

Combustion Models for Industrial Applications

Fact Sheet

Project Information

COMBINA

Funded under
FP7-PEOPLE

Grant agreement ID: 230714


Overall budget
€ 811 419

Status
Closed project

EU contribution
€ 811 419

Start date
1 March 2009

End date
28 February 2013

Coordinated by
**NUMERICAL MECHANICS
APPLICATIONS
INTERNATIONAL SA**
 Belgium

Objective

Combustion processes are an essential component of energy conversion and their accurate modeling is required if the objectives of reduction of fuel consumption and emissions are to be realized. Meeting these requirements will involve a substantial effort, in particular towards the development and availability of accurate and reliable simulation tools for reactive flows and more experimental data. In the COMBINA project, collaboration between a CFD software developing SME, which is coordinating this project, four major research groups on combustion and an SME specialized in experimental analysis of combustors is established. The research partners are originating from Belgium, Netherlands, France, Germany and Turkey. The partners will share and contribute with complementary expertise on the modeling of premixed, partially premixed and spray combustion including RANS and LES modeling and the generation of new experimental results for their validation. An industrial observer group (IOG) of representatives from the gas turbine

manufacturing industry will advise the consortium on longer term industrial objectives and provide additional test cases. The current COMBINA project opens new pathways across the different sectors. The coordinating SME-1 is having the most recent numerical combustion models integrated in its software system towards the demands of end users in the manufacturing industry. SME-2 will benefit from intensive exchanges and transfers on experimental and numerical techniques and tools. The university partners will gain access to industrially relevant testcases from SME-2 and the IOG and to an industrial CFD software environment for testing advanced models on real-life applications that so far have only been applied with academic codes on simplified configurations. Actions towards networking and dissemination will involve training activities, as well as two workshops, on combustion modeling and on experimental techniques for combustors.

Field of science

/natural sciences/computer and information sciences/software

Programme(s)

Topic(s)

Call for proposal

FP7-PEOPLE-IAPP-2008

Funding Scheme


MC-IAPP - Industry-Academia Partnerships and Pathways (IAPP)

Coordinator



NUMERICAL MECHANICS APPLICATIONS INTERNATIONAL SA

Address

Chaussee De La Hulpe 187-189
1170 Bruxelles
 **Belgium**

[Website](#) 

Activity type

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

[Contact the organisation](#) 

EU contribution

€ 631 148

Administrative Contact

Participants (6)



PARS MAKINA SANAYI VE TICARET LIMITED SIRKETI

 Turkey

EU contribution

€ 65 335

Address

**Planlamacilar Sitesi 160
Sokak No 3 Beysukent
Cankaya
06530 Ankara**

Activity type

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

[Contact the organisation](#) 

Administrative Contact

**Ibrahim Sinan Akmandor
(Prof.)**



TECHNISCHE UNIVERSITEIT EINDHOVEN

 Netherlands

EU contribution

€ 9 031

Address

**Groene Loper 3
5612 AE Eindhoven**

Activity type

**Higher or Secondary
Education Establishments**

[Website](#) 

[Contact the organisation](#) 

Administrative Contact

Alfons (A.W.J.) Bruekers (Dr.)



INSTITUT NATIONAL DES SCIENCES APPLIQUEES DE ROUEN

 France

EU contribution

€ 32 359

Address

**Avenue De L'université
76 801 Saint Etienne Du
Rouvray**

Activity type

**Higher or Secondary
Education Establishments**

[Website](#) 

[Contact the organisation](#) 

Administrative Contact

Luc Vervisch (Prof.)



TECHNISCHE UNIVERSITAT DARMSTADT

 Germany

EU contribution

€ 47 080

Address

**Karolinenplatz 5
64289 Darmstadt**

[Website](#)

Activity type

**Higher or Secondary
Education Establishments**


[Contact the organisation](#)

Administrative Contact

Johannes Janicka (Prof.)



MIDDLE EAST TECHNICAL UNIVERSITY

 Turkey

EU contribution

€ 18 527

Address

**Dumlupinar Bulvari 1
06800 Ankara**

[Website](#)

Activity type

**Higher or Secondary
Education Establishments**

[Contact the organisation](#)

Administrative Contact

Oguz Uzol (Prof.)



UNIVERSITEIT TWENTE

 Netherlands

EU contribution

€ 7 939

Address

**Drienerlolaan 5
7522 NB Enschede**

[Website](#)

Activity type

**Higher or Secondary
Education Establishments**

[Contact the organisation](#)

Administrative Contact

Benno Pals (Mr.)

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