Modelling of pollutant dispersion from sources in complex turbulent flows

Fact Sheet

Project Information

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Project closed

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1 October 1996

End date
30 September 1997

Funded under
Specific research and technological development programme in the field of the training and mobility of researchers, 1994-1998

Total cost
No data

EU contribution
No data

Coordinated by
ARISTOTLE UNIVERSITY OF THESSALONIKI
Greece

Objective

The development of an unsteadyNavier-Stokes computer code is proposed for the study of pollutant dispersion in complex flows. The velocity-vorticity formulation of the equations will be considered and a method which uses vortex particles in an unstructured finite element mesh will be used. Turbulence will be modelled using a

one equation turbulent transport model. Pollutant particles will be released from point or line sources and their trajectories will be computed as a function of time.
The resulting flow field will be used as an input to a Lagrangian statistics model for the calculation of the pollutant concentration. The flow around models of structures in the atmospheric boundary layer (buildings, hills etc.) will be computed and the pollutant dispersion will be studied. Comparison with existing experimental data will be performed in order to validate the computational model.

Programme(s)

FP4-TMR - Specific research and technological development programme in the field of the training and mobility of researchers, 1994-1998

Topic(s)

0302 - Post-doctoral research training grants

TI09 - Environmental Engineering

Call for proposal

Data not available

Funding Scheme

RGI - Research grants (individual fellowships)

Coordinator

ARISTOTLE UNIVERSITY OF THESSALONIKI

EU contribution

No data

Total cost

No data

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Participants (1)

Not available

Greece

EU contribution

No data

Address

Total cost

No data

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