



INGENIEURBÜRO FLUGWESEN UND BIOMECHANIK IFB AG

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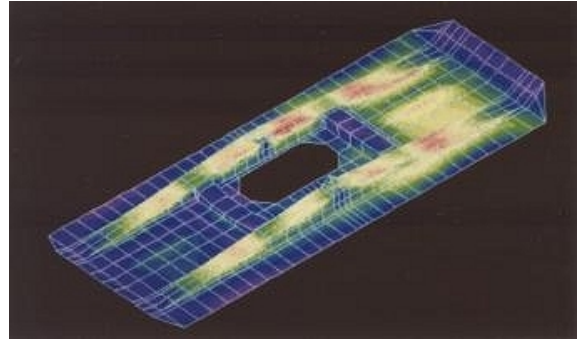


Since 15 years your partner for complete solutions !

Flight Affairs

Development of **helicopter-skis** for unlimited operation (test flights up to 173 kts without signs of oscillation).

Finite-Element-Analysis for minimal weight.



Measurement of aerodynamic forces and moments in a **wind-tunnel**.



Development of an articulating **hoist** made of carbon fibers with integrated control and drive assembly for an ambulance jet. Foldable **load distribution device** optimized for minimal space requirement.



All kind of **installations** in aircraft and helicopters. For example: Installation of a flight data recorder and cockpit voice recorder in an ambulance jet.

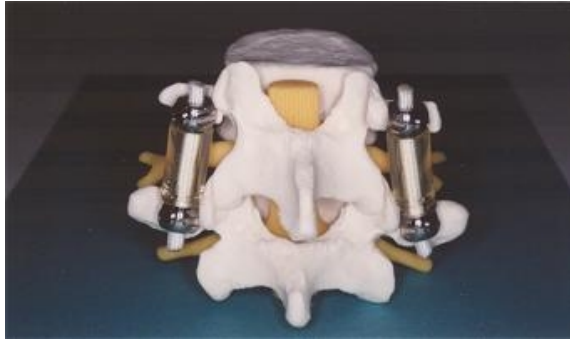


Dynamic tests in a high sophisticated crash center of a doctor seat for a rescue helicopter.

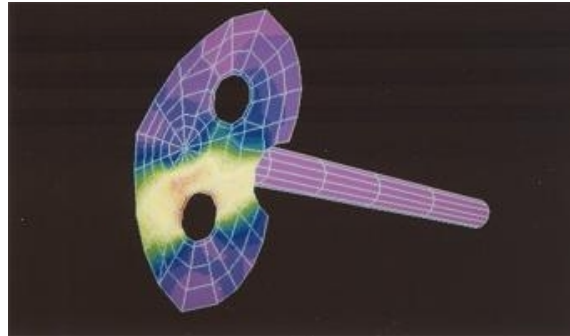
Lightweight has the potential to save

..... weight ♦ volume ♦ energy ♦ resources !

Biomechanics



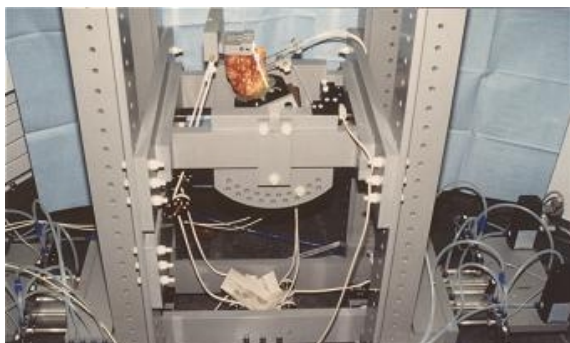
Development of an innovative system for the **dynamic stabilization** of the **lumbar spine** (avoiding fusion) including a new **bone screw** to be anchored in the vertebral body (pedicle) for carrying transverse loads.



Finite-Element-Analysis of a tibial plateau (knee prosthesis) for evaluation of the fracture mechanism and design of additional ribs.



Development of **artificial ligaments** for the reconstruction of the anterior cruciate ligament, including new test methods for fatigue evaluation, innovative drill jigs and a pre-operative planning.



Development of a computerized **spine simulator** for applying close to reality loads on anatomical specimen and surgical systems.

Development of a **knee simulator** for analyzing ligament lesions (injury thresholds) at skiing with load build up times down to 50ms.



Innovative concepts

..... out of distinctive basic research !

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CEO Stefan Freudiger, dipl. Masch. Ing. ETH, exec. MBA HSG

- Publications**
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