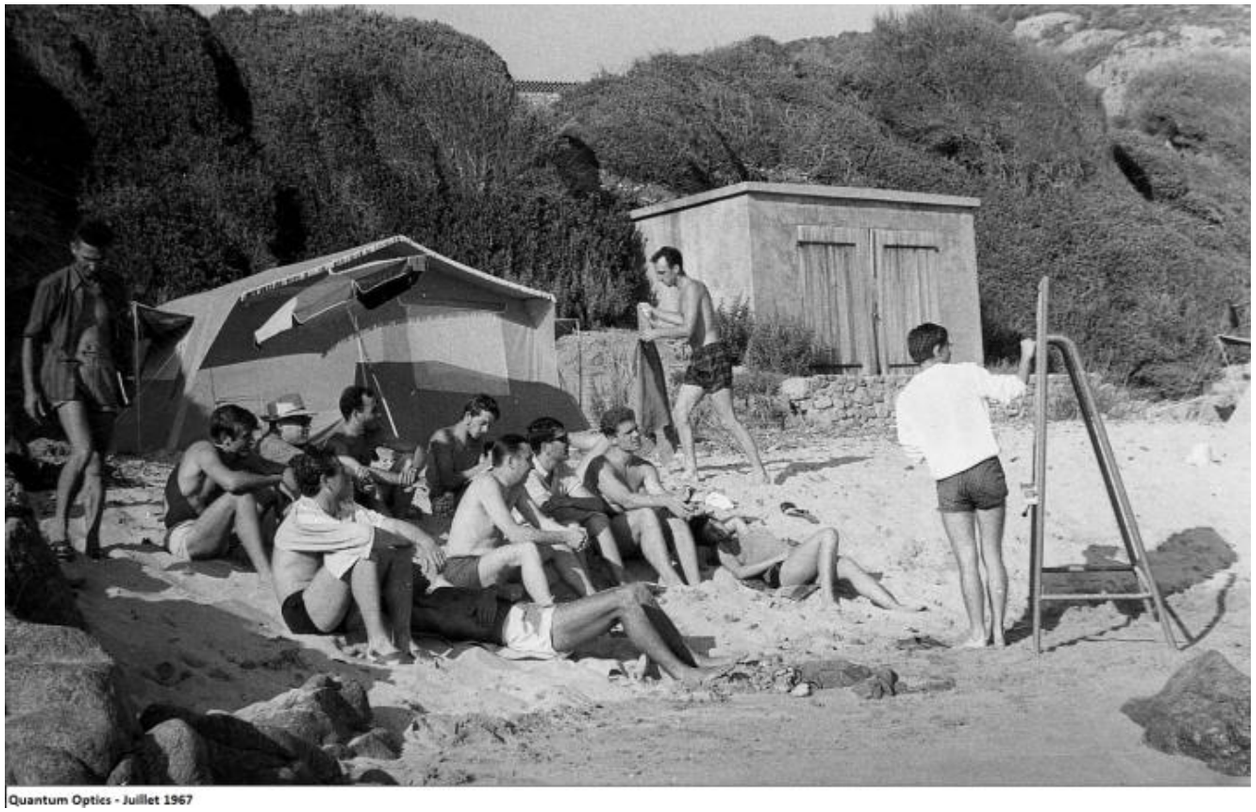
Welcome to IESC !

IESC was created in 1960 by Maurice Lévy (who died 3 years ago at the age of 99), leading theoretical physicist pioneering a french school of theoretical physics



George Charpark: Nobel prize for invention of particle detector multi-wire proportional chamber

CARGESE HISTORY

- >300 years poly-cultural history (c.f. 2 churches)
- >60 years prestigious Summer Schools in Physics & proceedings (Schwinger, ‘t Hooft, Glashow, Charpak, Parisi, ...)
- We started organising schools in Cargese in 2007

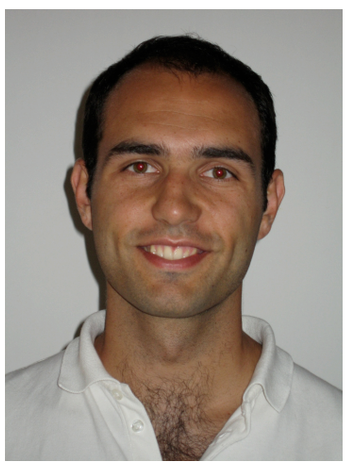
Your supervisors among our former Cargese students!

2007

FIGUEROA Daniel

LISANTI Mariangela

RENAUX-PETEL Sebastien



PAJER Enrico

RIVA Francesco

2010

HOCHBERG Yonit

2012

ELIAS MIRO Joan

KNAPEN Simon

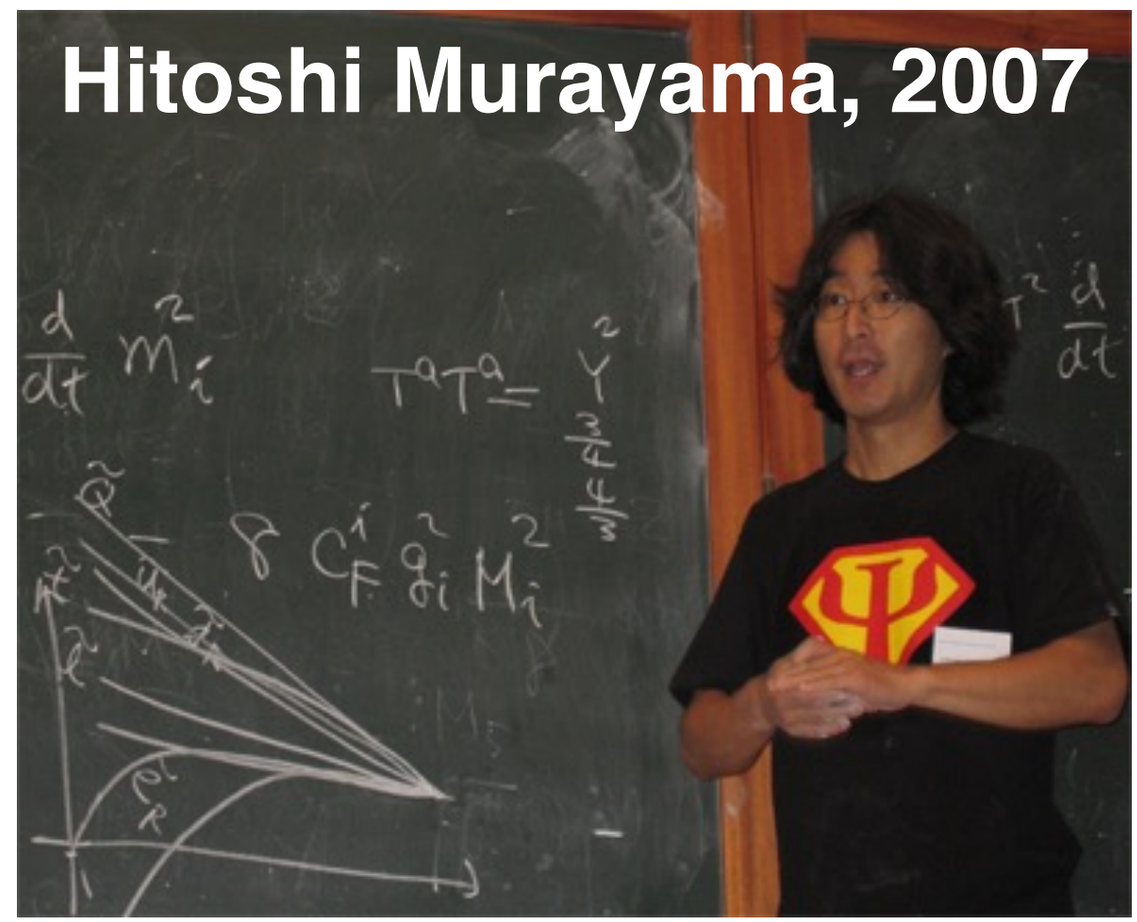
SOREQ Yotam

QUEVILLON Jérémie

Cargèse Summer School

Cosmology and Particle Physics Beyond the Standard Models

August 13 - 25, 2007



Cargese 2010: Physics at TeV colliders - From Tevatron to LHC

Jul 19 – 31, 2010
Institut d'Etudes Scientifiques de Cargese
Europe/Zurich timezone

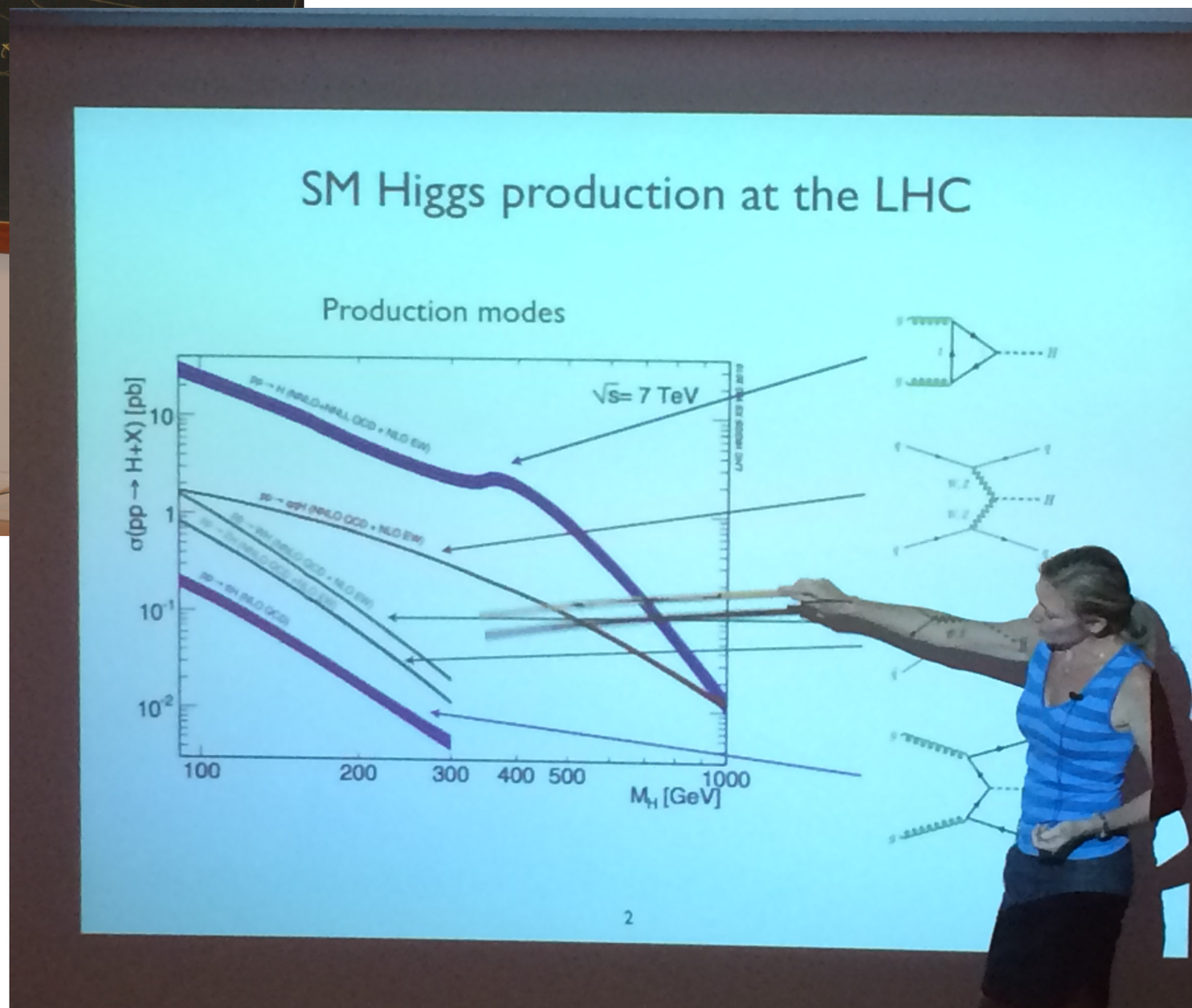
Enter your search term

International School Cargese 2012: Across the TeV frontier with the LHC

August 20, 2012 to September 1, 2012
Institut d'Etudes Scientifiques de Cargese
Europe/Paris timezone

Enter your search term

Matthew Schwartz, 2012



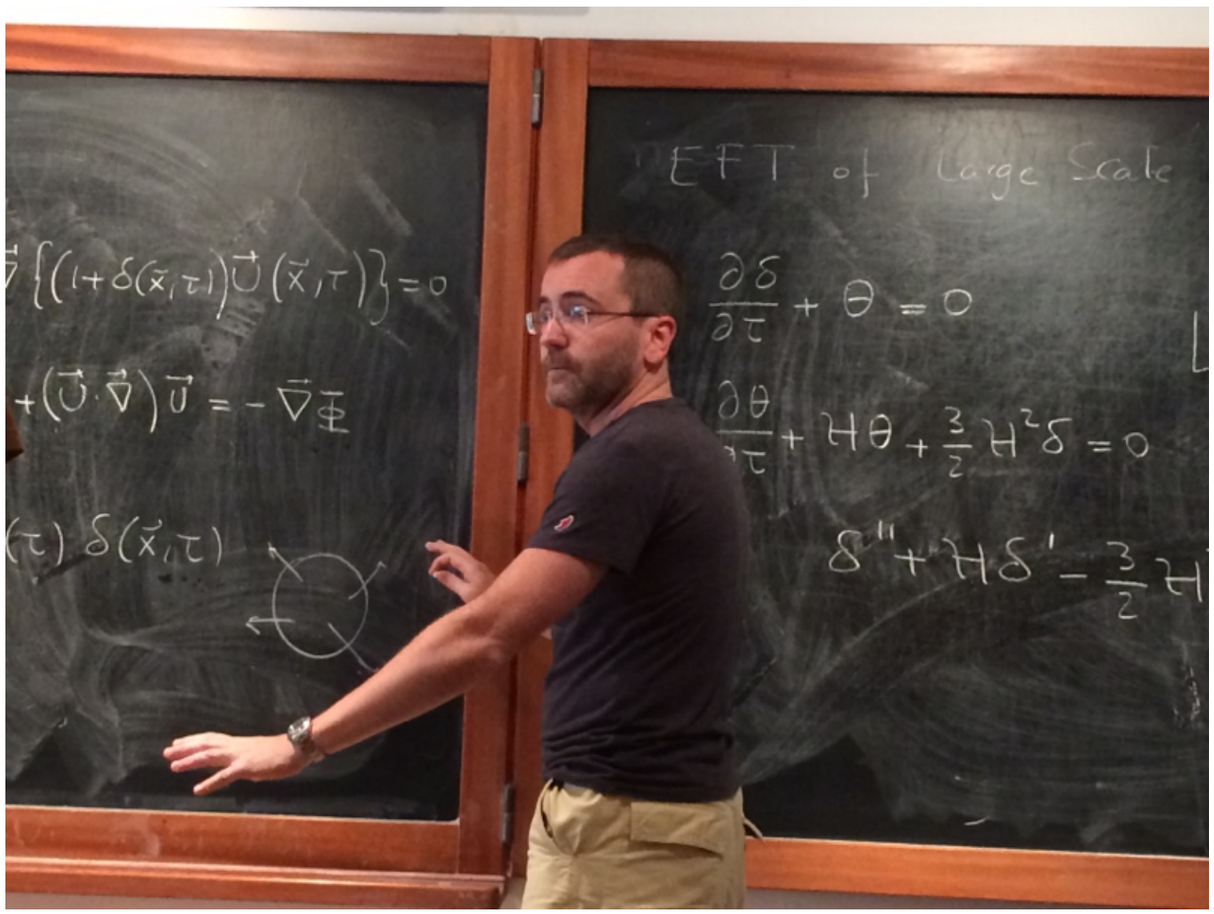
Giulia Zanderighi, 2012

Cargese International School for Theoretical Particle Physics: MultiTeV Probes of the Standard Model and beyond with the LHC

Jul 14 – 26, 2014
Institut d'Etudes Scientifiques de Cargese
Europe/Paris timezone

Enter your search term

Paolo Creminelli, '2014



Mass: From the Higgs to Cosmology

Jul 9 – 21, 2018
Institut d'Etudes Scientifiques de Cargese
Europe/Paris timezone

Josh Ruderman 2018

Roberto Contino, 2018

Rethinking Beyond the Standard Model

25 July 2022 to 6 August 2022
Institut d'Etudes Scientifiques de Cargese

Rethinking Beyond the Standard Model

25 July 2022 to 6 August 2022
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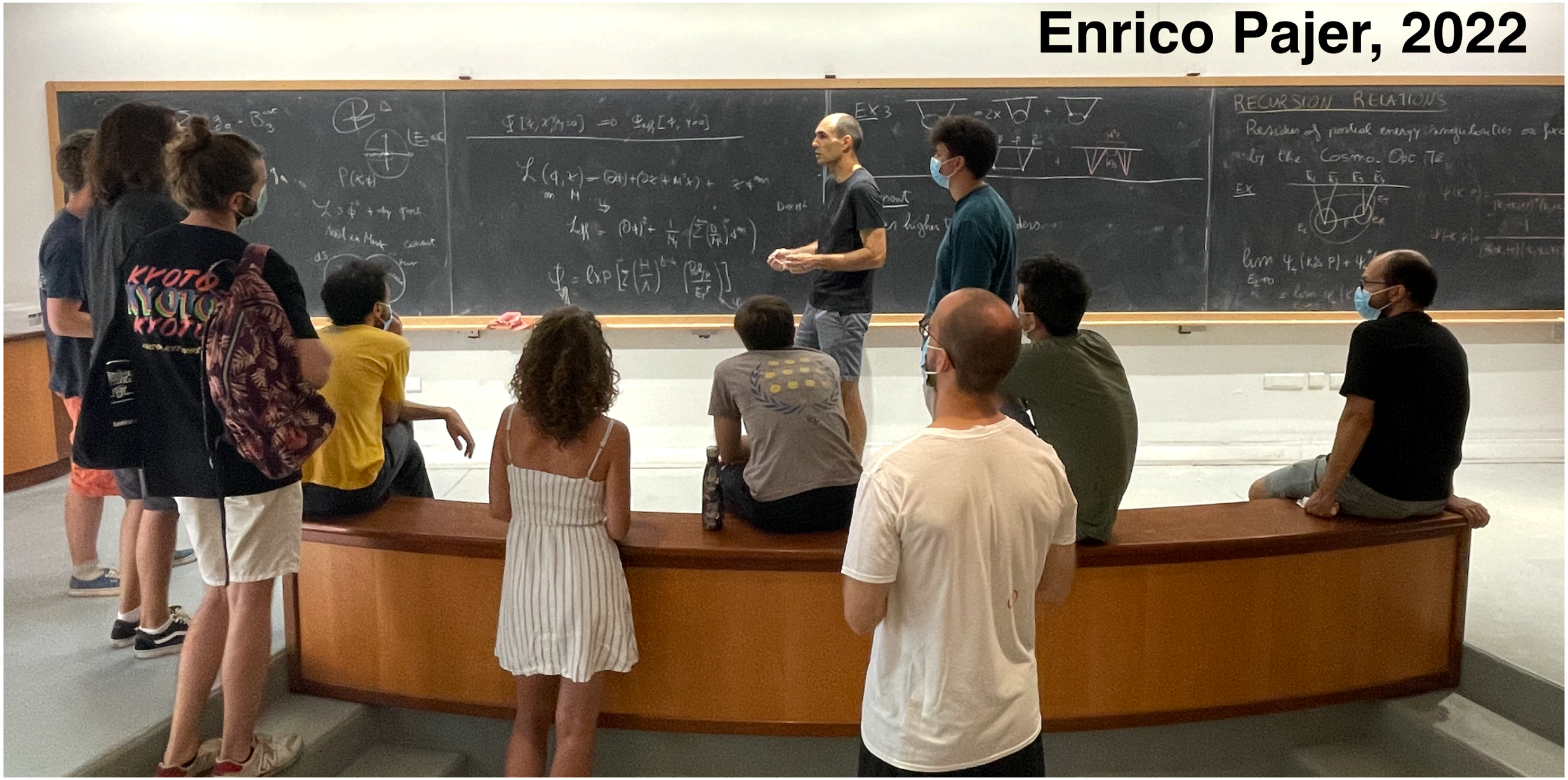


Rethinking Beyond the Standard Model

25 July 2022 to 6 August 2022
Institut d'Etudes Scientifiques de Cargese

CARGESE 2025 Summer school

- We tried to select 87 PhD students among ~200 excellent applications
- We tried to choose great lecturers
- Let now these both enjoy their meeting!

CARGESE 2025 -- BSM odyssey: turns and twists in particle theory

Week #1: July 21 – 27

	Monday 21	Tuesday 22	Wednesday 23	Thursday 24	Friday 25	Saturday 26	Sunday 27
8h15-8h55		**Opening**					
8h55-10h25	**Arrival** (buses leave Ajaccio airport around 4pm)	Rattazzi	Rattazzi	Rattazzi	Rattazzi	Baryakhtar	Free day
		coffee break					
10h50-12h20		Cheung	Cheung	Cheung	Cheung	Ellis	
		lunch break					
14h30-16h		Baumann	Baumann	Baumann	Baumann	Free afternoon	
		coffee break					
16h30-18h		Discussion	Discussion	Discussion	Discussion		
evening		**Welcome drink**					

Week #2: July 28 - August 2

	Monday 28	Tuesday 29	Wednesday 30	Thursday 31	Friday 01	Saturday 02	
8h55-10h25	Baryakhtar	Baryakhtar	Cohen	Cohen	Cohen	**Departure** (there will be a bus reaching Ajaccio airport around 11am)	
10h50-12h20	Ellis	Ellis	Cordova	Cordova	Cordova		
	lunch break						
14h30-16h	Reece	Reece	**Free afternoon and Boat Trip**	Reece	Reece		
	coffee break			coffee break			
16h30-18h	Discussion	Discussion		Discussion	Discussion		
evening				**Barbecue**	**Farewell party**		

Masha Baryakhtar: "*Gravitational probes of new physics*"
Daniel Baumann: "*Advanced Topics in Cosmology*"
Clifford Cheung: "*Scattering Amplitudes*"
Tim Cohen: "*Effective field theory*"
Clay Cordova: "*New QFT directions, new symmetries*"
Sebastian Ellis: *"Quantum probe of new physics"*
Riccardo Rattazzi: "*BSM phenomenology*"
Matthew Reece: "*Axion and axion-like particles*"

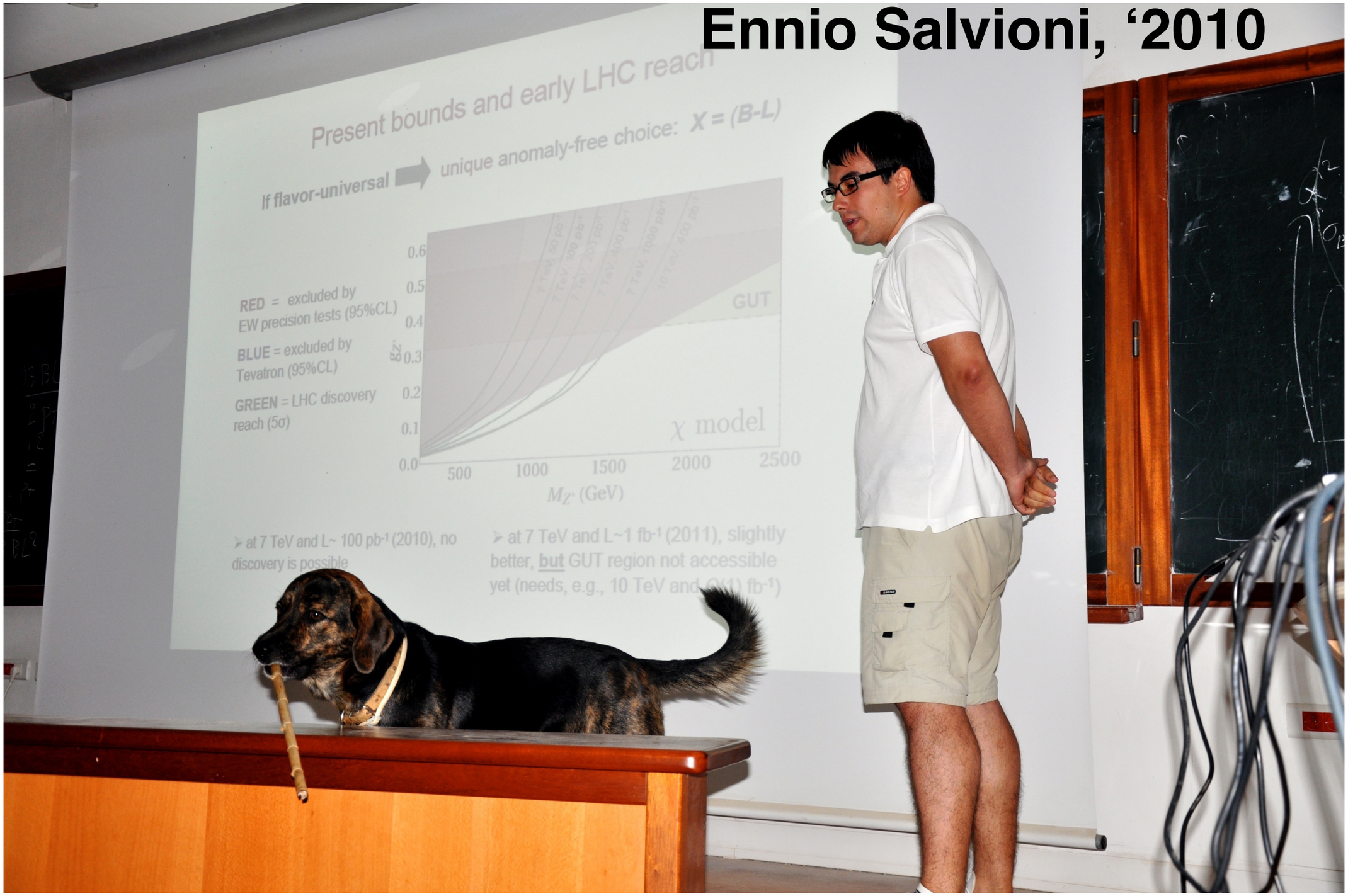
Lecture notes will be uploaded on Indico

During the weekend:
-Lectures on Saturday morning
-Free Saturday afternoon & Sunday (we'll post some excursion suggestions)


Beware when sea is turbulent

Beware, jellyfish!

Student's talks



Student’s talks

Send pdf of your slides to christophe.grojean@desy.de before the start of your session

CARGESE 2025: Participant Talks				
Day	**First Name**	**Last Name**	**Affiliation**	**Title**
Tuesday 22.07	Katarina	Trailović	Jožef Stefan Institute	Functional determinants and lifetime of the Standard Model
	Riikka	Seppä	University of Helsinki	TBC
	Enrico	Perboni	DESY	Bubble wall velocity in cosmological 1st order phase transition
	Ignacy	Nałęcz	University of Warsaw	Steady-state bubbles beyond local thermal equilibrium
	Gaurang Rama	Kane	University of Oxford	Supercooling in Confining Phase Transitions
	Charalampos	Nikolis	Stockholm University	TBC
	Jéssica	Gonçalves	University of Barcelona	TBC
	Fabio	Bernardo	University of Geneva	TBC
	Martina	Cataldi	University of Hamburg	Cold Baryogenesis
	Jacopo	Azzola	TUM	Minimal electroweak baryogengesis with Domain Walls
Wednesday 23.07	Edoardo	Alviani	IJCLab	Anomalies on-shell
	Jared	Goldberg	Technion	Either - Vector Pair Production, the Onshell Way, or Is the SM CP Violation Enough? (Hint: Maybe)
	Francesco	Calisto	CALTECH	TBC
	Jeffrey	Backus	Princeton University	Scattering Amplitudes in Gauge Theory
	Olivier	Delouche	University of Geneva	TBC
	Warin Patrick	McBlain	SISSA	Asymptotic Superluminality
	Cypris	Plantier	LPSC	differential forms in BSM phenomenology
	Heleen	Mulder	Nikhef	Probing the QCD theta term with paramagnetic molecules
	Rotem	Ovadia	University of Jerusalem	The Seiberg-Witten Axion
Thursday 24.07	André	Milagre	University of Lisbon	Electroweak Symmetry Breaking and Dark Matter Relic Density
	Satumaaria	Sukuvaara	University of Helsinki	Dark matter filtering in a first order phase transition
	Eric	Putney	Rutgers	Gaia and Dark Matter
	Junyang	Lu	UCSD	Detectability of dark matter subhalo impacts in Milky Way [illegible]
	Margaux	Jomain	LAPTh	Rekindling s-Wave Dark Matter Annihilation [illegible] GeV with Bre[illegible] Effe[illegible]
	Majed	Khalaf	University of Jerusalem	TBC
	Chaitanya	Paranjape	Weizmann Institute of Science	TBC
	Omri	Rosner	Weizmann institute of science	TBC
	Joel	Barir	Tel Aviv University	TBC
Friday 25.97	Andrea	Di Lecce	Scuola Normale Superiore Pisa	WIMPs in Co[illegible]ite Hig[illegible]
	Maximilian	Detering	King's College London	Higgs [illegible]
	Barbara Anna	Erdelyi	Università degli Studi di Padova	Pr[illegible] Phy[illegible] with th[illegible]ukawa coupling
	Javier	Reig Navarro	EPFL	[illegible]C
	Simone	Tentori	UC Louvain	Tales fro[illegible] Loop
	Dominik	Haslehner	TUM	[illegible]oop-Indu[illegible]ure Flows in Scalar Effective Field Theory
	Jaipratap	Grewal	UCSD	[illegible]C
	Lucine	Tabatt	HU Ber[illegible]	[illegible]
	Waël	Aoun	U[illegible]	[illegible]gic zeros at EFT matching
	Leonardo	Juliano	[illegible]ole Normale Superiore P[illegible]	[illegible]BC
Monday 28.07	Larissa	Kiriliuk Pastrello	[illegible]niv[illegible]ty	Incorporating Asymptotic Freedom for Holographic Energy Correlators
	Matheus	Martines	[illegible] Paulo& IJCLab	Probing Flavorful EFTs via pp -> VW and pp -> VH at the LHC
	Sebastiano	Cov[illegible]	U[illegible]sity [illegible]h	TBC
	Keegan	Hu[illegible]	Un[illegible] Toronto	TBC
	Micah	Mellors	U[illegible]sity of Toronto	TBC
	[illegible]	Pang	Rutgers	TBC
	[illegible]gan	McDuffie	Stony Brook University	Probing millicharged particles at electron beam dumps
	[illegible]ianna	Tinari	University of Zürich	Short- vs Long-Distance Dynamics in b->sll Decays
	[illegible]mpia	Miniati	Università degli Studi di Bologna	TBC
	[illegible]	Kudinoor	MIT	Imaging Hot-QCD Physics Using Energy Correlators
[illegible]sda[illegible].07	[illegible]	Hager	Max-Planck-Institut für Kernphysik	TBC
	Nabeen	Bhusal	DESY	Non-perturbative fermionic reheating
	Alica Ela	Rogelj	University of Bern	Evolution of gauge invariant scalar perturbations from inflation to reheating
	Praniti	Singh	Brown University	Reionization and the Hubble Constant: Correlations in the Cosmic Microwave Background
	Yunjia	Bao	University of Chicago	Crescendo Beyond the Horizon: More Gravitational Waves from Domain Walls Bounded by Inflated Cosmic Strings
	Juan Camilo	Garnica-Aguirre	University of Warsaw	Nucleation rate with out of equilibrium effects
	Heejoo	Kim	KAIST	Cosmic String Revisited
	Giacomo	Ferrante	LUPM	TBC
	Théodore	Fischer	Laboratoire Charles Coulomb	TBC
	Kai	Bartnick	TUM	Phi-Dwarfs: White Dwarfs probe Quadratically Coupled Scalars
Thursday 31.07	Lennard	Dufner	University of Cambridge	An Open System Approach to Gravity
	Marcello	Romano	IPhT	(Super) Gravity from Positivity
	Lucas	Fernandez Sarmiento	Carnegie Mellon University	Broken Weyl gravity
	Diego	Saviot	LAPTh	Examining the Anomalous Nature of Chiral Effects in Thermodynamics
	Aidan	Symons	UMass Amherst	Could We Soon Observe a Black Hole Explosion?
	Paolo	Bilisco	IPhT	Classical and quantum detection of gravitational waves
	Anna-Malin	Lemke	University of Hamburg	Anisotropy searches with PTAs
	Alessia	Musumeci	TUM	Nanohertz Gravitational Waves from the Baryon-Dark Matter Coincidence
	Katarina	Bleau	University of Mainz	TBC
	Nicholas	Leister	University of Mainz	TBC
Friday 01.08	Lorenzo	Tranchedone	University of Oxford	TBC
	Ethan	Carragher	University of Oxford	TBC
	Pier Giuseppe	Catinari	Rome University La Sapienza	TBC
	Chandrika	Chandrashekar	Harvard University	A Dynamical Axion Decay Constant with Extra Dimensions
	Ella	Henry	University of Washington	TBC
	Dan	Kondo	IPMU	GUT axion ALP scenario with high scale inflation
	Junxuan	Xu	Tsung-Dao Lee Institute	Small Instantons and the Post-Inflationary QCD Axion in a Special Product GUT
	Riccardo	Natale	DESY	Kinetic Axion and Ricci Reheating
	Zhaoyu	Bai	Weizmann Institute of Science	Probing Axions via Spectroscopic Measurements of S-stars at the Galactic Center
	Genta	Osaki	The University of Tokyo	Broadband Search for Axion Dark Matter via Shift Current

UPDATED

TOBE UPDATED