

 Content archived on 2024-06-18



AIRCRAFT and ROTORCRAFT PILOT COUPLINGS – TOOLS AND TECHNIQUES FOR ALLEVIATION and DETECTION

Fact Sheet

Project Information

ARISTOTEL

Grant agreement ID: 266073

[Project website](#) 

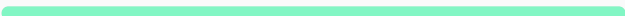
Project closed

Start date

1 October 2010

End date

30 September 2013



Funded under

Specific Programme "Cooperation": Transport
(including Aeronautics)

Total cost

€ 3 843 228,30

EU contribution

€ 3 003 652,00

Coordinated by

TECHNISCHE UNIVERSITEIT
DELFT

 Netherlands

This project is featured in...



Objective

The ARISTOTEL project challenge is ensuring aircraft safety and aims to reduce the aircraft and rotorcraft accidents caused by a particularly unfavourable category of phenomena: aircraft-pilot-couplings and rotorcraft-pilot-couplings (A/RPCs). Generally, A/RPCs are defined as “inadvertent, sustained aircraft oscillations which are a consequence of an abnormal joint enterprise between the aircraft and the pilot”. Recent experiences show that modern designs are being confronted in an increasing degree with dangerous A/RPCs. The reason for this is that modern aircraft feature a significant level of automation in their flight-control-systems (FCS). FCS is generally intended to relieve pilot workload and allow operations in degraded weather and visibility conditions. Especially in the modern rotorcraft, there seem to be embedded tendencies predisposing the FCS system towards dangerous RPCs. As the level of automation is likely to increase in future designs, extending to smaller aircraft and to different kinds of operation, the consequences of the pilot ‘fighting’ the FCS system and inducing A/RPCs needs to be eradicated. It is the goal of this project to develop the design tools and techniques needed to detect and alleviate the A/RPC problems. End products of the project will be: 1) Advanced vehicle-pilot-FCS simulation models for “rigid body” and aeroservoelastic A/RPC analysis; 2) A/RPC design guidelines and criteria; 3) protocols and guidelines for A/RPC flight simulator training. All results will be directly useable by the aerospace industry in the design process for improving flight safety. The project will contribute in this sense to: 1) the minimization of the factors that lead to pilot loss of control resulting in increased enhancement of the European aircraft safety and 2) will strengthen the European Aeronautics Industry competitiveness in their time- and cost-effective design tools.

Fields of science (EuroSciVoc)

[social sciences](#) > [sociology](#) > [industrial relations](#) > [automation](#)

[engineering and technology](#) > [mechanical engineering](#) > [vehicle engineering](#) > [aerospace engineering](#) >

[aircraft](#) > [rotorcraft](#)

[engineering and technology](#) > [mechanical engineering](#) > [vehicle engineering](#) > [aerospace engineering](#) > [aeronautical engineering](#)



Programme(s)

[FP7-TRANSPORT - Specific Programme "Cooperation": Transport \(including Aeronautics\)](#)

Topic(s)

[AAT.2010.3.3-3. - Avionics](#)

[AAT.2010.3.4-1. - Design systems and tools](#)

Call for proposal

FP7-AAT-2010-RTD-1

[See other projects for this call](#)

Funding Scheme

[CP-FP - Small or medium-scale focused research project](#)

Coordinator



TECHNISCHE UNIVERSITEIT DELFT

EU contribution

€ 602 533,50

Total cost

No data

Address

STEVINWEG 1

2628 CN Delft

 **Netherlands** 

Activity type

Higher or Secondary Education Establishments

Links

- Contact the organisation Website
- Participation in EU R&I programmes
- HORIZON collaboration network

Participants (9)



WYTWORNIA SPRZETU KOMUNIKACYJNEGO PZL-Swidnik Spolka Akcyjna

Poland

EU contribution

€ 106 649,50

Address

Al. Lotnikow Polskich 1
21045 SWIDNIK



Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- Contact the organisation Website
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

No data



OFFICE NATIONAL D'ETUDES ET DE RECHERCHES AEROSPATIALES

France

EU contribution

€ 372 534,25

Address

CHEMIN DE LA HUNIERE
91120 Palaiseau



Region

Ile-de-France > Ile-de-France > Essonne

Activity type

Research Organisations

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

No data



POLITECNICO DI MILANO

Italy

EU contribution

€ 233 750,00

Address

PIAZZA LEONARDO DA VINCI 32
20133 Milano



Region

Nord-Ovest > Lombardia > Milano

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

No data



UNIVERSITA DEGLI STUDI ROMA TRE

Italy

EU contribution

€ 237 600,00

Address

VIA OSTIENSE 133
00154 Roma



Region

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



THE UNIVERSITY OF LIVERPOOL

 United Kingdom

EU contribution

€ 440 488,00

Address

BROWNLOW HILL 765 FOUNDATION BUILDING
L69 7ZX Liverpool 

Region

North West (England) > Merseyside > Liverpool

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



STICHTING KONINKLIJK NEDERLANDS LUCHT - EN RUIMTEVAARTCENTRUM

 Netherlands

EU contribution

€ 440 010,25

Address

ANTHONY FOKKERWEG 2
1059 CM Amsterdam 

Activity type

Research Organisations

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

No data



STRAERO-INSTITUTUL PENTRU CALCULULSI EXPERIMENTAREA
STRUCTURILOR AERO-ASTONAUTICE S.A.

 Romania

EU contribution

€ 160 590,00

Address

IULIU MANIU 220 SECTOR 6
061126 Bucursti 

Region

Macroregiunea Trei > Bucureşti-Ilfov > Bucureşti

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

No data



FEDERAL STATE UNITARY ENTERPRISE THE CENTRAL
AEROHYDRODYNAMIC INSTITUTE NAMED AFTER PROF. N.E. ZHUKOVSKY

 Russia

EU contribution

€ 214 178,50

Address

Zhukovsky str 1

140180 ZHUKOVSKY 

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



EURICE EUROPEAN RESEARCH AND PROJECT OFFICE GMBH

 Germany

EU contribution

€ 195 318,00

Address

HEINRICH-HERTZ-ALLEE 1

66386 St Ingbert 

Region

Saarland > Saarland > Saarpfalz-Kreis

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data

Last update: 1 August 2019

Permalink: <https://cordis.europa.eu/project/id/266073>

