



Fifth International Conference on Computational Fluid Dynamics in the Process Industries

13-15 December 2006

Hilton on the Park, Melbourne, Victoria, Australia

OFFICIAL PROGRAM



Tuesday Evening - 12 December		
6.00 - 8.00 pm	REGISTRATION	Lower Foyer, Hilton on the Park Melbourne
6.30 - 7.30 pm	COCKTAIL PARTY	Cliveden Room, Hilton on the Park Melbourne

Day 1 - Wednesday, 13 December						
8.30	REGISTRATION		Upper Foyer, Hilton on the Park Melbourne			
PLENARY SESSION (Chairman Phil Schwarz)		Ballroom 3				
9.00	Welcome from CSIRO		Phil Schwarz, CSIRO Minerals			
	Opening		Dr Michael Barber, Group Executive, Information, Manufacturing and Minerals Group, CSIRO			
9.20	Keynote Lecture Andrew Shook (BHP Billiton)		A PHOENIX FROM THE ASHES: COMPUTATIONAL FLUID DYNAMICS AT BHPBILLITON TECHNOLOGY			
	SESSION 1 (Ballroom 3)		SESSION 2 (Ballroom 2)		SESSION 3 (Ballroom 1)	
	Light Metals Mini-Symposium (Chairman Raj Rajakumar)		Gas-Liquid Flows (Chairman Malcolm Davidson)		Casting (Chairman Mahesh Prakash)	
9.55 Session Lead Paper	LI Kiss (Université du Québec à Chicoutimi)	TRANSPORT PROCESSES AND BUBBLE DRIVEN FLOW IN THE HALL-HEROULT CELL	NG Deen, M van Sint Annaland and JAM Kuipers (University of Twente, The Netherlands)	DIRECT NUMERICAL SIMULATION OF HEAT TRANSPORT IN DISPERSED GAS-LIQUID TWO-PHASE FLOW USING A FRONT TRACKING APPROACH	VR Voller (St Anthony Falls Laboratory, University of Minnesota)	A MULTI-SCALE / MULTI-PHYSICS MODELING FRAMEWORK FOR SOLIDIFICATION SYSTEMS
10.20	YQ Feng , W Yang, M Cooksey and MP Schwarz	CFD MODEL OF BUBBLE DRIVEN FLOW IN ALUMINIUM REDUCTION CELLS AND VALIDATION	A Bui and R Manasseh (CSIRO MMT)	A CFD STUDY OF THE BUBBLE DEFORMATION DURING DETACHMENT	L Zhang (Norwegian University of Science &	FLUID FLOW AND INCLUSION REMOVAL IN MOLTEN STEEL CONTINUOUS CASTING

	(CSIRO Minerals)	USING PIV MEASUREMENT			Technology, Norway)	STRANDS
10.40	MORNING TEA		Ballroom Foyer, Hilton on the Park Melbourne			

	SESSION 1 (Ballroom 3)		SESSION 2 (Ballroom 2)		SESSION 3 (Ballroom 1)	
	Light Metals Mini-Symposium (Chairman Alan Manzoori)		Drying (Chairman David Fletcher)		Casting (Chairman Vaughan Voller)	
11.10	V Bojarevics and K Pericleous (University of Greenwich, UK)	<i>TIME DEPENDENT ELECTRIC, MAGNETIC AND HYDRODYNAMIC INTERACTION IN ALUMINIUM ELECTROLYSIS CELLS</i>	GJ Oberman , TW Farrell, IW Turner and EA Sizgek (Queensland University of Technology)	<i>DRYING OF A LIQUID DROPLET SUSPENDED IN A BINARY ATMOSPHERE</i>	M Prakash , J Ha, PW Cleary and J Grandfield (CSIRO MIS)	<i>PRELIMINARY SPH MODELLING OF OXIDE FORMATION DURING THE MOULD FILLING PHASE IN DC CASTING OF EXTRUSION BILLETS</i>
11.30			AL Ljung , TS Lundström and K Tano (Division of Fluid Mechanics, Luleå, Sweden)	<i>SIMULATION OF HEAT TRANSFER AND FLUID FLOW IN A POROUS BED OF IRON ORE PELLETS DURING UP-DRAUGHT DRYING</i>	L Zhang (Norwegian University of Science & Technology (NTNU) Norway)	<i>FLUID FLOW, HEAT TRANSFER AND INCLUSION MOTION IN MOLTEN STEEL CONTINUOUS CASTING TUNDISHES</i>
11.50	PW Cleary , N Stokes, J Ha and M Prakash (CSIRO Mathematical & Information Sciences)	<i>DISCRETE AND CONTINUOUS MODELLING OF REACTIVE PELLETS AND GAS TRANSPORT IN PYROMETALLURGICAL BATHS</i>	JR Gabites , J Abrahamson, J A Winchester (University of Canterbury, New Zealand)	<i>AIR FLOW PATTERNS IN AN INDUSTRIAL MILK POWDER SPRAY DRYER</i>	K Satou , R Hirayama, K Fujisaki, S Taniguchi, S Satou (Tohoku University, Nippon Steel)	<i>MECHANISM OF THE DRIFT FLOW IN CONTINUOUS CASTING AND THE EFFECT ON THE DRIFT FLOW USING THE ELECTROMAGNETIC FIELD</i>
12:10	M Prakash and PW Cleary (CSIRO MIS)	<i>MODELLING OF COLD METAL EXTRUSION USING SPH</i>	U Sjöström , M Lundqvist and O Eriksson (MEFOS, Sweden)	<i>APPLICATION OF COMPUTATIONAL FLUID DYNAMICS MODELLING ON THE GRATE-KILN PROCESS AT LKAB</i>		
12.30	LUNCH		Ballroom Foyer			

PLENARY SESSION (Chairman Jiyuan Tu)		Ballroom 3
1.30	Keynote Lecture Professor Suhas V Patankar (University of Minnesota)	CFD MODELLING OF FLOW AND HEAT TRANSFER IN INDUSTRIAL APPLICATIONS

	Light Metals Mini- Symposium (Chairman Suhas Patankar)		Gas-Liquid Flows (Chairman Martin van Sint Annaland)		Hot Metal Tapping (Chairman Andrew Campbell)	
2:20	G Lane (CSIRO Minerals)	FLOW INSTABILITY IN AN ALUMINA PRECIPITATOR FITTED WITH A DRAFT TUBE CIRCULATOR	JJ Nijdam, O Simonin, TAG Langrish and DF Fletcher (University of Sydney)	EXPERIMENTAL AND MODELLING INVESTIGATIONS OF DROPLET DISPERSION IN A TURBULENT JET	A Ashrafian, S Tore Johansen (SINTEF, Norway)	TAPPING OF STRATIFIED LIQUIDS FROM A PACKED BED
2:40	GJ Brown (Alcoa World Alumina, Australia)	USE OF CFD TO PREDICT AND REDUCE EROSION IN AN INDUSTRIAL SLURRY PIPING SYSTEM	AR Paschedag and M Wegener (TU Berlin)	THREE-DIMENSIONAL SIMULATIONS OF MASS TRANSFER AT SINGLE DROPLETS	M Trapani, AP Campbell and D Montgomerie (BHP Billiton Olympic Dam Smelter)	CFD MODELLING ASSISTANCE FOR THE DESIGN OF ELECTRIC FURNACE SLAG TAPHOLE BREAST PLATES
3:00	AR Heath and I Livk (CSIRO Minerals)	COUPLED POPULATION BALANCE AND CFD MODEL FOR A CONTINUOUS GIBBSITE CRYSTALLISER	PV Cueille, ES Rosa, G Sanchez-Soto, N Noui-Mehidi and M Rivero (CSIRO MMT)	SWIRL TUBES AS AN IN-LINE GAS-LIQUID SEPARATOR	CA Snyders, JJ Eksteen and A Moshokwa (Anglo Platinum)	THE POLOKWANE SMELTER MATTE TAPPING CHANNEL MODEL

3:20	AFTERNOON TEA	Ballroom Foyer
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	Electro-Magnetic Applications Mini- Symposium (Chairman Hugh Blackburn)		Fluid-Solid Interaction (Chairman Paul Cleary)		Pyrometallurgy (Chairman John Rankin)	
3.50	J Stiller , K Koal, K Fraña and R Grundmann (TU Dresden)	STIRRING OF MELTS USING ROTATING AND TRAVELING MAGNETIC FIELDS	M Gradinscak, S E Semercigil and OF Turan (Victoria University)	LIQUID SLOSHING IN FLEXIBLE CONTAINERS, PART 1: TUNING CONTAINER FLEXIBILITY FOR SLOSHING CONTROL	Y Yang, B Zhou, JR Post, E Scheepers , MA Reuter and R Boom (Delft University of Technology, The Netherlands)	COMPUTATIONAL FLUID DYNAMICS SIMULATION OF PYROMETALLURGICAL PROCESSES
4.10	T Albrecht , R Grundmann, G Mutschke and G Gerbeth (TU Dresden)	ELECTROMAGNETIC CONTROL OF A TRANSITIONAL BOUNDARY LAYER	M Gradinscak , S E Semercigil and OF Turan (Victoria University)	LIQUID SLOSHING IN FLEXIBLE CONTAINERS, PART 2: USING A SLOSHING ABSORBER WITH A FLEXIBLE CONTAINER FOR STRUCTURAL CONTROL	D Maldonado , P Zulli, B Y Guo and AB Yu (Bluescope Steel Research Laboratories)	MATHEMATICAL MODELLING OF FLOWS AND TEMPERATURE DISTRIBUTIONS IN THE BLAST FURNACE HEARTH
4.30	A Bui , Y Zhu and K Petkovic-Duran (CSIRO MMT)	MODELLING OF SEPARATION OF METAL IONS IN A MICROFLUIDIC CHIP	M Kamaruddin, KP Thiagarajan , A Czajko (University of Western Australia)	ANALYSIS OF CURRENT-INDUCED FORCES ON OFFSHORE PIPELINE BUNDLES	E Scheepers , A T Adema, Y Yang, R Boom and MA Reuter (Delft University of Technology, The Netherlands)	A CFD MODEL OF A SUBMERGED ARC FURNACE FOR PHOSPHORUS PRODUCTION
4.50	BREAK					
5.00	VENDOR SESSION - New Developments in Software and Hardware (Chairman Phil Schwarz)				BALL ROOM 3	
5.00	ATD International					
5.10	Computer Transition Systems					
5.20	LEAP Australia					
5.30	Worley Parsons					
5.40	Xian Qiao (Australia) Pty Ltd and China Nonferrous Metals Processing Technology- Suzhou New Changguang Thermal Technology Co, Ltd.					
5.50	Panel Discussion					
6.00	Happy Hour - Drinks Ballroom Foyer					
7.00	FINISH					

Day 2 - Thursday, 14 December

8.30	REGISTRATION	Ballroom Foyer, Hilton on the Park Melbourne
PLENARY SESSION (Chairman Bart Follink)		Ballroom 3
9.00	Keynote Lecture Professor Jinghai Li (Chinese Academy of Sciences)	<i>STRUCTURE-ORIENTED MULTI-SCALE SIMULATION OF GAS-SOLID TWO-PHASE FLOWS - METHODOLOGY AND APPLICATION</i>

	SESSION 1 (Ballroom 3)		SESSION 2 (Ballroom 2)		SESSION 3 (Ballroom 1)	
	Gas-Solid Flows Mini- Symposium (Fluidisation) (Chairman Bart Follink)		Gravity Separation Mini- Symposium (Chairman Anh Nguyen)		Mixing Vessels (Chairman Yundong Wang)	
9.50 Session Lead Paper	Y Igci, S Sundaresan, S Pannala, T O'Brien and R W Breault (National Energy Technology Laboratory)	<i>COARSE-GRAINING OF TWO-FLUID MODELS FOR FLUIDIZED GAS-PARTICLE SUSPENSIONS</i>	D Kleine, BD Reddy (University of Cape Town, South Africa)	<i>FINITE ELEMENT SIMULATION OF UNSTEADY FLOWS IN SECONDARY SETTLING TANKS</i>	PA Tanguy , M Heniche, C Rivera, C Devals and K Takenaka (URPEI, Ecole Polytechnique, Canada)	<i>RECENT DEVELOPMENTS IN CFD APPLIED TO VISCOUS AND NON-NEWTONIAN MIXING IN AGITATED VESSELS</i>
10:15	X Dong and AB Yu (University of New South Wales)	<i>HETEROGENEOUS PHENOMENA OF BUBBLE FLOW IN GAS-FLUIDISED BEDS</i>	TV Nguyen , A Heath, and PJ Witt (CSIRO Minerals)	<i>POPULATION BALANCE - CFD MODELLING OF FLUID FLOW, SOLIDS DISTRIBUTION AND FLOCCULATION IN THICKENER FEEDWELLS</i>	JP Torr� , DF Fletcher, T Lasuye and C Xuereb (The University of Sydney)	<i>CFD MODELLING OF PARTIALLY BAFFLED AGITATED VESSELS WITH FREE SURFACES</i>
10.35	MORNING TEA Ballroom Foyer					
11.05	POSTER SESSION Ballrooms 1, 2 & 3					
	GJ Sheard and K Ryan (Monash University)	<i>THE FLOW PAST PARTICLES DRIVEN BY A PRESSURE GRADIENT IN SMALL TUBES</i>	JH Kruger and CG du Toit (North-West University, South Africa)	<i>THE SIMULATION OF A THERMAL-FLUID SYSTEM USING AN INTEGRATED SYSTEMS CFD APPROACH</i>		
	Y Du and W Tang (Huazhong University of Science and Technology)	<i>NUMERICAL AND EXPERIMENTAL INVESTIGATION OF THE NEAR WAKE OVER A SLITTY BLUFF BODY</i>	S Shinde, P Jha, A Mujumdar and M Horio (Tokyo University of Agriculture and Technology)	<i>FLUID FLOW CHARACTERISTICS AND RTD ANALYSIS OF A SINGLE STRAND TUNDISH</i>	QF Hou, HY Wang, Q Yue, ZS Zou and AB Yu (University of New South Wales)	<i>PHYSICAL AND MATHEMATICAL MODELLING OF SWIRLING FLOW TUNDISH</i>

			J Yagi, H Nogami and AB Yu (Tohoku University Japan)	<i>MULTI-DIMENSIONAL MATHEMATICAL MODEL OF BLAST FURNACE BASED ON MULTI-FLUID THEORY AND ITS APPLICATION TO DEVELOP SUPER-HIGH EFFICIENCY OPERATIONS</i>	N Su (Central Queensland University)	<i>MODELLING SCALE-DEPENDENT RADIAL TWO-PHASE FLOW OF LIQUID AND GAS IN UNSATURATED POROUS MEDIA</i>
	R Meland, IR Gran, J Melheim, ST Munkejord and NE Haugen (SINTEF Energy Research)	<i>CLUSTER INTEGRATION METHOD FOR NON-SPHERICAL GRANULAR PARTICLES</i>	AV Bekker, I Livk and EV Polianczyk (CSIRO Minerals)	<i>CFD MODELLING OF NON-UNIQUE STATIONARY REGIMES IN CARBON FILTRATION COMBUSTION</i>	HF Li, ZF Tian, JY Tu, W Yang, GH Yeoh, CL Xue and CG Li (RMIT University)	<i>STUDIES OF AIRFLOW THROUGH A HUMAN NASOPHARYNX AND PHARYNX AIRWAY</i>
	JS Baek and YJ Kim (Sungkyunkwan University, Korea)	<i>COOLING EFFECT ENHANCEMENT IN MAGNETRON SPUTTERING SYSTEM</i>	J Gylys, S Sinkunas, T Zdankus and V Giedraitis (Kaunas University of Technology, Lithuania)	<i>ANALYSIS OF THE IN-LINE TUBE BUNDLE HEAT TRANSFER TO THE FOAM FLOW</i>	N Novia, MS Ray and VK Pareek (Curtin University of Technology)	<i>UNSTEADY STATE SIMULATION OF EULERIAN-EULERIAN MULTIPHASE FLOW IN FCC RISER REACTORS</i>
	JH Hwang and YJ Kim (Sungkyunkwan University, Korea)	<i>OPERATING CHARACTERISTICS OF AN AGITATOR WITH A DRAUGHT TUBE</i>	PW Cleary, J Ha, M Prakash and T Nguyen (CSIRO MIS)	<i>INDUSTRIAL SCALE DIE FILLING AND THE USE OF SHORT SHOTS TO UNDERSTAND THERMAL AND FLOW EFFECTS</i>		

	Gas-Solid Flows Mini- Symposium (Chairman Hans Kuipers)		Gravity Separation Mini- Symposium (Chairman Daya Reddy)		Heat Transfer (Chairman Weimin Gao)	
11:30	A Wachs and Y Peysson (Institut Français du Pétrole)	<i>A DISTINCT ELEMENT GRANULAR SOLVER/FICTITIOUS DOMAIN METHOD FOR THE NUMERICAL SIMULATION OF PARTICULATE FLOWS</i>	PTL Koh and MP Schwarz (CSIRO Minerals)	<i>CFD MODEL OF A SELF-AERATING FLOTATION CELL</i>	DR Lester , M Rudman and G Metcalfe (CSIRO MMT)	<i>OPTIMISATION OF HEAT TRANSFER IN NON-NEWTONIAN FLUIDS WITH CHAOTIC ADVECTION</i>
11: 50	D Higgins and M Davidson (Melbourne University)	<i>AN ISOTHERMAL MODEL OF AGGLOMERATION IN A FLASH SMELTING REACTION SHAFT</i>	PF George, AV Nguyen and GJ Jameson (The University of Newcastle)	<i>COMPUTATIONAL MODELLING AND VALIDATION OF ULTRAFINE PARTICLE FLOTATION</i>	S Trang , D Stephens and MP Schwarz (CSIRO Minerals)	<i>MODELLING HEAT TRANSFER IN THE DRIPPER ZONE OF A HEAP LEACHING OPERATION</i>

12:10	K Mohanarangam , J.Y.Tu and L Chen (RMIT University)	NUMERICAL SIMULATION AND VALIDATION OF TURBULENT GAS-PARTICLE FLOW IN A BACKWARD-FACING STEP	TY Liu , PTL Koh and MP Schwarz (CSIRO Minerals)	CFD-BASED MULTISCALE MODELLING OF BUBBLE-PARTICLE COLLISION EFFICIENCY WITH MOBILE BUBBLE SURFACE IN A TURBULENT ENVIRONMENT	D Chen , Y Liu, R Benito and W Stein (CSIRO MMT)	CFD MODELLING OF THE RADIATION AND CONVECTION LOSSES IN THE MTSA RECEIVER
12.30	LUNCH Ballroom Foyer					

PLENARY SESSION (Chairman Mark Davis)		Ballroom 3
1.30	Keynote Lecture Professor Jan Cilliers (Royal School of Mines, Imperial College)	UNDERSTANDING FROTH BEHAVIOUR WITH CFD

	Gas-Solid Flows Mini- Symposium (Chairman Jinghai Li)		Gravity Separation Mini- Symposium (Chairman Jan Cilliers)		Combustion (Chairman Stein Johansen)	
2:20	NG Deen, M van Sint Annaland and JAM Kuipers (University of Twente, The Netherlands)	DIRECT NUMERICAL SIMULATION OF PARTICLE MIXING IN DISPERSED GAS-LIQUID-SOLID FLOWS USING A COMBINED VOLUME OF FLUID AND DISCRETE PARTICLE APPROACH	RB White , ID Sutalo and TV Nguyen (CSIRO)	MODELLING FLUID FLOWS IN SPLIT-FEED FEEDWELLS	IS Lowndes, H Morvan, S Silvester , S Pickering, R Hart and Y Cai (University of Nottingham)	THE MODELLING OF FIRE SPREAD AND SUPPRESSION WITHIN UNDERGROUND MINE TUNNELS
2:40	BY Guo , P Zulli, D Maldonado and AB Yu (University of NSW)	NUMERICAL ANALYSIS OF GAS FLOW-SLAG SURFACE INTERACTION IN BLAST FURNACE	CM Nguyen and AV Nguyen (The University of Newcastle, Australia)	COMPUTATIONAL VALIDATION AND EXTENSION OF THE GENERALISED SUTHERLAND EQUATION FOR BUBBLE-PARTICLE ENCOUNTER EFFICIENCY IN FLOTATION	P Cisse, GA Karim and I Wierzba (University of Calgary)	THE CONVECTIVE DISPERSION OF FLAMMABLE MIXTURES WITHIN OPEN CYLINDRICAL ENCLOSURES FOLLOWING THE RELEASE OF A FIXED MASS OF GASEOUS FUEL
3:00	B Kuan , W Yang, C Solnordal and MP Schwarz (CSIRO Minerals)	DILUTE GAS-SOLID FLOW IN MILL-DUCT BIFURCATION: CFD SIMULATION AND EXPERIMENTAL VALIDATION			SS Hla , DJ Harris and DG Roberts (CRC for Coal in Sustainable Development, CSIRO Energy Technology)	CFD MODELLING FOR AN ENTRAINED FLOW GASIFICATION REACTOR USING MEASURED "INTRINSIC" KINETIC DATA

3:20	MJ Leahy , MR Davidson, MP Schwarz (CSIRO Minerals)	A TWO-DIMENSIONAL MODEL FOR THE HEAP BIOLEACHING OF CHALCOCITE: EFFECT OF INLET HEIGHT			D Maldonado , P Zulli, YS Shen, BY Guo and AB Yu (Bluescope Steel Research Laboratories)	APPLICATION OF A COAL COMBUSTION MODEL IN THE DESIGN OF BLAST PARAMETERS FOR AN IRONMAKING BLAST FURNACE
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3:40	AFTERNOON TEA		Ballroom Foyer			
	Gas-Solid Flows Mini- Symposium (Fluidisation) (Chairman Ron Breault)		Fluid Dynamics (Chairman Klaus Bremhorst)		Environmental Flow Modelling (Chairman Matthew Brennan)	
4:10	JA Laverman, M van Sint Annaland and JAM Kuipers (Dutch Polymer Institute, The Netherlands)	INVESTIGATION OF THE INFLUENCE OF BUBBLE-BUBBLE INTERACTIONS ON THE HYDRODYNAMICS OF BUBBLING GAS-SOLID FLUIDISED BEDS USING THE DISCRETE BUBBLE MODEL	GJ Sheard , T Leweke and K Hourigan (Monash University)	THE VORTEX TRAJECTORIES INVOKED BY AN ARRESTING CYLINDER	RJ Haywood , GJ Brown, LJ Irons, M Stark (Hatch)	USING CFD TO REDUCE COMMISSIONING TIME FOR ELECTROSTATIC PRECIPITATORS
4:30	S Vun , J Naser and PJ Witt (Swinburne University of Technology)	INCLUSION OF A SOLID MECHANICS BASED SOLIDS RHEOLOGY MODEL INTO THE KINETIC THEORY OF GRANULAR FLOW	A Godbole , P Cooper, J Norrish and GR Hunt (University of Wollongong)	CFD ANALYSIS OF IMPINGING AXISYMMETRIC TURBULENT FOUNTAINS	MR Behera and K Murali (Indian Institute of technology Madras, India)	SIMULATION OF INTERFACIAL FLOWS USING FRONT TRACKING APPROACH
4:50	WM Gao , LX Kong, DM Fabijanic and PD Hodgson (Deakin University)	COMPUTATIONAL SIMULATION OF MASS TRANSFER AND CHEMICAL REACTIONS AT COMPONENT SURFACES IN FLUIDISED BED HEAT TREATMENT FURNACES	K Ryan , G Sheard and M Thompson (Monash University)	SHORT WAVE INSTABILITIES OF COUNTER-ROTATING BACHELOR VORTEX PAIRS	SA Silvester , IS Lowndes, J Docx and S Kingman (University of Nottingham)	THE APPLICATION OF COMPUTATIONAL FLUID DYNAMICS TO THE IMPROVED PREDICTION OF DUST EMISSIONS FROM SURFACE QUARRYING OPERATIONS
5:10	N Novia , MS Ray and VK Pareek (Curtin University of Technology)	APPLICATION OF CFD FOR TRANSIENT MULTIPHASE FLOW AND REACTION MODELLING IN A RISER	NM Murad , J Naser, F Alam and S Watkins (Swinburne University of Technology)	COMPUTATIONAL AERO-ACOUSTICS OF VEHICLE A-PILLAR AT VARIOUS WINDSHIELD RADII	TB Silvester and PW Cleary (CSIRO MIS)	WAVE-STRUCTURE INTERACTION USING SMOOTHED PARTICLE HYDRODYNAMICS
5:30	FINISH					
6:30	PRE-DINNER DRINKS	Ballroom Foyer, Hilton on the Park Melbourne				
7:00	CONFERENCE DINNER	Ballroom Rooms, Hilton on the Park Melbourne				

Day 3 - Friday, 15 December		
8.30	REGISTRATION	Ballroom Foyer, Hilton on the Park Melbourne
PLENARY SESSION (Chairman Greg Sheard)		Ballroom 3
9.00	Keynote Lecture Professor Mark Kendall (University of Queensland)	<i>FLUID MECHANICS CONSIDERATIONS OF GENE AND DRUG DELIVERY TO SKIN AND IMMUNE RESPONSES IN THE BODY</i>

	SESSION 1 (Ballroom 3)		SESSION 2 (Ballroom 2)		SESSION 3 (Ballroom 1)	
	Bio-Engineering Mini- Symposium (Chairman Mark Kendall)		Flows with Phase Change (Chairman Stéphane Zaleski)		Combustion (Chairman Jun-Ichiro Yagi)	
9.50 Session Lead Paper	S.Moore and I David (University of Canterbury, New Zealand)	<i>3D PATIENT SPECIFIC MODELS OF THE CIRCLE OF WILLIS</i>	B Prast, B Lammers and M Betting (Twister BV)	<i>CFD FOR SUPERSONIC GAS PROCESSING</i>	YS Shen, BY Guo, P Zulli, D Maldonado and AB Yu (University of NSW)	<i>A THREE-DIMENSIONAL CFD MODEL FOR COAL BLENDS COMBUSTION: MODEL FORMULATION AND VALIDATION</i>
10:15	A Bui, K Liffman, B Stanley, M Lawrence-Brown and J Semmens (CSIRO MMT)	<i>A STUDY OF FLUID AND STRUCTURE INTERACTION IN A CAROTID BIFURCATION</i>	C Marsh and D Withers (CFD Design & Engineering, NZ)	<i>CFD MODELLING OF DIRECT CONTACT STEAM INJECTION</i>	M Miltner, A Makaruk, M Harasek and A Friedl (Vienna University of Technology)	<i>CFD-MODELLING FOR THE COMBUSTION OF SOLID BAILED BIOMASS</i>
10.35	MORNING TEA Ballroom Foyer					
	Bio-Engineering Mini- Symposium (Chairman Tim Secomb)		Cyclones (Chairman Ghazi Karim)		Modelling Techniques (Chairman Valdis Bojarevics)	
11:05	S Ahmed, ID Sutalo and H Kavnoudias (CSIRO MMT)	<i>HEMODYNAMICS AND STRESS DISTRIBUTION IN A CEREBRAL ANEURYSM PARTIALLY BLOCKED WITH COILS</i>	S Pirker and D Kahrmanovic (Johannes Kepler University, Austria)	<i>A COMBINED METHOD FOR SIMULATING GAS-PARTICLE FLOWS IN HIGHLY LADEN CYCLONES</i>	J Ha, PW Cleary and M Prakash (CSIRO MIS)	<i>SPH MODELLING OF METAL FORGING</i>
11.25	K Chitra, S Vengadesan, T Sundararajan and P Nithiarasu (IIT)	<i>HEMODYNAMIC STUDY IN CAVOPULMONARY VASCULAR SYSTEM BY CHARACTERISTIC BASED SPLIT WITH ARTIFICIAL</i>	P Bunyawanichakul, M P Kirkpatrick, J E Sargison and G J Walker (University of Tasmania)	<i>A THREE-DIMENSIONAL SIMULATION OF A CYCLONE DRYER</i>	NG Deen, M van Sint Annaland and JAM Kuipers (University of Twente)	<i>DIRECT NUMERICAL SIMULATION OF COMPLEX MULTI-FLUID FLOWS USING A COMBINED IMMERSED BOUNDARY (IB) AND VOLUME OF FLUID</i>

	Madras, India.)	<i>COMPRESSIBILITY SCHEME</i>				(VOF) APPROACH
11:45	K Inthavong , ZF Tian, HF Li, W Yang, C Xue and C Li. (RMIT University)	<i>LOCAL DEPOSITION SITES OF DRUG PARTICLES IN A HUMAN NASAL CAVITY</i>	M Narasimha , MS Brennan, PN Holtham, A Purchase and TJ Napier-Munn (JKMRC)	<i>LARGE EDDY SIMULATION OF DENSE MEDIUM CYCLONE-PREDICTION OF MEDIUM SEGREGATION AND COAL PARTITIONING</i>	R Das and PW Cleary (CSIRO MIS)	<i>UNIAXIAL COMPRESSION TEST AND STRESS WAVE PROPAGATION MODELLING USING SPH</i>
12:05	M Sinnott , PW Cleary and M Prakash (CSIRO MIS)	<i>AN INVESTIGATION OF PULSATILE BLOOD FLOW IN A BIFURCATION ARTERY USING A GRID-FREE METHOD</i>	V Singh, S Srivastava, R.Chaval, V Vitankar, B Basu , MC Agrawal (Aditya Birla Management Corporation Ltd)	<i>SIMULATION OF GAS-SOLID FLOW AND DESIGN MODIFICATIONS OF CEMENT PLANT CYCLONES</i>	J Ha (CSIRO MIS)	<i>NUMERICAL COMPARISON OF RADIAL BASIS FUNCTIONS AND GENERALISED SMOOTHED PARTICLE HYDRODYNAMICS</i>
12.25	LUNCH Ballroom Foyer					

PLENARY SESSION (Chairman Murray Rudman)		Ballroom 3
1.30	Keynote Lecture Professor Harry van den Akker (Delft University of Technology)	<i>THE DETAILS OF CFD DO MATTER</i>

	Bio-Engineering Mini- Symposium (Chairman Tim David)		Fluid Dynamics (Chairman Harry van den Akker)		Mixing Vessels (Chairman Jamal Naser)	
2.20 Session Lead Paper	TW Secomb , B Styp-Rekowska and AR Preis (University of Arizona)	<i>COMPUTATIONAL SIMULATION OF RED BLOOD CELL DEFORMATION AND RADIAL MIGRATION IN MICROVESSELS</i>	S Zaleski (Pierre & Marie Curie University)	<i>THREE-DIMENSIONAL SPATIAL DEVELOPMENT OF ATOMIZING JETS: THEORY, SIMULATION AND ELEMENTARY PROCESSES</i>	Y Wang , Q Rao, J Fan and W Fei (Tsinghua University, Beijing)	<i>PIV MEASUREMENTS AND CFD SIMULATION OF VISCOUS FLUID FLOW IN A STIRRED TANK AGITATED BY A RUSHTON TURBINE</i>
2.45	LT Choi and JY Tu (RMIT University)	<i>FLOW AND PARTICLE DEPOSITION PATTERNS IN A REALISTIC HUMAN DOUBLE BIFURCATION AIRWAY MODEL</i>	MA Navarro and AAC Santos (Federal University of Minas Gerais, Brazil)	<i>PRESSURE LOSS THROUGH THE BOTTOM END PIECE OF A NUCLEAR FUEL ASSEMBLY</i>	M Robinson , PW Cleary and J Monaghan (Monash University)	<i>ANALYSIS OF MIXING IN A TWIN-CAM MIXER USING SMOOTHED PARTICLE HYDRODYNAMICS</i>

3:05	HF Li , JY Tu, DK Shanmugam, CL Xue and CG Li (RMIT)	<i>A CFD STUDY OF FLUID-PARTICLE BEHAVIOUR IN A POROUS VESTIBULE OF A HUMAN NASAL AND PHARYNX AIRWAY</i>	K Bremhorst, Z Qin and C Jacobs (The University of Queensland)	<i>COMPARISON OF RANS MODELLING WITH DNS AND EXPERIMENTAL DATA FOR A CONVERGING-DIVERGING NOZZLE AND A ROTATING CYLINDER ELECTRODE</i>	JE Olsen , H Laux and JB Oian (SINTEF, Norway)	<i>MIXING AND REFINING DYNAMICS OF A GAS-STIRRED THREE-PHASE REACTOR BY CFD ANALYSIS</i>
3:25	HM Blackburn , SJ Sherwin (CSIRO MMT)	<i>INSTABILITY, TRANSITION AND RECEPTIVITY OF PULSATILE FLOW IN A STENOTIC TUBE</i>	A Sozzi and F Taghipour (University of British Columbia, Canada)	<i>MODELING THE PERFORMANCE OF ULTRAVIOLET REACTOR IN EULERIAN AND LAGRANGIAN FRAMEWORKS</i>		
3.45	Closing Ceremony (Ballroom 3) Presentation of Student Prizes – by Mark Woffenden, CEO, Parker CRC for Integrated Hydrometallurgy Solutions					
4:00	AFTERNOON TEA Upper Foyer					