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Institute for Mathematical Sciences

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4th IMS Turbulence Workshop, 23-25 March 2009

Programme

Monday, 23rd March

9.20 - 09.30 - Introductory remarks

9.30 - 10.10 - Wojciech Grabowski

Overview 1: [Clouds and microphysics](#)

10.10 - 10.50 - Mike Reeks

Overview 2: [Turbulence and inertial particles](#)

10.50 - 11.15 - Break

11.15 - 11.55 - Anthony Davis

Overview 3: Clouds and radiation

11.55 - 12.35 - Adrian Lock

Overview 4: [Parameterisation of clouds](#)

12.35 - 14.00 - Lunch

14.00 - 14.30 - Eberhard Bodenschatz

[The Cloud Physics Experiments at the MPIDS: Tunnel and Zugspitze](#)

14.30 - 15.00 - Tom Choularton

[Field studies of the glaciation processes in clouds with turbulence](#)

15.00 - 15.30 - Jean-Louis Brenguier

[How observations shall be used to constrain numerical simulations \(see presentation\)](#)

15.30 - Break

16.00 - 16.30 - Yangang Liu

[Systems approach to cloud droplet size distributions: analogy with statistical physics and kinetics - \(see presentation\)](#)

16.30 - 17.00 - Emmanuel Villermaux

[Single drop fragmentation is the source of raindrop size distribution](#)

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17.00 - Reception

Tuesday, 24th March

9.00 - 9.30 - Zellman Warhaft

[Lagrangian measurements of inertial particle accelerations in the laboratory and their relation to water droplets in clouds - \(see presentation\)](#)

9.30 - 10.00 - Luis Portela

[A numerical study on the combined effects of turbulence and gravity on droplet collisions in clouds](#)

10.00 - 10.30 - Lance Collins

[Towards quantifying the collision kernel of inertial particles in isotropic turbulence](#)

10.30 - 11.00 - Break

11.00 - 11.30 - Said Elghobashi

[The physical mechanisms of two-way interactions between dispersed particles and turbulent flows](#)

11.30 - 12.00 - Grisha Falkovich

[Turbulent warm cloud: toy model \(see presentation\)](#)

12.00 - 12.30 - Elena Meneguz

[Quantification of heavy particle segregation in turbulent flows: a Lagrangian approach \(see presentation\)](#)

12.30 - 14.00 - Lunch

14.00 - 14.30 - Stuart Coleman

[A unified sweep-stick mechanism of heavy particle clustering for 2D and 3D homogeneous isotropic turbulence \(see presentation\)](#)

14.30 - 15.00 - Rutger Ijzermans

[A Lagrangian approach to droplet condensation in turbulent clouds \(see presentation\)](#)

15.00 - 15.30 - Lian-Ping Wang

[Turbulent collision-coalescence of cloud droplets and its impact on warm rain formation - \(see presentation\)](#)

15.30 - 16.00 - Break

16.00 - 16.30 - Alex Khain

[Turbulence in cumulus clouds and its effect on cloud microstructure and precipitation formation](#)

16.30 - 17.00 - Steven Krueger

[Enhancement of coalescence due to droplet inertia in turbulent clouds](#)

17.00 - 18.00 - Discussion

[Slides by Jean-Louis Brenguier](#)

19.00 - Dinner

Wednesday, 25th March

9.00 - 9.30 - Howard Barker

[3D Radiative Transfer for Cloudy Atmospheres: Implications for Forward Modelling and Remote Sensing \(see presentation\)](#)

9.30 - 10.00 - Anthony Davis

[Radiative Transfer in Stratified 3D Clouds and Cloud Systems: A Hierarchical Modeling Framework for Diagnostics and Energetics, or Both - \(see presentation\)](#)

10.00 - 10.30 - Wojciech Grabowski

[Impact of entrainment and mixing on optical properties of boundary layer clouds \(see presentation\)](#)

10.30 - 11.00 - Break

11.00 - 11.30 - Juan Pedro Mellado

[Buoyancy reversal in the cloud-top mixing layer \(see presentation\)](#)

11.30 - 12.00 - Szymon Malinowski

[Buoyancy fluctuations due to evaporative cooling and uneven mass loading during entrainment and mixing of clouds - \(see presentation\)](#)

12.00 - 12.30 - Steven Krueger

[Fine-scale modeling of entrainment and mixing of cloudy and clear air](#)

12.30 - 14.00 - Lunch

14.00 - 14.30 - Raymond Shaw

[Mixing and entrainment in turbulent clouds](#)

14.30 - 15.00 - Alan Grant

[Microphysical effects on cumulus-scale processes](#)

15.00 - 15.30 - David Randall

[Evaporatively driven entrainment: LES and role in global cloudiness - \(see presentation\)](#)

15.30 - 16.00 - Break

16.00 - 16.30 - Boris Grits

[The orientation distribution of atmospheric Stokesian hydrometeors](#)

16.30 - 17.00 - Kyle Spyksma

[High-order statistics of highly-resolved convection and cloud dissipation \(see presentation\)](#)

17.00 - 18.00 - Discussion

Download all abstracts

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[Programme order](#)

Ryo Onishi - [Impact of turbulent collisions on cloud development](#)

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