

A T **H** L A S

all-terrain helicopter landing system

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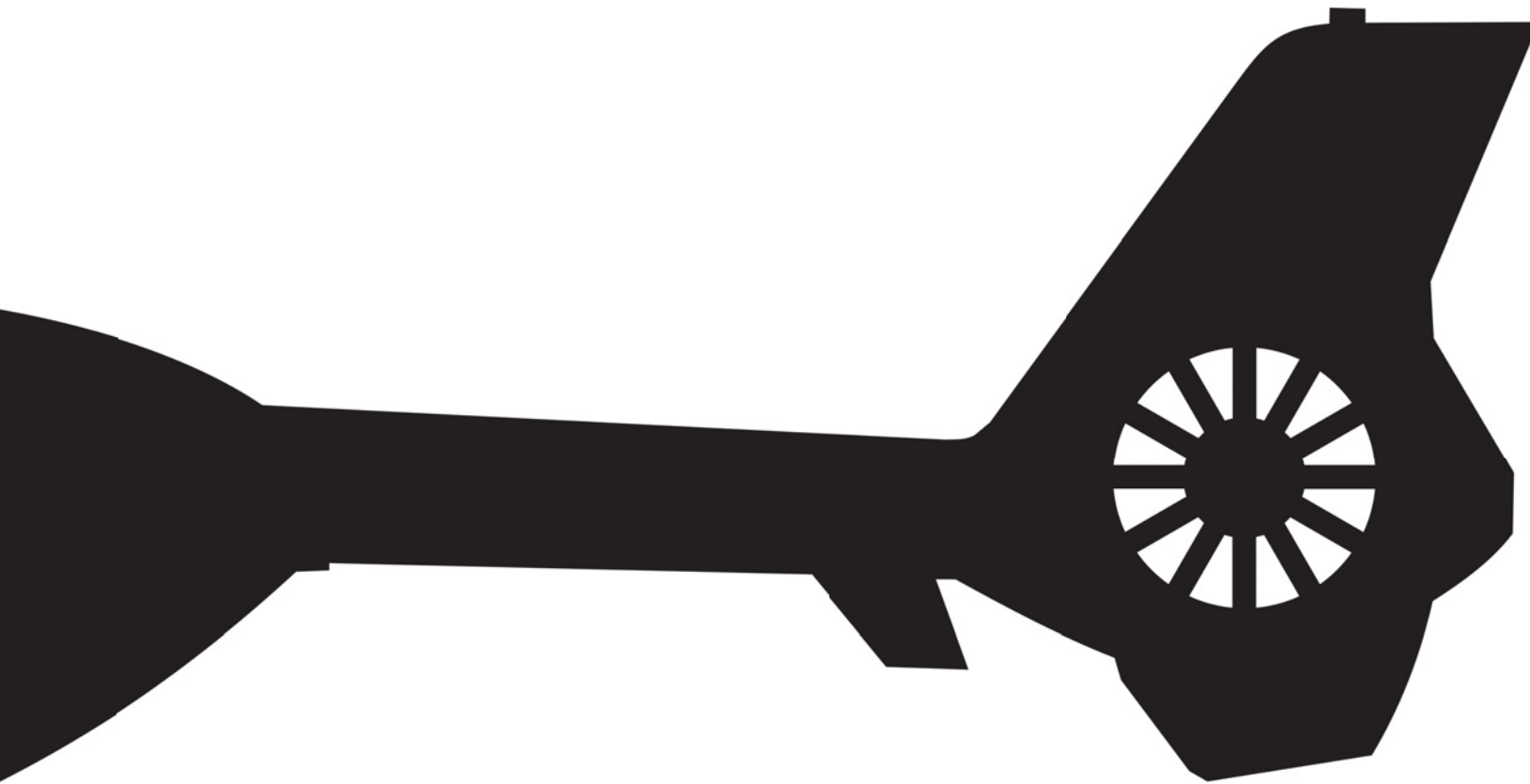
ETH zürich

 **RSL**
Robotic Systems Lab

zhaw School of
Engineering

„If you are in trouble anywhere in the world, an airplane can drop you flowers, but a helicopter can land and save your life.“

Igor Sikorsky, Aviation pioneer



Vision

We aim to enable helicopter landings on uneven and steep terrain with an inclination of up to 20 degrees. Thereby we are removing crucial limitations of today's helicopter landing gears. This will expand the application area of helicopters significantly.



Concept



To prove the feasibility of an adaptive landing gear, we are developing a prototype for an unmanned helicopter. With a rotor diameter of 3.2 m and an empty weight of 50 kg this model is ideal to test all required technologies. Our landing gear will consist of four individually controllable legs for maximal adaptability and stability. The resulting prototype will not only be applicable for unmanned platforms but will additionally serve as a technology demonstrator for manned systems. With the developed technology we will be able to enlarge the operational boundaries of today's helicopters.



Team



We are 12 students from ETH Zurich and ZHAW Winterthur. Our different backgrounds – mechanical, electrical and systems engineering – enable a dynamic approach to complex problems.

We are taking on an intensive challenge within the Focus Project course: Within only eight months we are going to develop a working prototype from an initial, market-oriented question. The outcome of this project will be presented at the end of May 2017.

Support

Prof. Dr. Marco Hutter
Professor at RSL

Fabian Günther
Engineer at RSL (Coach)

Marko Bjelonic
Engineer at RSL (Coach)

Hendrik Kolvenbach
Engineer at RSL (Coach)

Michael Liem
Student Coach

Team

Mechanical Engineering



Gokula
Englberger



Daniel
Erne



Boris
Stolz



Eric
Hayoz



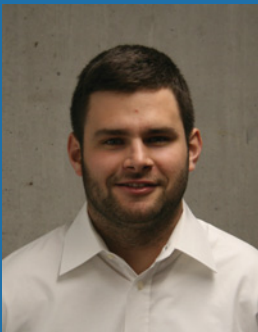
Luca
Vandeventer



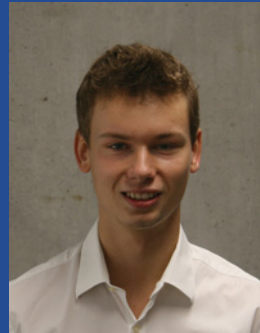
Tobias
Löw



Tim
Brödermann



Jan Gasser



Lorin
Mühlebach



Stephan
Müller

Electrical Engineering



Dominique
Scheuer



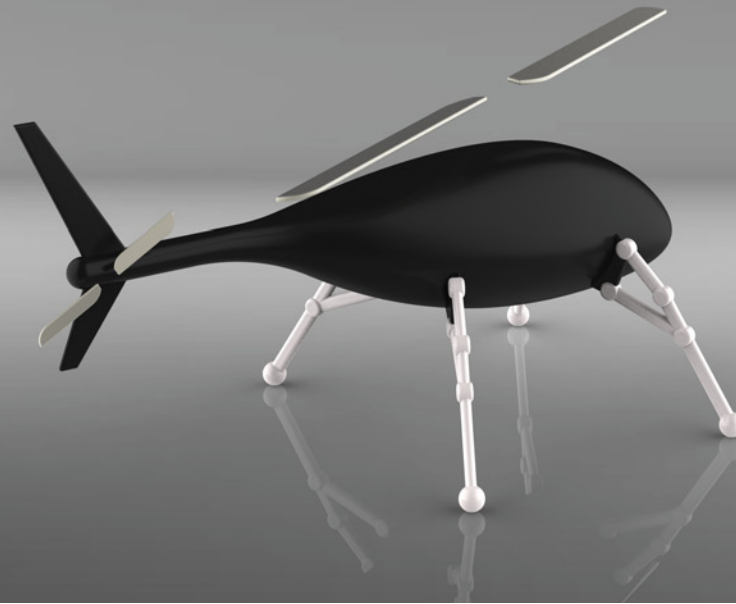
Enea
Castiello

Systems Engineering

Sponsoring

We are developing an innovative solution to enable safe helicopter landings in previously inaccessible terrain. The prototype we are constructing is hopefully just the start: We aim to make it scalable so in a further step it could be built in real scale. To get there, we need your sponsorship:

Join us as a partner or supplier and help us make our vision become reality!



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