



Nieuwsbrief

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Bericht van de voorzitter

Het nieuwe NVvL-bestuur zit deze maand een half jaar in het zadel. Veel zaken zijn opgestart. Alle vanaf mei gehouden lezingen voor onze leden zijn online gehouden, het programma voor 2022 is in voorbereiding waaronder de viering van ons tachtig jarig bestaan en er wordt gewerkt aan de nieuwe website.

Het dagelijks bestuur heeft een kennismakingsgesprek gehad met vertegenwoordigers van de besturen van de Nederlandse Vereniging voor Luchtvaart Geneeskunde (NVvLG) en de Vliegtuigbouwkundige Studie Vereniging 'Leonardo da Vinci'. De drie verenigingen maken deel uit van de Afdeling Luchtvaart Wetenschappen van de KNVvL. Afgesproken is o.a. om elkaar beter te informeren over elkaars activiteiten.

De eerstvolgende lezing van Floris Bremmers op 18 november staat hieronder aangekondigd. Deze lezing, die ook weer online wordt gegeven, beveel ik u van harte aan.

Tot slot: Zoals bekend is de NVvL lid van de Council of European Aerospace Societies (CEAS). Daarbij maak ik u attent op het oktobernummer van het CEAS-bulletin:
<https://ceas.org/wp-content/uploads/2021/11/AE-4-2021-v.def-JPS.pdf>



Mark van Venrooij (voorzitter)



Agenda

Datum	Onderwerp	Vorm	Spreker
18 november 2021	Scaled Flight Testing	Online	Floris Bremmers, NLR
16 december 2021	BRIK II	Online	Bernard Buijs, CLSK
20 januari 2022	Nieuwjaarsborrel	ntb	



Volgende lezing: Scaled Flight Testing

From Scaled Flight Testing Validation Towards Distributed Electric Propulsion Demonstration

The Scaled Flight Demonstrator (SFD) has been developed within CleanSky2 in order to assess the use of Scaled Flight Testing as a test capability that is complementary to ground test devices like wind tunnels and iron-birds. The main objective was to validate scaled flight testing for the overall aircraft behavior. For this validation purpose, a well-known A320 aircraft configuration has been selected. In parallel to the development of the SFD, many theoretical investigations about the scaling effects on aerodynamics coefficients and on handling qualities of the A320 at different scales have been performed.

Scaled Flight Testing allows to investigate dynamic maneuvers and handling qualities that cannot be well evaluated and validated in wind tunnel tests. Also, the flight control laws could be evaluated in real flight conditions on such a flying test bed after the hardware and software tests in the simulation-based iron-bird environment on the ground. Overall, it would be an intermediate step between ground tests and first real size flight tests. Scaled Flight Testing could be used earlier during the design process than real flight tests and would allow validation of the flight control laws at lower costs.

In the next step Distributed Electric Propulsion (DEP) will be demonstrated as a radical configuration for an Advanced Small/Medium Range (SMR) airliner for the 2035 timeframe. The configuration was selected from a design space exploration and features Distributed Propulsion. The selected design builds on propulsors (propellers) in the leading edge. The configuration will build on the results achieved by the SFD demonstrator and will re-use substantial parts of the hardware created for this demonstrator: the DEP-SFD.

Following successful design, manufacturing, integration and wind tunnel testing, the SFD is now being prepared for the high speed taxi tests and first flight. The DEP-SFD is in the detailed design phase.

De lezing is bij te wonen via Zoom:

<https://tudelft.zoom.us/j/96816689086?pwd=Sk5aUGwzaWwvZFNTcGxOK1Bnc1VKZz09>

Meeting ID: 968 1668 9086; Passcode: 461875

Over Floris Bremmers:

R&D Engineer at NLR, obtained his Masters in Aerospace Engineering at the Technical University of Delft, specializing in multidisciplinary design optimization and knowledge based engineering. At NLR he is employed at the Flight Test & Certification department and works on prototype development and measurement techniques: particularly regarding scaled aircraft development and scaled flight test demonstration.

Datum:

Donderdag 18 november 2021

Tijd:

19:30 – 21:00 uur

Vorm:

Online via Zoom (zie link hiernaast)

Onderwerp:

Scaled Flight Testing

Taal:

De lezing is in het Nederlands

Door:

Floris Bremmers



Floris Bremmers