### Day 1 - Tuesday September 18th

#### 9:00 Welcome and Opening Speeches

**Auditorium**

**9:00** Welcome and Opening Speeches

**9:10** Keynote presentation "Update on the CleanSky2 Fast Rotorcraft Programs" by Ron van Maanen (CleanSky JU)

**9:30** Coffee break

**10:00** Keynote presentation by GKN-Fokker, "Training enhancement for the Defence Helicopter Command – The power of visionary needs analysis" by Maj. Roland Blankenspoor (DHC, RNF)

**10:30** "Aviation challenges for the Global Energy Market" by Tony Cramp & Alrik Hoencamp (SHELL Aircraft)

#### 12:30 Lecture Room

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<td><strong>Flight Mechanics I</strong></td>
<td><strong>Unmanned Rotorcraft I</strong></td>
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<td>Philippe Beaumier</td>
<td>Marilena Pavel</td>
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<td><strong>Dynamics I</strong></td>
<td><strong>Commission Room 3</strong></td>
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<td>Pierangelo Masarati</td>
<td>Richard Markiewicz</td>
<td>Klausdieter Pahlke</td>
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**Aerodynamics I**

- **23** A Hybrid Navier-Stokes/Viscous Vortex Particle Methodology for Modeling Maneuver Loads
  - Sankar Lakshmi
  - (Georgia Institute of Technology, USA)

- **25** Aerodynamics of Single and Multiple Rotorcraft Hovering Inside Square Tunnels
  - Yasutada Tanobe
  - (JAXA, Japan)

- **59** Assessing different blade designs in hover and forward flight
  - George Barokas
  - (University of Glasgow, UK)

- **76** Rotor Airfoil Aerodynamic Design Method and Test Verification
  - Long He
  - (CARD, China)

**Flight Mechanics I**

- **108** Progress in the development of a time-to-contact autorotation cueing system
  - Michael Jump
  - (University of Liverpool, UK)

- **59** Design space analysis of an autonomous aerial crane VTOL concept with a detachable airship envelope
  - Yu Itto
  - (Yamato Holdings Co., Ltd., Japan)

- **20** Height-Velocity Diagram Analysis of a Variable Speed Rotor Helicopter
  - Renliang Chen
  - (Nanjing University, China)

- **97** The Tilt-Quadrotor: Modelling and Attitude Stabilization
  - Ricardo Marques
  - (Inst Superior Técnico, Uni Lisboa, Portugal)

**Unmanned Rotorcraft I**

- **16** Impact scenarios for collisions with unmanned aerial vehicles and their consequences to rotorcraft
  - Florian Franke
  - (Tech Hochschule Ingolstadt, Germany)

- **45** Vibration Reduction Analyses using Individual Blade Pitch Controls for Lift-Offset Rotors
  - Joe-Sang Park
  - (Chungnam National University, South Korea)

- **66** Discrete Vortex Cylinder Method for the Preliminary Loads Calculating of the Helicopter Flight
  - Evgeny Nikolayev
  - (Kazan Helicopters Plant, Russia)

- **18** The Tilt-Quadrotor: Modelling and Attitude Stabilization
  - Patricio Ventura Daz
  - (NASA Ames Research Center, USA)

- **19** Preliminary Analysis and Conceptual Design of a Modular Rotary-Wing Unmanned Air System
  - Nicholas Bogja
  - (University of Manchester, UK)

- **55** Controller Gain Optimization for Gust Rejection in a UAV
  - Venkatasubramani Subba Reddiar
  - (Pennsylvania State University, USA)

- **44** A Physics-Based Approach to Urban Air Mobility
  - Patricia Ventura Daz
  - (NASA Ames Research Center, USA)

- **31** DriveTrain Influence on the Lead-Lag Modes of Hingeless Helicopter Rotors
  - Felix Armin Weiss
  - (DLR, Germany)

- **66** An Experimental Investigation of Hub Drag Characteristic on Coaxial Rigid Rotor Helicopter
  - Min Tang
  - (CARD, China)

- **61** Controller Gain Optimization for Gust Rejection in a UAV
  - Venkatasubramani Subba Reddiar
  - (Pennsylvania State University, USA)

- **14** Real Time Flight Dynamics Model Identification of Tilt-Rotor Aircraft
  - Wei Wu
  - (Nanjing University, China)

- **110** Development of an Automatic System for Helicopter Approach to a Moving Vessel
  - Sebastian Toczekuzki
  - (Warsaw University of Technology)

- **10** Experimental Research on Whirl Flutter of Tiltrotor Aircraft
  - Linghua Dong
  - (Nanjing University, China)

- **94** Experimental investigation on dynamic stall flow control for wind turbine airfoil using plasma actuators
  - Guoping Li
  - (CARD, China)

#### 19:00 Welcome reception at Prinsenhof Delft
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<td>Philippe Baemmir</td>
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**Day 2 - Wednesday September 19th**

11:00 "The Electric VTOL Revolution" by Mr. Mike Hirschberg (Executive Director AHS—The Vertical Flight Society)
Keynote presentation on "EASA Rotorcraft Safety Strategy" by David Solar (EASA)