid city hall. Delft is more than 750 years old. The city owes its name to the word 'delving', digging the oldest canal, the Oude Delft. In 1246, Delft received its city franchise from the Dutch Earl Willem II. Delft is nicknamed 'de Prinsenstad' (the Prince's City), because William of Orange, the first in the Dutch royal line, held court in Delft in the 16th century. In 1842 the Royal Academy for Civil Engineers was founded. The Academy used the building vacated by the artillery school. The Academy of then is the TUDelft of today, which is also the largest employer in Delft.

TU-Delft University

Daily, about 27.000 people travel across our campus: students, scientists, visitors, and employees of the university and the companies on campus. Stretching over 161 hectares, the campus is larger than downtown Delft, and one of the largest university campuses in the world. The campus has been equipped with an extensive bicycle and pedestrian road network. The TU Delft campus has a green, parky character. Large parts of the campus are therefore only accessible on foot, by bike, or public transport. For motorists there is the campus ring road, which circles the entire campus. Clear signage on the campus ring guides you easily to the central parking lots. From there, every destination is reachable on foot.



Preliminary Programme

Day 1 - Tuesday September 18th					
Auditorium					
9:00	Welcome and Opening Speeches Keynote presentation by CleanSky JU on Fast Rotorcraft Program				
10:30	<i>Coffee break</i>				
11:00	Keynote presentations by GKN-Fokker, Defence Helicopter Command and SHELL Aircraft				
12:30	<i>Networking Lunch</i>				
13:30-15:30	Lecture Room	Senate Room	Frans van Hasselt Room	Commission Room 3	Commission Room 2
	Aero-dynamics I	Flight Mechanics I	Unmanned Rotorcraft I	Dynamics I	Test & Evaluation I
15:30	<i>Coffee break</i>				
16:00-18:00	Aero-dynamics II	Flight Mechanics II	Unmanned Rotorcraft II	Dynamics II	Test & Evaluation II
19:00	<i>Welcome reception at Prinsenhof Delft</i>				

Day 2 - Wednesday September 19th					
9:00-10:30	Lecture Room	Senate Room	Frans van Hasselt Room	Commission Room 3	Commission Room 2
	Aero-dynamics III	Flight Mechanics III	Engine and Propulsion I	Dynamics III	Acoustics I
10:30	<i>Coffee break</i>				
Lecture Room					
11:00	“The Electric VTOL Revolution” by Mr. Mike Hirschberg (Executive Director AHS–The Vertical Flight Society)				
11:30	AHS Best Paper Award				
12:00	ARF Best Paper Award; “A Study of Rotor/Wing Aerodynamic Interaction at High Speed Flight on a Compound Helicopter” by Mr. Hideaki Sugawara (JAXA)				
12:30	<i>Networking Lunch</i>				

Day 2 - Wednesday September 19th					
	Lecture Room	Senate Room	Frans van Hasselt Room	Commission Room 3	Commission Room 2
13:30-15:30	Aero-dynamics IV	Flight Mechanics IV	Engine and Propulsion II	Operational aspects	Crew Station Human Factors
15:30	Coffee break				
16:00-18:00	Aero-dynamics V	Aircraft Design I	Unmanned Rotorcraft III	Simulation and training I	HUMS & Maintenance
19:00	Conference dinner at paddle steamer 'De Majesteit' (Bus transport from TU Delft conference centre)				

Day 3 - Thursday September 20th					
	Lecture Room				
9:00	Opening of the Safety workshop				
9:10	Keynote presentation on Rotorcraft Safety Strategy by EASA				
9:50	Emeritus Professor Gareth Padfield "The Danger of speed instability below minimum power; a forgotten problem?"				
10:30	Coffee break				
	Lecture Room	Senate Room	Frans van Hasselt Room	Commission Room 3	Commission Room 2
11:00-12:30	Aero-dynamics VI	Safety Workshop	Systems, Avionics & sensors	Simulation & training II	Acoustics II
12:30	Networking Lunch				
13:30-15:30	Aero-dynamics VII	Safety Workshop	Aircraft Design II	Simulation & training III	Structures & Materials
15:30	Coffee break				
16:00-18:00	Aero-dynamics VIII	Safety Workshop	Aircraft Design III	Flight Mechanics V	Test & Evaluation III

Day 4 - Friday September 21st	
9:00-15:00	Technical tour to Fokker-GKN Aerostructures or LC Woensdrecht (National Defence helicopter maintenance and supply centre)

Forum Registration

To apply for registration please go to www.erf2018.org/registration

Registration Fees

ERF Registration Fees	Early Registration Before July 15, 2018	Late Registration After July 15, 2018
Non Member	840 €	890 €
Member (CEAS)	800 €	850 €
Speaker/Chairman	740 €	790 €
PhD Student	600 €	650 €
BSc/MSc Student	300 €	300 €
Social Program for Accompanying Person	115 €	115 €

ERF registration fee for non-members/members/speakers/chairmen/PhD students includes: ERF attendance, ERF documentation, coffee breaks, lunches, 1 welcome cocktail ticket, 1 gala dinner ticket.

CEAS Member: Council of European Aerospace Societies (includes: 3AF, AAAR, AIAE, AIDAA, DGLR, FTF, HAES, NVvL, PSAA, RAeS, SWFV, TsAGI, CzAeS)

ERF registration fee for BSc/MSc students includes:

ERF attendance, ERF documentation, coffee breaks, lunches. Please send a copy of your Student ID-Card (erf2018@nlr.nl)

Discover the best of Holland

Discover the true story of Willem of Orange, get up close and personal with Johannes Vermeer, and see how the world-famous Delft Blue ceramics are made.



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Delft, City of Delft Blue Pottery

Between 1600 and 1800, Delft was one of the foremost pottery producers in Europe as Delft Blue pottery was immensely popular. Only “De Koninklijke Porceleyne Fles”, known as “Royal Dutch”, has remained in operation since 1653 and still produces the Delft Blue pottery according to the traditional methods. Other locations in Delft where one can see the pottery are “De Delftse Pauw” and in the many souvenir shops around town.

Delft & the Royal House of Orange

The New Church contains the crypt where the members of the Dutch royal family, the house of Orange, have their final resting place.

Delft, City of Johannes Vermeer

Johannes Vermeer was born in Delft in 1632, he lived and painted all of his life in Delft until he died in 1675.

Information on Delft

Information on Delft (e.g. accommodations, shopping, eating & drinking, history of Delft) can be found on www.delft.com

Climate

The Netherlands share the temperate maritime climate common to much of Northern and Western Europe. The average day temperature in September is around 15 - 20° Celsius. An umbrella or rain coat for occasional showers may be useful.



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Electricity

The voltage in the Netherlands is 220-240V. USA, English and some other foreign appliances require an adapter for the voltage as well as an adapter for the plug.

Please bring your own adapter as there are no adapters available at the congress venue.

Currency and banking

The currency in the Netherlands is the Euro. In general, all major credit cards are accepted for payment in hotels, restaurants and shops. Most banks in Delft are open from 9.00 to 17.00 hours (Monday to Friday).

Opening hours shops

In the city center most shops are open 7 days a week. Opening hours: 09.30 until 18.00 hrs (Monday to Saturday); 12.00-17.00 hrs. (Sunday in the city center only). On Friday evening shops are open until 21.00 hrs.

Insurance

Delegates are advised to arrange adequate travel, health and other insurance before they leave their home country. The Forum does not cover participants against cancellations of bookings or loss/theft of belongings.

Passports and visa

All visitors travelling to the Netherlands must be in possession of a valid passport. Participants should check with their local travel agents whether they require an entry visa for the Netherlands.

Time zone

The Netherlands and Amsterdam are in the Central European Time Zone, one hour ahead of GMT.

Travel to ERF 2018

From Amsterdam Airport (by train)

Arriving at Amsterdam Airport, the Schiphol train station is located directly below the airport. Direct trains to Delft (final destination Vlissingen) leave every 30 minutes from platform 5-6. The journey by train will take approximately 39 minutes. A one-way journey will cost € 9,60 (full fare, 2nd class) and € 16,30 (full fare, 1st class)

Where to buy train tickets?

You can travel on NS (the Dutch Railways) with a single-use chip card that is available from the yellow ticket machines with the blue overhead sign reading 'train tickets'.

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You can find the ticket machines near the platforms at Schiphol Plaza. Tickets (for domestic and international travel) are also available at the Ticket- and Service desks at Schiphol Plaza.

When travelling with a single-use chip card, you need to check in at a check-in point before your journey, and to check out at a check-out point after your journey. For more information, please check the NS website.

From Rotterdam The Hague Airport (by bus and train)

Arriving at Rotterdam The Hague Airport there is no direct public transport to Delft. First take bus # 33 (direction Rotterdam Centraal, 20-25 minutes) to go to Rotterdam's central station. A one-way journey will cost € 1,70 for the bus (full fare). The buses stop right next to the departures hall.

Rotterdam central station has fast and regular railway connections to the city of Delft; almost every ten minutes trains to Delft leave from the platforms 8 or 9. A one-way journey will cost € 3,20 (full fare, 2nd class) or € 5,40 (full fare, 1st class) for the train.

The total journey from the airport to Delft station will take approximately 40-50 min.

Where to buy bus and train tickets?

On board of the bus you can purchase the bus ticket to the central station. At Rotterdam's central station you can purchase a single-use chip card from the yellow ticket machines with the blue overhead sign reading 'train tickets'.

Tickets (for domestic and international travel) are also available at the Ticket- and Service desks, which you can find in front of the luggage lockers and the toilets in the public area of the central station.

From Rotterdam The Hague Airport (by taxi)

You can also take a taxi to get to Delft. The taxi stand is located directly in front of the entrance/exit of the airport terminal. The fare to Delft (about 12 kilometers) will take 15-20 minutes (though not at rush hour traffic) and will cost approximately € 33.



Dedicated to innovation in aerospace



Delft University of Technology

Language

Conference language is English. Presentations and discussions are therefore in English. There will be no simultaneous translation during the session.

Welcome cocktail

Prinsenhof Delft

Sint Agathaplein 1

2611 HR Delft

i) <http://prinsenhof-delft.nl/en/>

Conference dinner

Paddle steamer 'De Majesteit'

Maasboulevard (next to nr. 100)

3063 NS Rotterdam



Hotel Accommodation

All hotel bookings must be arranged by participants themselves. We advise all delegates to book their hotels directly well in advance and referring to the specific hotel booking code: **ERF2018**. For more details see also: www.erf2018.org

Please note, the hotel rates are only applicable when reservations are made directly with the hotel.

	Hotel	Room price
1	Casa Julia	from € 80.00
2	Johannes Vermeer	from € 106.00
3	Hampshire Delft Centre	from € 106.00
4	Westcord Hotel	from € 129.00
5	Hotel de Plataan	from € 110.00

You can also use the following link to find hotel rooms:

www.preferredreservations.nl/erf-2018

More about these hotels and other hotels in Delft can be found on the website:

www.delft.com/planning-your-trip/stay

Venue

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