

Programme for 22nd International Shock Interaction Symposium – University of Glasgow

Monday	4.07.2016
8:30 – 10:00	Registration
10:00 – 10:10	Welcome by Prof Kostas Kontis
	Session 1.1: Shock-shock and shock-vortex interaction Chair: Prof Frank Lu
10:10 – 11:50	White: <i>The effect of increasing rarefaction on the Edney type IV shock interaction problem</i> Oshima: <i>Shock wave interaction with a solid body floating in the air</i> Kerampran: <i>Analysis of planar and spherical shock-wave mitigation by wet aqueous foams</i> Hu: <i>Simulations of shock wave interactions in multiple materials by a conservative sharp-interface method</i>
11:50 – 12:50	Lunch break
12:50 – 14:30	Session 1.2: Shock waves in transonic, supersonic and hypersonic flows 1 Chair: Prof Xiangyu Hu
	Ananthapadmanaban: <i>Effect of cowl length and cowl actuation on starting characteristics of a high-speed air intake</i> Rajesh: <i>Computational simulation of shock interactions in supersonic projectile launch</i> Gang: <i>Forecasting method of shock-standoff distance for forward-facing cavity</i> Shoesmith: <i>Shock reflection in axisymmetric internal flows</i>
14:30 – 15:00	Coffee break
15:00 – 16:40	Session 1.3: Shock wave propagation and transient flows Chair: Prof Beric Skews
	Ekaterinaris: <i>A high order DG method with shock wave resolution within the cell</i> Hemmati: <i>Maximum currents possible in lightning return strokes</i> Omang: <i>Experimental and numerical results from shock propagation through dust columns in a shock tube</i> Lu: <i>On the propagation of planar blast waves through non-uniform channels</i>
18:15	Civic Reception hosted by Lord Provost (City Chambers, Glasgow)

Tuesday	5.07.2016
9:00 – 10:40	Session 2.1: Shock waves in nozzles and jets Chair: Prof Akihiro Sasoh
	Kai: <i>fs-laser induced micro shock waves in a 50 μm capillary</i> Rajesh: <i>Shock transformations in vacuum ejectors</i> Tamba: <i>Experiment of interaction between a normal shock wave and various counter flows using a counter-driver shock tube</i> Volkov: <i>Microwave and laser ignition for pulse detonation engines</i>
10:40 – 11:10	Coffee break
	Session 2.2: Dynamics of explosion, blast waves and detonations 1 Chair: Prof Evgeny Timofeev
11:10 – 12:25	Van Bo: <i>Numerical study on the deflagration-to-detonation transition process of liquid fuel in pulse detonation engines</i> Dzieminska: <i>Auto ignition caused by shock wave – boundary layer interaction in reactive mixtures</i> Needham: <i>Simulation of shock-induced ignition of an acetylene bubble</i>
12:25 – 13:25	Lunch break
13:25 – 15:05	Session 2.3: Shock wave reflection and diffraction 1 Chair: Prof Sergey Martyushov
	Kobayashi: <i>Oblique shock reflection over a membrane</i> Krassovskaya: <i>Formation of shock wave reflection configurations in unsteady flows</i> Timofeev: <i>On unsteady shock reflection from a concave cylindrical surface</i> Alzamora: <i>New findings on the shock reflection from wedges with small concave tips</i>
15:05 – 15:35	Coffee break
15:40 – 17:30	Visit to National Wind Tunnel and Testing Facilities Departure point: University of Glasgow Main Gates on University Avenue
Wednesday	6.07.2016
8:45 – 18:30	Day out - see separate time plan. Departure point: Wolfson Medical Building on University Avenue.

Thursday	7.07.2016
9:00 – 10:15	Session 3.1: Shock waves in transonic, supersonic and hypersonic flows 2 Chair: Dr Alexander Wagner
	Takayama: <i>Scale effects on the transition of reflected shock waves</i> Liao: <i>Ballistic range experiment of shock stand-off distance for spheres in air with flight speeds between 5.08 and 6.41 km/s</i> Tritarelli: <i>Vorticity-production mechanisms in shock/mixing-layer interaction problems</i>
10:15 – 10:45	Coffee break
10:45 – 12:25	Session 3.2: Shock wave reflection and diffraction 2 Chair: Prof Kazuyoshi Takayama
	Paton: <i>Normal shock wave diffraction over a three-dimensional corner</i> Ndebele: <i>The diffraction a two dimensional curved shock wave using geometric shock dynamics</i> Khatri: <i>An investigation of hysteresis phenomenon in reflection of asymmetric shock waves</i> Sakurai: <i>Triple-point singularity and the Neumann paradox of Mach reflection</i>
12:25 – 13:25	Lunch
13:25 – 14:40	Session 3.3: Dynamics of explosion, blast waves and detonations 2 Chair: Dr Charles Needham
	Zhang: <i>Air blast from a reactive-material-cased explosive charge</i> Khoo: <i>Simulation of detonation propagation in hydrogen detonation chamber containing inert particles</i> Walenta: <i>Extinguishing detonation in pipelines - optimization of the process</i>
14:40 – 15:10	Coffee break
15:10 – 16:25	Session 3.4: Shock wave reflection and diffraction 3 Chair: Dr Irina Krassovskaya
	Skews: <i>Shock wave development within expansive flows</i> Sundarapandian: <i>On the focusing of expansion wave due to shock interaction with cylindrical water column</i> Sindhu: <i>Experimental investigation of mist injection at the stagnation point of a blunt body in hypersonic flow</i>
16:30 – 18:30	Meeting of International Shock Wave Institute Committee and Editorial Board of Shock Wave Journal (<i>by invitation only, location: James Watt South Building, room 633</i>)
18:45	Banquet (Bute Hall, Sir Gilbert Scott Building, University of Glasgow)

Friday	8.07.2016
9:00 – 10:40	Session 4.1: Shocks in condensed and heterogeneous media Chair: Prof G Rajesh
	Needham: <i>High-fidelity computational fluid dynamics simulations of blast environments in animal injury studies</i> Martyushov: <i>Numerical simulation of reactive gas mixes flows in the detonation engine</i> Colonia: <i>Shocks interactions in continuum and rarefied conditions employing a novel gas-kinetic scheme</i> Yamamoto: <i>Equation of state of pure water, aqueous solutions of sodium chloride, gelatin gel and glucose syrup</i>
10:40 – 11:10	Coffee break
11:10 – 12:50	Session 4.2: Shock/boundary layer interaction Chair: Prof KPG Reddy
	Wagner: <i>Hypersonic shock wave boundary layer interaction studies on a flat plate at elevated surface temperature</i> Ogawa: <i>Viscous correction and shock reflection in stunted Busemann intakes</i> Szwaba: <i>Laminar and turbulent shock wave boundary layer interaction on compressor blade</i> Gnani: <i>Shock wave/boundary layer interactions in internal flows</i>
12:50 – 13:50	Lunch break
13:50 – 14:30	Closing ceremony