

Whilst gratefully acknowledging the financial support of INTERREG project,

Has INTERREG made any real difference in the way we work and research?

Diesel sprays formation and penetration:

Experiment and modelling at ICEG

Thiesel 2006, Spain, Sept 2006

THIESEL 2006 Conference on Thermo- and Fluid Dynamic Processes in Diesel Engines

Developments in Diesel Spray Characterisation and Modelling

K. Karimi, E M. Sazhina, W. A. Abdelghaffar, C. Crua, T. Cowell, M R. Heikal, M R. Gold

PTNSS CONGRESS-2007 B07-C165

Split Injection Strategy for Diesel Sprays: Experiment and Modelling

K. Karimi, C. Crua, M R. Heikal, E M. Sazhina

INTERREG Monitoring Meeting Rouen July 2006: Cross-pollination of ideas

- Constructive discussions of the experiment and modelling for sprays
- •Reformulation of the model for Centre-of-Mass penetration following the feedback from the meeting

Future work

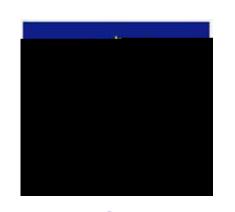
Positive feedback at the PTNSS Congress from Professor Jan Macek, Vice-Dean for R&D Josef Bozek Research Centre, Czech Technical University, Prague in reference to their paper:

Fuel Injection Process Computations Using the Eulerian Multidimensional Model by Marcel Divi!, Jan Macek

The ICEG experiment and modelling are useful for their Computational Fluid Dynamics work

AUTOIGNITION OF -PENTANE IN A RAPID COMPRESSION MACHINE: EXPERIMENT MODELLING

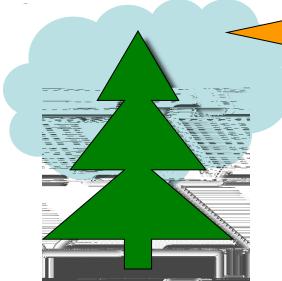




Autoignition of hydrocarbon vapour: the Shell model for !

Forest fires: INTAS workshop, Russia, May 2006

Autoignition of Products of Pyrolysis of trees tops when heated by thermal radiation from Forest Fire flame front



Crown Fire

Workshop INTAS – Siberian Branch
Of the Russian Academy of Sciences
Scientific Cooperation and Collaborative Call
10-12 May 2006
Novosibirsk, Russia

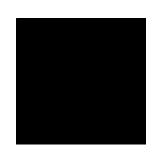
Mathematical modeling of forest fire initiation and spread

V.A. Perminov, E.M. Sazhina

Kemerovo State University, Russia School of Engineering, University of Brighton, UK

Abstract: A mathematical model for description of heat and mass transfer processes at crown forest fire initiation and spread is developed. It is assumed that the forest can be modelled as a two-temperature multiphase non-deformable porous reactive medium during a forest fire.

The applicability of the Shell autoignition model to the description of ignition of gaseous products of pyrolysis of forest materials is explored. The Shell model accounts for the continuous chemical heat release prior to the ignition (including cool flames) while being less CPU intensive than detailed kinetic mechanisms (DKM) of autoignition.





Dissemination for wider audiences; Public lectures at

- House of Commons, 2006
- University Centre Hastings



INTERREG has made real difference in the way we work and research, by

- opening pastures new for research
- enabling cross-pollination of research ideas
- dissemination of knowledge to wider audiences