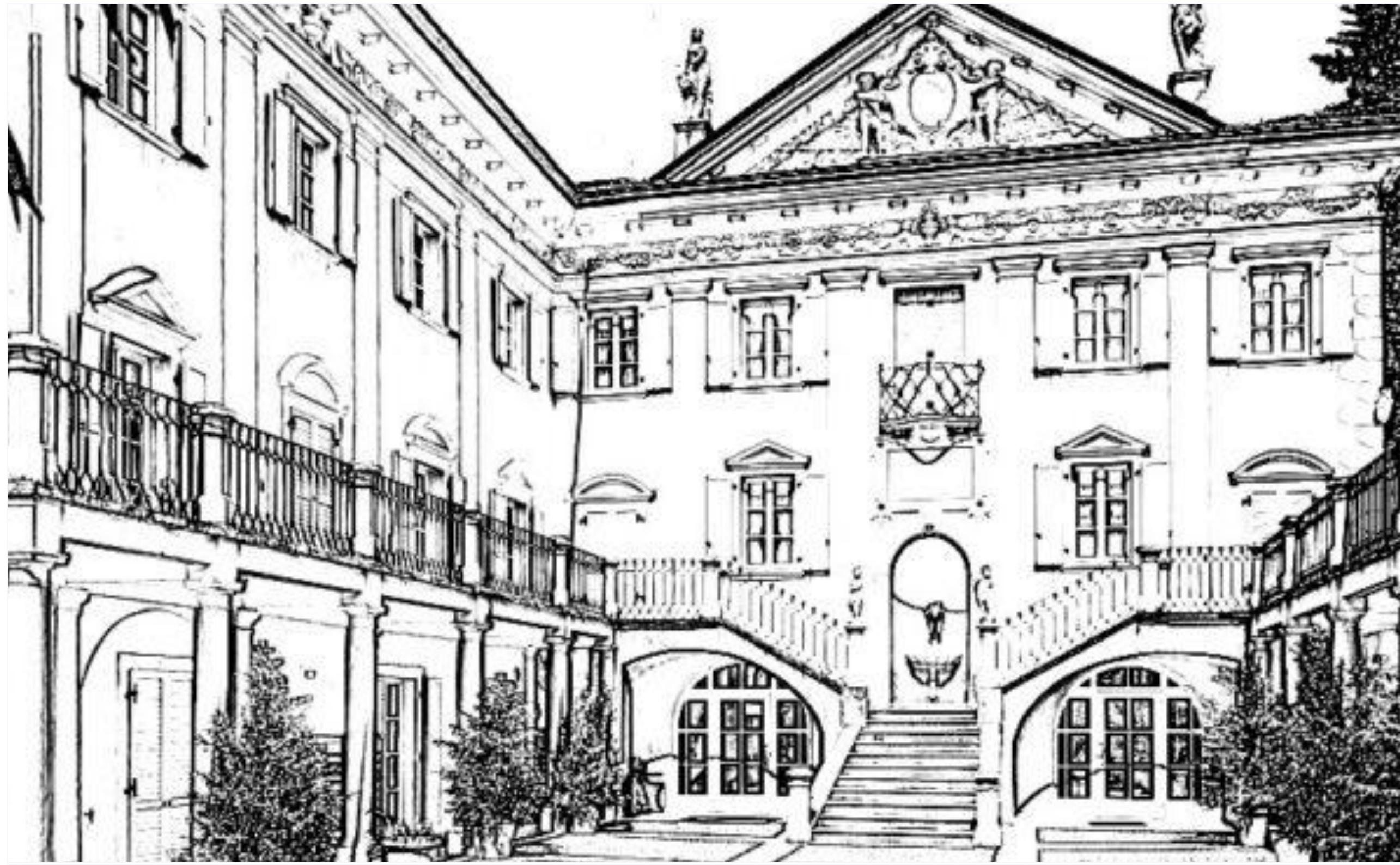


Synergies between LHC and EIC for quarkonium physics



ORGANIZING COMMITTEE

Francesco G. Celiberto (Chair, UAH, Madrid, Spain)

Jean-Philippe Lansberg (Chair, IJCLab, Orsay, France)

Charlotte Van Hulse (Chair, UAH, Madrid, Spain)

José M. Alarcón (UAH, Madrid, Spain)

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Carlo Guerrero (UAH, Madrid, Spain)

Daniel Kikola (WUT, Warsaw, Poland)



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ECT*
EUROPEAN CENTRE
FOR THEORETICAL STUDIES
IN NUCLEAR PHYSICS AND RELATED AREAS



Universidad
de Alcalá

WORKSHOP
8-12 July 2024

CONTACT: Ines Campo

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<https://indico.ectstar.eu/event/>

Programme

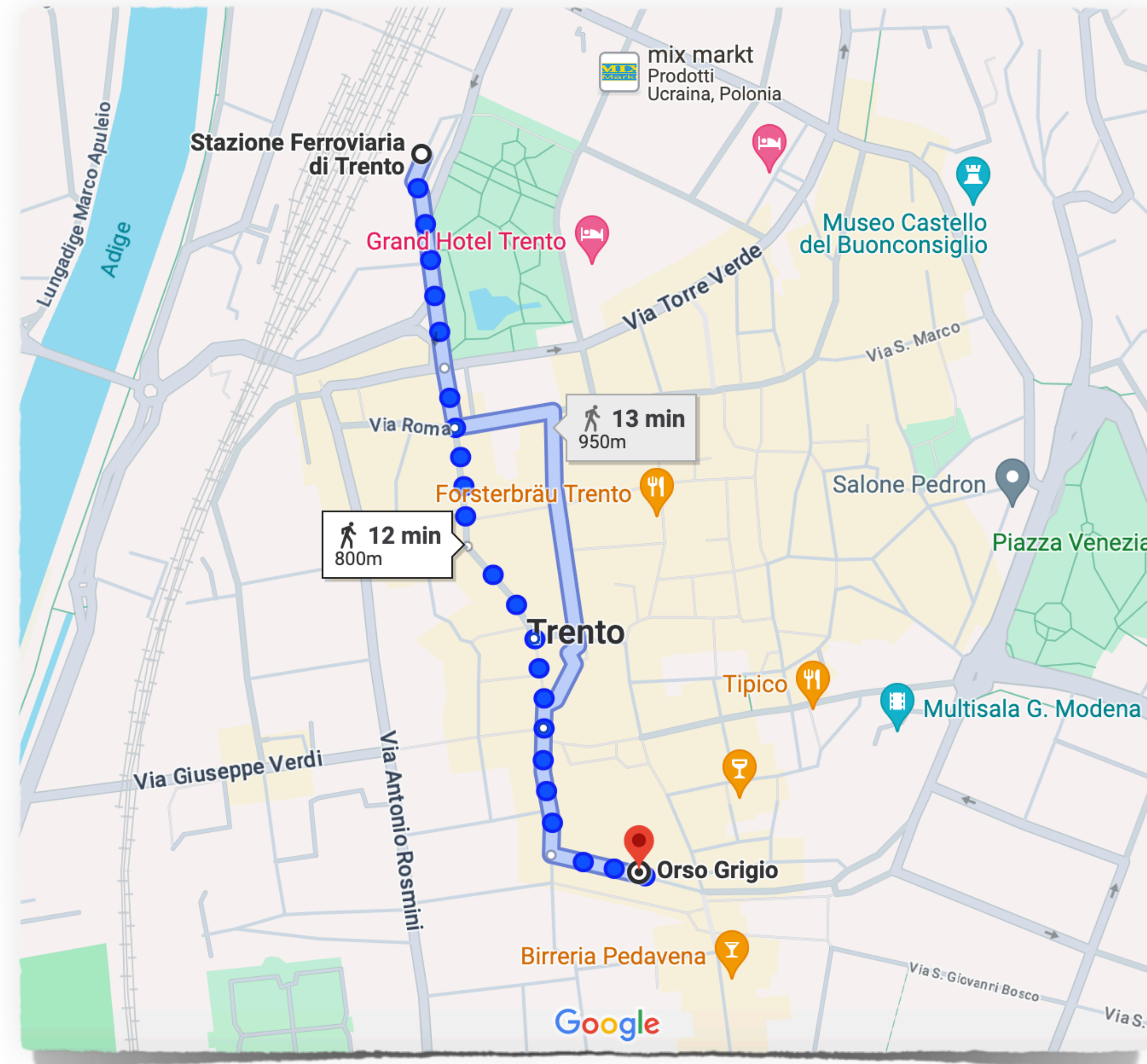
- **Quarkonia in inclusive reactions**
- **TMD physics & (semi-)inclusive reactions**
- **Quarkonia in exclusive & diffractive processes**
- **Experimental requirements & measurements**
- **From LHC to EIC: Assets & synergies**

Practical Information

- We start at 9am and finish at 18 (on Friday at 16:45)
- 3 sessions with max 3 talks of 30'
- Question session + long discussion session every day
- Please sign 2 lists every day: Lunch & Presence books
- Social dinner on Thursday at 20: Limited    included
- Accompanying persons need to pay (35 €) at the restaurant

Social dinner

- On Thursday at 20 at Ristorante Orso Grigio  



Timetable – Monday 8th

09:00	Welcome address <i>Aula Renzo Leonardi, ECT*</i>	09:00 - 09:30
	Experimental review on quarkonium production at the LHC <i>Aula Renzo Leonardi, ECT*</i>	Vato Kartvelishvili 09:30 - 10:00
10:00	Legacy of HERA: Quarkonium production at ZEUS and H1 <i>Aula Renzo Leonardi, ECT*</i>	Alessia Bruni 10:00 - 10:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>	10:30 - 11:00
11:00	Theory review of quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	Jean-Philippe Lansberg 11:00 - 11:30
	NLO inclusive J/ψ photoproduction at large p_T from HERA to the EIC <i>Aula Renzo Leonardi, ECT*</i>	Yelyzaveta Yedelkina 11:30 - 12:00
12:00	Advance in potential-NQRCD studies for quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	Xiangpeng Wang 12:00 - 12:30

Timetable — Monday 8th

09:00	Welcome address <i>Aula Renzo Leonardi, ECT*</i>		
	Experimental review on quarkonium production at the LHC <i>Aula Renzo Leonardi, ECT*</i>		
10:00	Legacy of HERA: Quarkonium production at ZEUS and H1 <i>Aula Renzo Leonardi, ECT*</i>		
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>		
11:00	Theory review of quarkonium production <i>Aula Renzo Leonardi, ECT*</i>		
	NLO inclusive J/ψ photoproduction at large p_T from HERA <i>Aula Renzo Leonardi, ECT*</i>		
12:00	Advance in potential-NQRCD studies for quarkonium production <i>Aula Renzo Leonardi, ECT*</i>		
14:00	Collinear Factorization: PDFs, massive schemes, resummations, and quarkonia <i>Aula Renzo Leonardi, ECT*</i>	<i>Emanuele Roberto Nocera</i>	14:00 - 14:30
	Nuclear PDFs and quarkonia <i>Aula Renzo Leonardi, ECT*</i>	<i>Tomas Jezo</i>	14:30 - 15:00
15:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>		15:00 - 15:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>		15:30 - 16:00
16:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>		16:00 - 16:15
	Round tables (1h45) <i>Aula Renzo Leonardi, ECT*</i>		16:15 - 18:00
17:00			

Timetable – Tuesday 9th

09:00	Quarkonium production and TMDs <i>Aula Renzo Leonardi, ECT*</i>	<i>Cristian Pisano</i> 09:00 - 09:30
	Gluon TMDs in di-J/psi hadroproduction <i>Aula Renzo Leonardi, ECT*</i>	<i>Jelle Bor</i> 09:30 - 10:00
10:00	Experimental results on double J/ψ hadroproduction <i>Aula Renzo Leonardi, ECT*</i>	<i>Liupan An</i> 10:00 - 10:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>	10:30 - 11:00
11:00	Spin asymmetries in (semi-)inclusive processes from the LHC to EIC <i>Aula Renzo Leonardi, ECT*</i>	<i>Shinsuke Yoshida</i> 11:00 - 11:30
	Azimuthal asymmetries in J/ψ + jet at the EIC <i>Aula Renzo Leonardi, ECT*</i>	<i>Luca Maxia</i> 11:30 - 12:00
12:00	Spin asymmetries in quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	<i>Nanako Kato</i> 12:00 - 12:30

Timetable – Tuesday 9th

09:00	Quarkonium production and TMDs <i>Aula Renzo Leonardi, ECT*</i>	14:00	Quarkonium production and TMDs in MG5 <i>Aula Renzo Leonardi, ECT*</i>	<i>Alice Colpani Serri</i>	14:00 - 14:30
	Gluon TMDs in di-J/psi hadroproduction <i>Aula Renzo Leonardi, ECT*</i>		Color reconnection and MC involving quarkonia <i>Aula Renzo Leonardi, ECT*</i>	<i>Anna Stasto</i>	14:30 - 15:00
10:00	Experimental results on double J/ψ hadroproduction <i>Aula Renzo Leonardi, ECT*</i>	15:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>		15:00 - 15:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>		Coffee break <i>Aula Renzo Leonardi, ECT*</i>		15:30 - 16:00
11:00	Spin asymmetries in (semi-)inclusive processes from the EIC <i>Aula Renzo Leonardi, ECT*</i>	16:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>		16:00 - 16:15
	Azimuthal asymmetries in J/ψ + jet at the EIC <i>Aula Renzo Leonardi, ECT*</i>		Round table <i>Aula Renzo Leonardi, ECT*</i>		16:15 - 18:00
12:00	Spin asymmetries in quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	17:00			

Timetable – Wednesday 10th

09:00	Review on excited quarkonium photoproduction <i>Aula Renzo Leonardi, ECT*</i>	<i>Maxim Nefedov</i> 09:00 - 09:30
	Inclusive photoproduction of quarkonium at the LHC via UPCs <i>Aula Renzo Leonardi, ECT*</i>	<i>Kate Lynch</i> 09:30 - 10:00
10:00	Photoproduction in Madgraph <i>Aula Renzo Leonardi, ECT*</i>	<i>Laboni Manna</i> 10:00 - 10:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>	10:30 - 11:00
11:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>	11:00 - 11:30
12:00	Round tables (1h) <i>Aula Renzo Leonardi, ECT*</i>	11:30 - 13:00

Timetable — Wednesday 10th

09:00	Review on excited quarkonium photoproduction <i>Aula Renzo Leonardi, ECT*</i>	<i>Maxim Nefedov</i>
	Inclusive photoproduction of quarkonium at the LHC v <i>Aula Renzo Leonardi, ECT*</i>	
10:00	Photoproduction in Madgraph <i>Aula Renzo Leonardi, ECT*</i> Coffee break <i>Aula Renzo Leonardi, ECT*</i>	
11:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i> Round tables (1h)	<div data-bbox="1116 393 3195 1799" style="background-color: yellow; padding: 10px;"> Free afternoon <div style="display: flex; justify-content: space-between; align-items: center;"> <i>Aula Renzo Leonardi, ECT*</i> 14:00 - 18:00 </div> </div>
12:00	<i>Aula Renzo Leonardi, ECT*</i>	

Timetable – Thursday 11th

09:00	Experimental results on exclusive, diffractive and diffractive dissociative quarkonium production at the LHC <i>Ronan McNulty</i>	
	Exclusive quarkonium productions: NLO effects, QCD evolution and resummation <i>Aula Renzo Leonardi, ECT*</i>	<i>Saad Nabeebaccus</i> 09:30 - 10:00
10:00	Quarkonium, PDFs and xFitter <i>Aula Renzo Leonardi, ECT*</i>	<i>Chris Flett</i> 10:00 - 10:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>	10:30 - 11:00
11:00	From BFKL to Shock wave and CGC in quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	<i>Michael Fucilla</i> 11:00 - 11:30
	ePIC and quarkonia <i>Aula Renzo Leonardi, ECT*</i>	<i>Salvatore Fazio</i> 11:30 - 12:00
12:00	Prospects for isolated quarkonium studies <i>Aula Renzo Leonardi, ECT*</i>	<i>lidia carcedo</i> 12:00 - 12:30

Timetable – Thursday 11th

09:00	Experimental results on exclusive, diffractive and diffractive production of quarkonia <i>Ronan McNulty</i>	14:00	Asymmetric collisions in Madgraph <i>Anton Safronov</i>	14:00 - 14:30
	Exclusive quarkonium productions: NLO effects, QCD evolution <i>Aula Renzo Leonardi, ECT*</i>		HL-LHC quarkonium prospects in pA/AA collisions <i>Andry Rakotozafindrabe</i>	14:30 - 15:00
10:00	Quarkonium, PDFs and xFitter <i>Aula Renzo Leonardi, ECT*</i>	15:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>	15:00 - 15:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>		Coffee break <i>Aula Renzo Leonardi, ECT*</i>	15:30 - 16:00
11:00	From BFKL to Shock wave and CGC in quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	16:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>	16:00 - 16:15
	ePIC and quarkonia <i>Aula Renzo Leonardi, ECT*</i>		Discussion on HL-LHC quarkonium prospects in pp collisions <i>Liupan An et al.</i>	16:15 - 16:45
12:00	Prospects for isolated quarkonium studies <i>Aula Renzo Leonardi, ECT*</i>	17:00	Round table <i>Aula Renzo Leonardi, ECT*</i>	16:45 - 18:00

Timetable – Friday 12th

09:00	DPS, TPS and MPI in quarkonium production <i>Aula Renzo Leonardi, ECT*</i>	<i>Maria Elena Ascioti</i> 09:00 - 09:30
	DPS in quarkonium hadroproduction and photoproduction <i>Aula Renzo Leonardi, ECT*</i>	<i>Matteo Rinaldi</i> 09:30 - 10:00
10:00	NLOAccess: HO, Pythia and diffractive inclusive production <i>Aula Renzo Leonardi, ECT*</i>	<i>Carlo Flore</i> 10:00 - 10:30
	Coffee break <i>Aula Renzo Leonardi, ECT*</i>	10:30 - 11:00
11:00	Synergies EIC-LHC for TMD studies (with quarkonia) <i>Aula Renzo Leonardi, ECT*</i>	<i>Daniël Boer</i> 11:00 - 11:30
	Complementarity EIC-LHC for diffractive / exclusive studies (with quarkonia) <i>Aula Renzo Leonardi, ECT*</i>	<i>Charlotte Van Hulse</i> 11:30 - 12:00
12:00	Complementarity EIC-LHC for heavy-ion studies (with quarkonia) <i>Aula Renzo Leonardi, ECT*</i>	<i>Daniel Kikola</i> 12:00 - 12:30

Timetable – Friday 12th

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	Complementarity EIC-LHC for diffractive / exclusive studies <i>Aula Renzo Leonardi, ECT*</i>	
12:00	Complementarity EIC-LHC for heavy-ion studies (with quarkonia) <i>Aula Renzo Leonardi, ECT*</i>	

14:00	Questions for the day <i>Aula Renzo Leonardi, ECT*</i>	14:00 - 14:30
	Round table on simulation needs and theory tools	
15:00	Round table on synergies (1h) <i>Aula Renzo Leonardi, ECT*</i>	14:30 - 15:30
16:00	Closing & QaT2025 plan <i>Aula Renzo Leonardi, ECT*</i>	15:30 - 16:30
		16:30 - 16:45