



Deutsche Gesellschaft
für Luft- und Raumfahrt
Lilienthal-Oberth e.V.



ROYAL AERONAUTICAL SOCIETY
HAMBURG BRANCH E.V.



Verein Deutscher Ingenieure
Hamburger Bezirksverein e.V.
Arbeitskreis Luft- und Raumfahrt

Invitation to an RAeS lecture in cooperation with the DGLR and VDI

New Concepts in Pilot G-Protection

Dipl.-Ing. Rainer Stuwe,
Product Manager, Autoflug

Lecture
followed by discussion

Entry free !
No registration !



Paul Bonhomme, winner of the Red Bull Air Race World Championship, 2009

Date: Thursday, 28th January, 18:00
Location: HAW Hamburg
Berliner Tor 5
(Neubau), Hörsaal 01.12

Mild to moderate gravitational Forces (G-Forces) have been encountered by most of us on a commercial flight or while taking a roller coaster ride. Pilots of military high performance airplanes and aerobatic airplanes are subjected to high G-Forces with significant impacts on the human body. Without adequate training/protection, the pilot might lose his consciousness. The lecture will outline the different developments throughout the evolving aircraft generations.

When striving for the maximum possible G-Protection, new concepts should minimize possible adverse physiological effects with respect to the human body. The importance of the "human aspect" will be emphasised.

Finally, the G-Race Suit will serve as an example of a new concept, to support pilots in high performance aerobatic airplanes to withstand G-Forces of up to +12 G's. As most G-suits use compressed air, the G-Race Suit is based on the hydrostatic principle, using "liquid filled muscles" to create the required counter pressure on the lower extremities.

The lecturer joined the German Naval Academy in Flensburg in 1979 and was awarded a Masters degree in Aviation and Space Technology at the German Armed Forces University in 1983. He received his wings at Mather Air Force Base in California in 1986 which was followed by 14 years of different assignments in the German Naval Air Arm as Weapons Systems Officer Tornado, CO of the Naval Flotilla's Operations and Tactics Group etc. He has 15 years of naval flying experience including 1600hrs on medium G aircraft. He joined Autoflug in 2000 as Product Manager responsible for new aircrew G-protection systems.

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<http://hamburg.dglr.de>
<http://www.raes-hamburg.de>
<http://www.vdi.de/2082.0.html>

und  Luftfahrtstandort
Hamburg
<http://www.luftfahrtstandort-hamburg.de>

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