

Spin and hydrodynamics in relativistic nuclear collisions ECT* Online Event



From **October 05** until **October 16**, 2020

14:00 – 17:00 Central Europe Time Zone

WEEK ONE

Oct. 05, 2020

Chair: *Wojciech Florkowski*

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|-------------|---|
| 14:00-15:00 | Takafumi Niida
<i>Experimental overview of spin polarization signatures</i> |
| 15:00-15:15 | Break |
| 15:15-16:00 | Xiao-Liang Xia
<i>Vector meson spin alignment</i> |
| 16:00-16:45 | Yuri Ivanov
<i>Review of polarization at NICA energies</i> |
| 16:45-17:15 | Round table discussion |

Oct. 06, 2020

Chair: *Jinfeng Liao*

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|-------------|---|
| 14:00-15:00 | Iuri Karpenko
<i>Review of hydrodynamic calculations of spin polarization</i> |
| 15:00-15:15 | Break |
| 15:15-16:00 | Yilong Xie
<i>Effects of hadronic interactions in Lambda polarization</i> |
| 16:00-16:45 | Yifeng Sun
<i>Kinetic calculations of polarization</i> |
| 16:45-17:15 | Round table discussion |

Oct. 07, 2020

Chair: Francesco Becattini

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|-------------|--|
| 14:00-15:00 | Leonardo Tinti
<i>Spin, polarization and Wigner function</i> |
| 15:00-15:15 | Break |
| 15:15-16:00 | Andrea Palermo
<i>Exact formulae for Wigner functions at equilibrium</i> |
| 16:00-16:45 | Georgy Prokhorov
<i>Quantum features of acceleration and vorticity in relativistic hydrodynamics</i> |
| 16:45-17:15 | Round table discussion |

Oct. 08, 2020

Chair: Dirk Rischke

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|-------------|---|
| 14:00-15:00 | Jinfeng Liao
<i>Review of the Chiral Magnetic Effect</i> |
| 15:00-15:15 | Break |
| 15:15-16:00 | Matteo Buzzegoli
<i>Spin and axial chemical potential</i> |
| 16:00-16:45 | Umut Gursoy
<i>Holographic description of spin flow</i> |
| 16:45-17:15 | Round table discussion |

Oct. 09, 2020

Chair: *Amaresh Jaiswal*

- 14:00-15:00 Qun **Wang**
Review of spin polarization in microscopic models
- 15:00-15:15 Break
- 15:15-16:00 Ho-Ung **Yee**
Spin diffusion in perturbative QCD
- 16:00-16:45 Avdhesh **Kumar**
Spin dynamics in RTA
- 16:45-17:30 Gaoqing **Cao**
Polarization and resonance decays

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Week TwoOct. 12, 2020

Chair: *Xu-Guang Huang*

- 14:00-15:00 Enrico **Speranza**
The role of spin tensor in spin hydrodynamics
- 15:00-15:15 Break
- 15:15-16:00 Masaru **Hongo**
Entropy current analysis of spin hydrodynamics
- 16:00-16:45 Shuzhe **Shi**
Spin hydrodynamics from kinetic theory
- 16:45-17:15 Round table discussion

Oct. 13, 2020

Chair: Yuri Ivanov

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|-------------|--|
| 14:00-15:00 | Radoslaw Ryblewski
<i>Review of spin and hydrodynamics</i> |
| 15:00-15:15 | Break |
| 15:15-16:00 | Ziyue Wang
<i>Spin dynamics in equal-time kinetic theory</i> |
| 16:00-16:45 | Yu-Chen Liu
<i>Spin hydrodynamics from effective theory</i> |
| 16:45-17:30 | Andrey Sadofyev
<i>Spin 1 kinetic theory</i> |

Oct. 14, 2020

Chair: Ho-Ung. Yee

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|-------------|--|
| 14:00-15:00 | Kenji Fukushima
<i>Extreme matter in electromagnetic fields and under rotation</i> |
| 15:00-15:15 | Break |
| 15:15-16:00 | Gabriele Inghirami
<i>Relativistic magnetohydrodynamics and simulations</i> |
| 16:00-16:45 | Koichi Hattori
<i>MHD from QED</i> |
| 16:45-17:15 | Round Table Discussion |

Oct. 15, 2020

Chair: Qun Wang

- 14:00-15:00 **Di-Lun Yang**
Review of quantum kinetic theory for spin transport
- 15:00-15:15 Break
- 15:15-16:00 **Nora Weickgenannt**
Spin polarization from vorticity through nonlocal collisions
- 16:00-16:45 **Xin-Li Sheng**
Kadanoff-Baym approach to the non-local collision term
- 16:45-17:30 **Joe Kapusta**
Spin equilibration in kinetic approach

Oct. 16, 2020

Chair: Kenji Fukushima

- 14:00-15:00 **Mamoru Matsuo**
Spin transport in condensed matter physics
- 15:00-15:15 Break
- 15:15-16:00 **Shu Lin**
Polarization rotation of chiral fermions in vortical fluids
- 16:00-16:45 **Giorgio Torrieri**
Lagrangian approach to spin hydrodynamics
- 16:45-17:00 CONCLUSIONS