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Welcome & Introduction

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at the
Parton Shower and Resummation Workshop 2019
Vienna | 11 June 2019



The 2019 PSR workshop will focus on new developments both in **analytic resummation** and the development of **parton shower algorithms**, as well as **their relation**. We will also put emphasis on **jet substructure** techniques, as well as the physics of **non-global observables** and recent development on the **handling of colour structure** as well as **Monte Carlo methods**.

Amplitude evolution	
Erwin Schrödinger Institut	13:45 - 15:00
Coffee Break	
Erwin Schrödinger Institut	15:00 - 16:30
Amplitude evolution	
Erwin Schrödinger Institut	15:30 - 15:55
Electroweak effects	
Erwin Schrödinger Institut	15:55 - 16:45
Discussion	
Erwin Schrödinger Institut	16:45 - 17:00
Blackboard Session	
Erwin Schrödinger Institut	17:00 - 18:00

New techniques and algorithms	
Erwin Schrödinger Institut	09:00 - 10:15
Coffee Break	
Erwin Schrödinger Institut	10:15 - 10:45
New techniques and algorithms	
Erwin Schrödinger Institut	10:45 - 11:10
MPI, small-x and high energy	
Erwin Schrödinger Institut	11:10 - 12:00
Phenomenology	
Erwin Schrödinger Institut	14:00 - 15:15
Coffee Break	
Erwin Schrödinger Institut	15:15 - 15:45
Jet shape and structure	
Erwin Schrödinger Institut	15:45 - 16:35

Jet shape and structure	
Erwin Schrödinger Institut	09:00 - 10:15
Coffee Break	
Erwin Schrödinger Institut	10:15 - 10:45
Automation of resummation	
Erwin Schrödinger Institut	10:45 - 12:00

Beyond leading power	
Erwin Schrödinger Institut	14:00 - 15:15

Proposal mission accomplished – with 58 registrants being a new PSR record!
Full programme on Indico: <https://indico.cern.ch/event/814040/>

No organized social programme – please **enjoy the city** on your own for a little while, we'll stop a bit earlier tomorrow. I'm happy to join and make suggestions.

Everyone needs to eat and drink though ...

Today: **Welcome aperitif** – couple of glasses and some snacks at the Danube canal, everyone responsible for themselves afterwards.

Tomorrow: **Common dinner** at a traditional 'Heurigen' Schübl-Auer at Nußdorf.

For those staying longer: We'll organize something on short notice for Thursday.

Lunch

Plenty of places close by, please check with the locals or the ESI suggestions.



Financial issues

- Everyone will get a per diem of EUR 80 per night of stay (except those explicitly not wanting support) – thanks to ESI and support by the Physics Department
- Everyone will need to pay back EUR 55 to the secretaries at the coffee break (including those not being supported). This is for welcome aperitif drinks (snacks are on the Particle Physics Group), and the the common dinner.
- If there are leftovers we'll re-distribute them.

Opening hours of the institute: Officially 9:00 – 17:00, we need to vacate the lecture halls by 17:00, but can stay for discussion and collaboration afterwards.

Talks: Please send me your slides as PDF well in advance of the session so I can put it on the Indico and the presentation laptop.

The programme is dense, but there is still plenty of space for discussion, so: Discuss!

One last thing



Welcome to PSRI09

Parton Shower and Resummation Institute takes place in **DESY** Hamburg on May 4-29, 2009. Our aim is to bring together mainly theorists to discuss about various aspect of the parton shower algorithms and the re-summation schemes. The format of the workshop is rather unconventional. We would like to spend more time on discussion than having formal talks.

RECENT DEVELOPMENTS ON PARTON SHOWER ALGORITHMS

(May 12-20, 2009)

In this session we would like discuss the recent and “**future**” developments on the parton shower algorithms.

PRESENTATIONS

- Maciej Skrzypek: “The exclusive NLO non-singlet kernel”
- Simon Plaetzer: “Parton Showers, Local Recoils, and Coherence”
- Stefan Weinzierl: “Parton Shower based on Catani-Seymour dipole factorization”

PARTON SHOWERS vs. ANALYTIC RESUMMATION

(May 24-29, 2009)

PRESENTATIONS

- Mrinal Dasgupta: “Soft gluons --analytical calculations vs Monte Carlo models”
- ...

TRANSVERSE MOMENTUM RESUMMATION FOR COLOR SINGLET PRODUCTION

(May 18-22, 2009)

The p_T distribution of the Drell-Yan like processes is the simplest non-trivial, but one of the most important quantity what we can measure on hadron-hadron colliders. There are sever nice results available for resummation of the large logarithms. We would like discuss rather extensively this topic.

PRESENTATIONS

- Anna Kulesza: “ p_T resummation for colour singlet production”
- Zoltan Nagy: “QCD vs. MC: Drell-Yan p_T distribution”

MATCHING PARTON SHOWERS AND EXACT MATRIX ELEMENTS

(May 21-22, 2009)

The matching of the parton shower and exact matrix element is one of the hottest topic of the Monte Carlo event generator developments. We will have an overview on the current techniques and want to discuss their quality, precision and validity.

PRESENTATIONS

- Leif Lönnblad: “CKKW-L merging at tree- and loop-level”
- ...

Happy 10th anniversary!

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Enjoy the workshop and Vienna!