

Course on Combustion, Towards Carbon-Neutral Combustion Systems

31st January - 4th February 2022

PROGRAMME

	Monday Day 1	Tuesday Day 2	Wednesday Day 3	Thursday Day 4	Friday Day 5
	Laminar flames & chemistry	Turbulent combustion	Experiments, H ₂ & NH ₃	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 IIa Alexis Bohlin	Spray combustion I, Validation of CFD models for spray combustion Dirk Roekaerts	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 IIb Alexis Bohlin	Spray combustion II Benedicte Cuenot	Modern IC engines II Bart Somers
Coffee break					
10:45-11:35	Combustion chemistry Jeroen van Oijen	Application of AI I Alessandro Parente	H ₂ in furnaces Sander Gersen	Biomass Wiebren de Jong	Engine modelling, Approaches and examples Xander Seykens
11:40-12:30	Chemistry reduction I Jeroen van Oijen	Application of AI II Alessandro Parente	NH ₃ combustion Rob Bastiaans	Metal fuels Philip de Goey	Numerical: applications to HD engines Xander Seykens
Lunch					
	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 Arjen 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 Arjen Kirkels	Aviation & propulsion Arvind Rao	Developments in power generation II Christer Björkvist
Coffee break					
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
				Course Dinner	