

Schedule of the 12th Festival de Théorie, July 4-29, 2022

| Week 1 - July 4-8 | 08:30 | 09:10 - 10:00 | 10:00 - 10:40 | 10:40 | 11:00 - 11:55 | 11:55 - 12:30 | 12:30 - 14:30 | 14:30 | 15:15 | 16:00 | 16:15 | 17:30 | 18:30 - 20:00 |
|-------------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|-------------|------------|--------------|---------------|-------|-------------------|
| Monday 4 | Welcome | A. Pumir | discussion | Coffee | P. Manz | discussion | Lunch | B. Metzger | discussion | Coffee | Q&A Pumir | | |
| | 08:30 | 09:00 - 09:50 | 9:50 - 10:30 | 10:30 | 11:00 - 11:45 | 11:45 - 12:30 | | 14:30 | 15:15 | 16:00 | 16:15 | 17:30 | 18:30 - 20:00 |
| Tuesday 5 | Coffee break | S. Tobias | discussion | R. Varennes | M. Veranda | | | F. Marcotte | discussion | Coffee break | Q&A Tobias | | |
| Wednesday 6 | | D. Dritschel | discussion | E. Serre | discussion | | | O.D. Gurcan | discussion | Coffee break | Q&A Dritschel | | |
| Thursday 7 | | D.W. Hughes | discussion | A. Guillevic | G. Brochard | | | G. Tynan | discussion | Coffee break | Q&A Hughes | | Public conference |
| Friday 8 | | P.H. Diamond | discussion | L.P. Goswami | N. Cao | | | A. Das | discussion | Coffee break | Q&A Diamond | | |

| Week 2 - July 11-15 | 08:30 | 09:00 - 09:50 | 9:50 - 10:30 | 10:30 | 11:00 | 11:45 | 12:30 - 14:30 | 14:30 | 15:15 | 16:00 | 16:15 | 17:30 | 18:30 - 20:00 | | | |
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| Monday 11 | BASTILLE DAY | C. Rampf | discussion | Coffee break | R. Heinonen | Q. Kriaa | Lunch | B. Favier | discussion | Coffee break | Q&A Rampf | | | | | |
| Tuesday 12 | | Y. Sarazin | discussion | | A. Milovanov | Z. Lin | | L. Schmitz | discussion | | Q&A Sarazin | | Conference dinner | | | |
| Wednesday 13 | | A. Frishman | discussion | | G. Ricard | F. Novkoski | | C. Hidalgo | discussion | | Q&A Frishman | | | | | |
| Thursday 14 | | BASTILLE DAY | | | BASTILLE DAY | | | BASTILLE DAY | | | BASTILLE DAY | | | | | |
| Friday 15 | | L. Biferale | discussion | | C. Holland | T.S. Hahm | | H. Li | discussion | | Q&A Biferale | | | | | |

| Week 3 - July 18-22 | 08:30 | 09:00 - 09:50 | 9:50 - 10:30 | 10:30 | 11:00 | 12:30 - 14:30 | 14:30 | 16:00 | 16:15 | 17:15 | 18:00 | | | |
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| Monday 18 | PROJECTS | B. Gallet | discussion | Coffee break | R. Juneja | Priya | Lunch | PROJECTS | | PROJECTS | | | | |
| Tuesday 19 | | | | | F. Ramirez | Q. Yan | | C. Paz-Soldan | discussion | | Donnel / Di Giannatale | | | |
| Wednesday 20 | | | | | PROJECTS | | | PROJECTS | | | R. Singh | | | |
| Thursday 21 | | | | | | | | | | | PROJECTS | | | |
| Friday 22 | | | | | | | | | | | | | | |

| Week 4 - July 25-29 | 08:30 | 09:00 | 10:30 | 11:00 | 12:30 - 14:30 | 14:30 | 16:00 | 16:15 | 18:00 | | | |
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| Monday 25 | PROJECTS | | | Coffee break | PROJECTS | | PROJECTS | PROJECTS | | | | |
| Tuesday 26 | | | | | Symposium day | | | | | | | |
| Wednesday 27 | | | | | Symposium day | | | | | | | |
| Thursday 28 | | | | | Symposium day | | | | Closing | | | |
| Friday 29 | | | | | | | | | | | | |

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| Tutorials: 55 + 25 min | A. Pumir | Turbulence generation through an iterative cascade of elliptical instability | B. Favier | Zonal jets at the laboratory scale: hysteresis and Rossby waves resonance |
| Topicals: 30 + 15 min | P. Manz | A model for the bifurcated I-mode regime | Y. Sarazin | Flow dynamics and turbulence self-organization in tokamak plasmas |
| | B. Metzger | Introduction to granular suspensions | A. Milovanov | The plasma staircase meets the nonlinear Schrödinger equation |
| Lectures / Q&A: 1h 15 min | S. Tobias | Model Reduction, Prediction and (Methods from) Control in Fluids, MHD & Dynamos | Z. Lin | Regulation of Alfvén eigenmodes by microturbulence in fusion plasmas |
| Short contrib.: 20 + 10 min | R. Varennes | Interplay between neoclassical magnetic braking and turbulent stress tensor regarding plasma flow | L. Schmitz | Transition physics in plasmas: micro and macro perspectives |
| Social events | M. Veranda | Addressing stochastic transport using Lagrangian Coherent Structures | A. Frishman | Transition to turbulence in wall bounded flows |
| | F. Marcotte | Identification of subcritical dynamos and minimal seeds | G. Ricard | Wave turbulence in 1d |
| | D. Dritschel | The late-time evolution of single-layer geophysical flows | F. Novkoski | Surface Waves along a Torus of Fluid |
| | E. Serre | k-ε reduction for cross-field turbulent transport for core & edge plasma | C. Hidalgo | Transport control and self-organization in fusion plasmas: An experimentalist's view |
| | O.D. Gurcan | Cascade models for micro-instabilities in fusion plasmas | L. Biferale | A.I. meets complex flows: Lagrangian & Eulerian data-driven tools for optimal navigation & data-assimilation |
| | D.W. Hughes | Magnetic Bucancy and the Anelastic Approximation | C. Holland | Characterization of Turbulence and Transport in a Tokamak Power Plant |
| | A. Guillevic | On the road to Kubo > 1: Quasi-linear theory in a 1D plasma | T.S. Hahm | ExB vortex dynamics around a magnetic island |
| | G. Brochard | Kinetic-MHD simulations for the internal kink instability | H. Li | Instabilities, Feedback and Modulations in Astrophysical Disk and Dust Flows |
| | G. Tynan | Shear layer physics at the closed-open field line transition | B. Gallet | Heat transport by baroclinic turbulence in oceans and planetary atmospheres |
| | P.H. Diamond | SOL Broadening by Edge Turbulence: Experiment and Theory of Entrainment Dynamics | R. Juneja | Stochastic particle trajectories in laser-plasma interaction |
| | L.P. Goswami | Role of Ponderomotive force in laser energy absorption in Magnetized plasma | Priya | Chaotic rotations in strongly coupled charged dust clusters |
| | N. Cao | Rossby waves past the breaking point in zonally-dominated turbulence | C. Paz-Soldan | Staircases: melting vortex crystals / Darmet w. resonant particles |
| | A. Das | Magnetic field generation through finite boundary effects | Donnel / Di Giannatale | Negative Triangularity Tokamak: Progress and Opportunity |
| | C. Rampf | The Vlasov-Poisson system in cosmology | R. Singh | Modelling of negative triangularity plasmas |
| | R. Heinonen | Optimal policies for olfactory search using partially observable Markov decision processes | | Zonal flows in negative triangularity tokamaks |
| | Q. Kriaa | Sedimentation of particle coulds | | |