BURGERS SYMPOSIUM
Conference Centre ‘De Werelt’ in Lunteren

05 & 06 JUNE 2018

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TUESDAY 05 JUNE

General Programme

Tuesday 05 June 2018

09.30 – 10.30  Registration, coffee/tea
10.30 – 10.40  Plenary: opening
10.40 – 11.30  Plenary: Burgers Lecture by Prof John Dabiri (Stanford University, USA)
11.30 – 11.50  Plenary: ‘100 Years of Fluid Mechanics in The Netherlands’ by Dr Fons Alkemade and Prof Jerry Westerweel
11.50 – 12.00  Plenary: ‘NWO Science’ by Dr Bram Borkent (NWO)
12.00 – 13.00  Lunch
13.00 – 14.45  Parallel sessions : 1 & 2
14.45 – 15.15  Tea / coffee break
15.15 – 15.45  Plenary: pitches by PhD students
15.45 – 17.30  Parallel sessions : 3 & 4
17.30 – 18.30  Posters + Gallery of Fluid Motion + Drinks
Evening programme :  18.30 – 20.00  Joint dinner
20.30 – 21.30  Plenary: Evening Lecture by Prof Charles Meneveau (Johns Hopkins University, USA)
21.30  Socialising & drinks

WEDNESDAY 06 JUNE

General Programme

Wednesday 06 June 2018

09.00 - 10.30  Parallel sessions : 5 & 6
10.30 – 11.00  Coffee / tea break
11.00 – 12.30  Parallel sessions : 7 & 8
12.30 - 13.30  Lunch
13.30 – 15.00  Parallel session : 9
15.00 – 15.30  Plenary: Awards session

Charles Hoogendoorn Award (KIVI)
Laudatio by jury + presentation by recipient Dr Sander Haase
Announcement winners of the
- Young Scientist Awards (2x)
- Gallery of Fluid Motion Award
15.30  Closure & drinks

PARTICIPATING GROUPS

TUD-ET  3ME – Process & Energy - Energy Technology | Boersma
TUD-FM  3ME – Process & Energy - Fluid Mechanics | Westerweel, Roekaerts, Henkes
TUD - MS  3ME – Process & Energy - Multiphase Systems | Poelma
TUD-ME  3ME – Maritime Engineering | van Rhee
TUD-TP  Chemical Technology – Transport Phenomena | Kleijn, Kreutzer, Mudde, vdAkker
TUD-AE  Aerospace Engineering | Hickel, Scarano
TUD-AM  Applied Mathematics | Vuik, Heemink
TUD-EFM  Civil Engineering & Geosciences – Environmental Fluid Mechanics | Reniers, Uijttewaal, Pietrzak
UT-EFD  Mechanical Engineering – Engineering Fluid Dynamics | Venner
UT-PCF  Science & Technology - Physics of Complex Fluids | Mugele
UT-PoF  Science & Technology - Physics of Fluids | Lohse, DvdMeer, Snoeijer, Versluis, Verzicco, Prosperetti
UT-SFI  Chemical Engineering - Soft Matter, Fluidics and Interfaces | Lammertink
UT-MSM  Engineering Technology – Multi-Scale Modelling | Ludwig
UT-WEM  Engineering Technology – Water Engineering Management | Hulscher
TUE-UPWE  Urban Physics and Wind Engineering | Blocken
TUE-CASA  Mathematics & Computer Science – Centre for Analysis, Scientific Computing & Applications | Koren, Peletier
TUE-CPI  Chemical Engineering - Chemical Process Intensification | van Sint Annaland
TUE-ET  Mechanical Engineering – Energy Technology | van Brummelen, Smeulders, van Steenhoven
TUE-MMM  Chemical Engineering – Multiscale Modelling of Multiphase Flows | Kuipers
TUE-MRF  Mechanical Engineering – Multiphase and Reacting Flows | Deen, de Goey, Kuerten
TUE-MTP  Applied Physics – Mesoscopic Transport Phenomena | Darhuber, Harting
TUE-WDY  Applied Physics – Vortex Dynamics & Turbulence | Clercx, van Heijst, Toschi
RUG-CMNM  Computational Mechanics & Numerical Mathematics | Verstappen, Veldman
WUR-EZ  Wageningen University – Experimental Zoology | van Leeuwen
WUR-PCC  Wageningen University – Physical Chemistry and Soft Matter | van der Gucht
Tuesday 05 June

13.00–14.45  
**TUESDAY 05 JUNE**  
LECTURE ROOM: EUROPA  
**1 BUBBLES, PARTICLES & DROPLETS 1**  
JO JANSSEN (UNILEVER)

- Rodrigo Ezeta - Vapor bubble nucleation in turbulent boiling Taylor-Couette flow  
  UT-PoF | Lohse, Huisman, Sun
- Saad Jahangir - X-ray computed tomography of cavitating flow in a converging-diverging nozzle  
  TUD-MS | Poelma
- Ramon Voncken - Concentration polarization in fluidized beds with vertically immersed membranes  
  TUE-CPI | van Sint Annaland, Roghair
- Alessandro Battistella - Meso-scale simulations of bubble nucleation  
  TUE-CPI | van Sint Annaland, Roghair
- Ronald Remmerswaal - A ghost fluid method for the modeling of contact discontinuities in two-phase flow  
  RUG-CMMN | Verstappen, Veldman
- Kim Alards - Directional change of tracer trajectories in rotating Rayleigh-Benard convection  
  TUE-WDY | Clercx
- Gianmarco Venditti - Capillary filling of suspensions: impact of particle-particle interactions  
  TUE-MTP | Darhuber, Harting
- Borge ten Hagen - Microswimmers in an evaporating droplet  
  UT-PoF | Lohse

15.45–17.30  
**TUESDAY 05 JUNE**  
LECTURE ROOM: EUROPA  
**3 TURBULENCE**  
TIM PEETERS (TATA STEEL)

- Rahim Rezaelha - Optimization of vertical axis wind turbines  
  TUE-UPWE | Blocken, Montazeri
- Matteo Madonia - Heat transfer in rapidly rotating turbulent convection  
  TUE-WDY | Kunnen
- Tiago Pestana - Linear growth of columnar eddies in rotating turbulence  
  TUD-AE | Hickel
- Giovanni Lacabello - Complex network analysis of turbulent flows  
  TUE-MRF | Deen, Kuerten, Scarsoglio, Ridolfi
- Joep van der Zanden - Spatial and temporal TKE distributions under bichromatic breaking waves  
  UT-WEM | Hulscher, Ribberink
- Dominik Krug - Attached eddy hypothesis in wall-bounded shear flow  
  UT-PoF | Lohse, Krug
- Dennis Bakhuis - Particles in turbulent Taylor-Couette flow  
  UT-PoF | Lohse, Huisman, Sun
- Mohamed El Abbassi - CFD simulation of non-premixed combustion in rotary kilns  
  TUD-AM | Vuik, Lahaye
TUESDAY 05 JUNE
LECTURE ROOM: AMERIKA
13.00-14.45
2 FLUID-STRUCTURE INTERACTION
BERT VREMAN (AKZO-NOBEL)

Frits de Prenter - Preconditioned iterative solvers for immersed finite element methods
TUE-ET | van Brummelen, Verhoosel
Aura Visan - Catalytically driven surface flow
UT-SF | Lammertink
Jakob Maljaars - A conservative particle-mesh projection with applications to advection dominated flows
TUD-EFM | Uijttewaal, Labeur
Simone van Lin - Interfacial water: how adsorbing ions affect the water structure at mineral-electrolyte interfaces
UT-PCF | Mugele, Siretanu
Vishak Chandra - Hydrodynamic dispersion in open-cell foams
UT-MMM | Kuipers, Peters
Pepijn van Denderen - Morphodynamic modelling of side channel development
UT-WEM | Hulscher, Schienlen
Stefan Engelhard - High frame rate contrast-enhanced ultrasound particle image velocimetry in the abdominal aorta
UT-PoF | Versluis
Aswin Muralidharan - Mechanical response of cellular membranes in pulsed electric fields
TUD-TP | van Ommen, Kreutzer, Boukany

TUESDAY 05 JUNE
LECTURE ROOM: AMERIKA
15.45-17.30
4 AERODYNAMICS & WAVES
VINCENT FOKKEMA (VSL)

Paul Mannion - Aerodynamics of paralympic handcycling
TUE-UPWE | Blocken, Toparlar
Thijs van Drunen - Optimization of individual time trial aerodynamics
TUE-UPWE | Blocken
Luis Laguarda - Bi-directional transitions between regular and Mach reflections in asymmetric shock interactions
TUD-AE | Hickel
Wouter van Veen - Offset in rotation axis increases rotational lift production in insect wings: a numerical study
WUR-EZ | van Leeuwen, Muijres
Gal Akrish - Inhomogeneous wave statistics over shear currents
TUD-EFM | Reniers, Zijlma
Marijn Sanders - Surface pressure measurements on trailing edge serrations for aeroacoustic noise characterization
UT-EFD | Venner, de Santana
Julian Biesheuvel - Localization algorithm for continuously distributed aeroacoustic sources
UT-EFD | Venner, de Santana
Yous van Halder - Efficient non-intrusive surrogate modeling for fluid mechanics applications
TUE-CASA | Koren, Sanderse
WEDNESDAY 06 JUNE
LECTURE ROOM : EUROPA
5 BUBBLES, PARTICLES & DROPLETS 2
GERRIT HOMMERSOM (DOW BENELUX)

Sten Reijers - Numerical simulations of oblique droplet impact onto a deep liquid pool
UT-PoF | Lohse, Gelderblom
Jelle Will - Rising of oddly shaped particles in still water and in turbulent flow
UT-PoF | Lohse, Huisman, Sun
Duraivelan Palanisamy - Calculating Einstein viscosities for non-spherical colloids
UT-MSM | Luding, den Otter
Marcel Workamp - Macroscopic friction and flow instabilities in granular emulsions
WUR-PCC | van der Gucht, Dijksman
Anais Gauthier - Non-wetting dynamics of Leidenfrost drops on a bath : self-propulsion and capillary interactions
UT-PoF | D van der Meer, Lohse
Xiao Xue - Effects of thermally induced capillary waves on nano-ligaments fragmentation
TUE-WDY | Toschi
Yigit Akargun - Diesel engine spray flame structure using LES
TUE-MRF | Deen, Somers

WEDNESDAY 06 JUNE
LECTURE ROOM : EUROPA
7 BUBBLES, PARTICLES & DROPLETS 3
MICHEL RIEPEN (ASML)

Yuk Man Lau - Measurement of interfacial tension
TUD-FM | Westerweel, van de Water
Giordano Lipari - GPU acceleration of SPH simulation
TUD-AM | Vuik
Paolo Cifani - DNS of turbulent bubbly flows for a large number of deformable bubbles
RUG-CMNM | Verstappen
Guillaume Lajoine - High-frequency surface acoustic waves trigger acoustic droplet vaporization through resonance
UT-PoF | Versluis
Pinaki Kumar - Inter-avalanche time distribution in glassy systems
TUE-WDY | Toschi
Robin Koldewij - Impact of droplets on a supercooled plate
TUE-WDY | Lohse
Maxim Masterov - Numerical simulations of bubble column using hybrid turbulence models
TUE-MMM | Kuipers, Baltussen

WEDNESDAY 06 JUNE
LECTURE ROOM : EUROPA
9 WETTING
HANS MEERMAN (TEIJIN ARAMID)

Abheeti Goyal - Substrate wetting effects on phase separation in thin films
TUE-WDY | Toschi
Hanieh Bazyar - Pore wetting in slippery liquid-infused membranes (SLIMs)
UT-SFI | Lammertink
Christian Diddens - Evaporation of multicomponent droplets
UT-PoF | Lohse, van Brummelen (TUE)
Tim Segers - Air entrainment into a jetting piezoacoustic inkjet nozzle
UT-PoF | Lohse, van Brummelen (TUE)
Ahmed Jarray - Simulation and prediction of ink suspension wettability on cellulose-based substrate
UT-MSM | Luding, den Otter
Maziyar Jalaal - Capillary dimples near a moving contact line
UT-PoF | Snoeijer, Lohse
Liz Mensink - Wetting of polymer brushes
UT-PoF | Snoeijer, de Beer
### 6 ENVIRONMENTAL FLOWS

**Lecture Room: Amerika**

- **Wednesday, 6 June 2023**
- **Time:** 09.00-10.30

**Presenter:** Mark Roest (Vortech)

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<td>Hamid Montazeri</td>
<td>Adaptation to climate change in urban areas with evaporating cooling</td>
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<td>Koen Berends</td>
<td>Efficient probabilistic computation for a high-dimensional problem: river engineering</td>
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<td>Geert Campmans</td>
<td>Modeling tidal sand wave recovery after dredging</td>
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<td>Frans van Grunsven</td>
<td>Turbidity formation at deep sea mining operations</td>
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<td>Bas Nieuwboer</td>
<td>Transport of large particles in a rotating dredge cutter head</td>
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<td>Dave Weij</td>
<td>Unstable breaching of underwater slopes</td>
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### 8 TRANSPORT & COMBUSTION

**Lecture Room: Amerika**

- **Wednesday, 6 June 2023**
- **Time:** 11.00-12.30

**Presenter:** Frank Visser (Flowserve)

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<td>Counterflow non-premixed flames for hydrothermal combustion of methanol</td>
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<td>Faizan Vance</td>
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<td>Sebastian Contreras Osorio</td>
<td>Experimental study on transport phenomena in 3D laminar flows</td>
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<td>Andres Aguirre Guzman</td>
<td>Rapidly rotating convection at low Prandtl number</td>
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<td>Stephen Varghese</td>
<td>Subsurface transport in rotated source-sink flows</td>
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<td>Claas Willem Visser</td>
<td>Marangoni spreading of miscible liquids in the drop-drop geometry</td>
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<td>Qierui Zhang</td>
<td>A Washburn-based model for oil-bleeding in grease lubrication</td>
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