



## Combustion Course Emphasizing Energy Transition

Eindhoven, the Netherlands, 24th - 28th February 2025

### Schedule of the course

	Monday, Day 1	Tuesday, Day 2	Wednesday, Day 3	Thursday, Day 4	Friday, Day 5
	Laminar flames & chemistry	Turbulent combustion	Experiments, H <sub>2</sub> & NH <sub>3</sub>	Liquid & solid Fuels	IC engines Applications
8:45-9:35	Governing conservation & chemistry I Jeroen van Oijen	Turbulent combustion modelling I Antonio Attili	Experimental techniques Ia Alexis Bohlin	Spray combustion I, Validation of CFD models for spray combustion Benedicte Cuenot	Modern IC engines I Bart Somers
9:40-10:30	Governing conservation & chemistry II Jeroen van Oijen	Turbulent combustion modelling II Antonio Attili	Experimental techniques II Alexis Bohlin	Spray combustion II Benedicte Cuenot	Modern IC engines II Bart Somers
<b>Coffee break</b>					
10:45-11:35	Combustion chemistry Jeroen van Oijen	Application of AI I Alessandro Parente	H <sub>2</sub> in furnaces Sander Gersen	Biomass Anna Felden	Engine modelling, Approaches and examples Xander Seykens
11:40-12:30	Chemistry reduction I Jeroen van Oijen	Application of AI II Alessandro Parente	NH <sub>3</sub> combustion Rob Bastiaans	Metal fuels Xiaocheng Mi	Numerical: applications to HD engines Xander Seykens
<b>Lunch</b>					
	Approaches & numerics	Approaches, models & experiments	Carbon neutral fuels & society	Advanced applications	Gasturbine developments
13:30-14:20	Chemistry reduction II Jeroen van Oijen	Numerical turbulent combustion I Antonio Attili	Carbon neutral fuels I Arjan Kirkels	Supercritical combustion Francesca di Mare	Developments in power generation I Christer Björkvist
14:25-15:15	Influence of turbulence Rob Bastiaans	Numerical turbulent combustion II Ivan Langella	Carbon neutral fuels II Arjan Kirkels	Aviation & propulsion Arvind Rao	Developments in power generation II Christer Björkvist
<b>Coffee break</b>					
15:30-16:15	Numerical simulation, laminar (hands on) I Jeroen van Oijen	Experimental techniques Ia Nico Dam	Lab visit Noud Maes	Gas turbines Jim Kok	Evaluation & Farewell party
16:20-17:00	Numerical simulation, laminar (hands on) II Jeroen van Oijen	Experimental techniques Ib Nico Dam	Lab visit Noud Maes	Micro turbines Naser Sayma	Evaluation & Farewell party
<b>Course Dinner</b>					