

## Particle Physics Division Fachverband Teilchenphysik (T)

Kerstin Borrás  
Deutsches Elektronen-Synchrotron DESY and RWTH Aachen  
Notkestraße 85  
22607 Hamburg  
kerstin.borras@desy.de

### Overview of Invited Talks and Sessions

(Lecture halls T-H15 to T-H39)

#### Invited Talks

T 1.1	Mon	9:30–10:00	T-H15	<b>From scattering amplitudes to precision predictions for the LHC</b> — •CLAUDE DUHR
T 1.2	Mon	10:00–10:30	T-H15	<b>Tackling new physics at the fringe of precision: Standard Model physics at the LHC</b> — •SIMONE AMOROSO
T 1.3	Mon	10:30–11:00	T-H15	<b>Hunt for New Physics at the LHC</b> — •SWAGATA MUKHERJEE
T 27.1	Tue	11:00–11:30	T-H15	<b>First Results From the Next Generation B-Factory Experiment Belle II</b> — •THOMAS KUHR
T 27.2	Tue	11:30–12:00	T-H15	<b>Flavour Anomalies</b> — •CHRISTOPH LANGENBRUCH
T 27.3	Tue	12:00–12:30	T-H15	<b>The top quark is still going strong (and electroweak)</b> — •ANDREA KNUE
T 80.1	Thu	11:00–11:30	T-H15	<b>Borexino looks in the direction of solar neutrinos</b> — •LIVIA LUDHOVA
T 80.2	Thu	11:30–12:00	T-H15	<b>Gravitational waves - a new probe of the early Universe</b> — •VALERIE DOMCKE
T 80.3	Thu	12:00–12:30	T-H15	<b>Gravitational wave detectors - current and future challenges</b> — •MICHÈLE HEURS
T 109.1	Fri	11:00–11:30	T-H15	<b>Ten years of Higgs boson measurements: what we know and what we don't know</b> — •CHRISTIAN GREFE
T 109.2	Fri	11:30–12:00	T-H15	<b>Future of Silicon Tracking Detectors: LHC Upgrades and Beyond</b> — •GEORG STEINBRÜCK
T 109.3	Fri	12:00–12:30	T-H15	<b>The dawn of high energy neutrino astronomy</b> — •ELISA RESCONI

#### Invited Topical Talks

T 28.1	Tue	14:00–14:25	T-H15	<b>Hadronic Jets: Accuracy and Precision of their Reconstruction and Calibration in ATLAS</b> — •CHRISTOPHER YOUNG
T 28.2	Tue	14:25–14:50	T-H15	<b>Direct searches testing BSM explanations of the flavor anomalies</b> — •ARNE CHRISTOPH REIMERS
T 28.3	Tue	14:50–15:15	T-H15	<b>ATLAS probes QCD measuring photons</b> — •HEBERTH TORRES
T 28.4	Tue	15:15–15:40	T-H15	<b>The upgrade of the ATLAS trigger to augment the physics reach of Run-3</b> — •DANIELE ZANZI
T 29.1	Tue	14:00–14:25	T-H16	<b>Testing the Standard Model through Gauge-boson Self-interactions</b> — •PHILIP SOMMER
T 29.2	Tue	14:25–14:50	T-H16	<b>Axions and similar particles - how to cover <math>10^{17}</math> orders of magnitude in mass</b> — •KRISTOF SCHMIEDEN
T 29.3	Tue	14:50–15:15	T-H16	<b>From GERDA to LEGEND - Hunting no neutrinos</b> — •CHRISTOPH WIESINGER
T 29.4	Tue	15:15–15:40	T-H16	<b>Mapping Highly-Energetic Messengers throughout the Universe</b> — •SARA BUSON
T 54.1	Wed	11:00–11:25	T-H15	<b>Hunting XYZ Beasts at Belle and Belle II</b> — •ELISABETTA PRENCIPE
T 54.2	Wed	11:25–11:50	T-H15	<b>Precision tests of the Standard Model using CP violation in B meson decays</b> — •THIBAUD HUMAIR
T 54.3	Wed	11:50–12:15	T-H15	<b>Back to the top: charting the bounds of the standard model</b> — •AFIQ ANUAR

T 54.4	Wed	12:15–12:40	T-H15	<b>Dark matter from spin-2 mediators</b> — ●STEFAN VOGL
T 55.1	Wed	11:00–11:25	T-H16	<b>Machine Learning for LHC Theory</b> — ●ANJA BUTTER
T 55.2	Wed	11:25–11:50	T-H16	<b>Towards high-precision deep learning for astroparticle physics</b> — ●CHRISTOPH WENIGER
T 55.3	Wed	11:50–12:15	T-H16	<b>The quest for the mechanism behind the matter-antimatter asymmetry</b> — ●JULIA HARZ
T 55.4	Wed	12:15–12:40	T-H16	<b>Towards the lightest dark matter in direct searches</b> — ●BELINA VON KROSIGK
T 81.1	Thu	14:00–14:25	T-H15	<b>LND - A ("Made in Germany") Radiation Monitor Operating at the far Side of the Moon</b> — ●SÖNKE BURMEISTER, SHENYI ZHANG, JIA YU, ZIGONG XU, STEPHAN BÖTTCHER, ROBERT WIMMER-SCHWEINGRUBER
T 81.2	Thu	14:25–14:50	T-H15	<b>Energetic Pulsar Environments and the Origins of Galactic Cosmic Rays</b> — ●ALISON MITCHELL
T 81.3	Thu	14:50–15:15	T-H15	<b>Looking forward to exciting physics with FASER</b> — ●FELIX KLING
T 81.4	Thu	15:15–15:40	T-H15	<b>Astroparticle physics at the LHC: Exploring the forward region with cross-section measurements</b> — ●HANS DEMBINSKI
T 82.1	Thu	14:00–14:25	T-H16	<b>Searches for new scalar particles at the LHC</b> — ●DOMINIK DUDA
T 82.2	Thu	14:25–14:50	T-H16	<b>Novel approaches to search for new physics in rare charm decays</b> — ●DOMINIK STEFAN MITZEL
T 82.3	Thu	14:50–15:15	T-H16	<b>Constraining the Higgs-charm Yukawa coupling with the CMS experiment</b> — ●LUCA MASTROLORENZO
T 82.4	Thu	15:15–15:40	T-H16	<b>Characterization of <math>H</math> boson events in the <math>\tau\tau</math> decay channel with the full CMS Run-2 data set</b> — ●SEBASTIAN WOZNIOWSKI

### Invited Talks of the joint symposium SMuK Dissertation Prize 2022 2022 (SYMD)

See SYMD for the full program of the symposium.

SYMD 1.1	Mon	14:00–14:25	Audimax	<b>Timeless Quantum Mechanics and the Early Universe</b> — ●LEONARDO CHATAIGNER
SYMD 1.2	Mon	14:25–14:50	Audimax	<b>First tritium <math>\beta</math>-decay spectrum recorded with Cyclotron Radiation Emission Spectroscopy (CRES)</b> — ●CHRISTINE CLAESSENS
SYMD 1.3	Mon	14:50–15:15	Audimax	<b>Watching the top quark mass run - for the first time!</b> — ●MATTEO M. DEFRANCHIS, KATERINA LIPKA, SVEN-OLAF MOCH
SYMD 1.4	Mon	15:15–15:40	Audimax	<b>Towards beam-quality-preserving plasma accelerators: On the precision tuning of the wakefield</b> — ●SARAH SCHRÖDER

### Prize Talks of the joint Awards Symposium (SYAW)

See SYAW for the full program of the symposium.

SYAW 1.1	Wed	14:10–14:40	Audimax	<b>Wie überprüft man die Ziele der Lehramtsausbildung Physik?</b> — ●HORST SCHECKER
SYAW 1.2	Wed	14:40–15:10	Audimax	<b>Astronomy at Highest Angular Resolution - Adaptive Optics, Interferometry and Black Holes</b> — ●FRANK EISENHAEUER
SYAW 1.3	Wed	15:10–15:40	Audimax	<b>Turbulence in one dimension</b> — ●ALEXANDER M. POLYAKOV

### Sessions

T 1.1–1.3	Mon	9:30–11:00	T-H15	<b>Invited Talks 1</b>
T 2.1–2.9	Mon	16:15–18:30	T-H15	<b>QCD (Theorie) 1</b>
T 3.1–3.9	Mon	16:15–18:35	T-H16	<b>Flavour Physics 1</b>
T 4.1–4.7	Mon	16:15–18:00	T-H17	<b>Flavour Physics 2</b>
T 5.1–5.8	Mon	16:15–18:20	T-H18	<b>Electroweak Interactions (Exp.) 1</b>
T 6.1–6.9	Mon	16:15–18:30	T-H19	<b>Top Quarks: Production (Exp.) 1</b>
T 7.1–7.8	Mon	16:15–18:15	T-H20	<b>Top Quarks: Properties 1</b>
T 8.1–8.9	Mon	16:15–18:30	T-H21	<b>Higgs Boson: Decay in Fermions 1</b>
T 9.1–9.9	Mon	16:15–18:30	T-H22	<b>Search for Supersymmetry</b>
T 10.1–10.9	Mon	16:15–18:30	T-H23	<b>Search for New Particles -1</b>
T 11.1–11.8	Mon	16:15–18:15	T-H24	<b>Gaseous Detectors</b>

T 12.1–12.9	Mon	16:15–18:30	T-H25	<b>Pixel Detectors</b>
T 13.1–13.8	Mon	16:15–18:15	T-H26	<b>Semiconductor Detectors: Radiation Hardness, new Materials and Concepts</b>
T 14.1–14.9	Mon	16:15–18:30	T-H27	<b>DAQ and Trigger 1</b>
T 15.1–15.7	Mon	16:15–18:00	T-H28	<b>GRID Computing</b>
T 16.1–16.9	Mon	16:15–18:30	T-H29	<b>Experimental Methods (general) 1</b>
T 17.1–17.8	Mon	16:15–18:20	T-H30	<b>Gamma Astronomy 1</b>
T 18.1–18.9	Mon	16:15–18:30	T-H31	<b>Neutrino Astronomy 1</b>
T 19.1–19.8	Mon	16:15–18:20	T-H32	<b>Cosmic Ray 1</b>
T 20.1–20.9	Mon	16:15–18:40	T-H33	<b>Neutrino Physics without Accelerators 1</b>
T 21.1–21.9	Mon	16:15–18:35	T-H34	<b>Neutrino Physics without Accelerators 2</b>
T 22.1–22.8	Mon	16:15–18:20	T-H35	<b>Search for Dark Matter 1</b>
T 23.1–23.6	Mon	16:15–17:45	T-H36	<b>Experimental Techniques in Astroparticle Physics 1</b>
T 24.1–24.5	Mon	16:15–17:35	T-H37	<b>Outreach Methods</b>
T 25.1–25.8	Mon	16:15–18:25	T-H38	<b>Data Analysis, Information Technology and Artificial Intelligence</b>
T 26.1–26.9	Mon	16:15–18:30	T-H39	<b>Data Analysis, Information Technology and Artificial Intelligence</b>
T 27.1–27.3	Tue	11:00–12:30	T-H15	<b>Invited Talks 2</b>
T 28.1–28.4	Tue	14:00–15:40	T-H15	<b>Invited Topical Talks 1</b>
T 29.1–29.4	Tue	14:00–15:40	T-H16	<b>Invited Topical Talks 2</b>
T 30.1–30.9	Tue	16:15–18:30	T-H15	<b>Flavour Physics 3</b>
T 31.1–31.8	Tue	16:15–18:15	T-H16	<b>Beyond the Standard Model (Theory) 1</b>
T 32.1–32.8	Tue	16:15–18:15	T-H17	<b>QCD (Exp.) 1</b>
T 33.1–33.9	Tue	16:15–18:30	T-H18	<b>Top Quarks: Production (Exp.) 2</b>
T 34.1–34.7	Tue	16:15–18:00	T-H19	<b>Top Quarks: Properties -2</b>
T 35.1–35.8	Tue	16:15–18:15	T-H20	<b>Higgs Boson: Associated Production 1</b>
T 36.1–36.9	Tue	16:15–18:30	T-H21	<b>Higgs Boson: Extended Models 1</b>
T 37.1–37.9	Tue	16:15–18:30	T-H22	<b>Search for New Particles 2</b>
T 38.1–38.7	Tue	16:15–18:00	T-H23	<b>Search for New Particles 3</b>
T 39.1–39.8	Tue	16:15–18:15	T-H24	<b>Gaseous Detectors 2</b>
T 40.1–40.9	Tue	16:15–18:30	T-H25	<b>Pixel Detectors 2</b>
T 41.1–41.9	Tue	16:15–18:30	T-H26	<b>Calorimeters 1</b>
T 42.1–42.7	Tue	16:15–18:00	T-H27	<b>Detector Systems 1</b>
T 43.1–43.8	Tue	16:15–18:15	T-H28	<b>DAQ and Trigger 2</b>
T 44.1–44.6	Tue	16:15–17:45	T-H29	<b>Experimental Methods (general) 2</b>
T 45.1–45.8	Tue	16:15–18:15	T-H30	<b>Gamma Astronomy 2</b>
T 46.1–46.9	Tue	16:15–18:30	T-H31	<b>Neutrino Astronomy 2</b>
T 47.1–47.8	Tue	16:15–18:15	T-H32	<b>Cosmic Ray 2</b>
T 48.1–48.10	Tue	16:15–18:45	T-H33	<b>Neutrino Physics without Accelerators 3</b>
T 49.1–49.9	Tue	16:15–18:40	T-H34	<b>Neutrino Physics without Accelerators 4</b>
T 50.1–50.7	Tue	16:15–18:00	T-H35	<b>Search for Dark Matter 2</b>
T 51.1–51.8	Tue	16:15–18:20	T-H36	<b>Experimental Techniques in Astroparticle Physics 2</b>
T 52.1–52.6	Tue	16:15–17:45	T-H37	<b>Outreach Methods 2</b>
T 53.1–53.9	Tue	16:15–18:30	T-H38	<b>Data Analysis, Information Technology and Artificial Intelligence 3</b>
T 54.1–54.4	Wed	11:00–12:40	T-H15	<b>Invited Topical Talks 3</b>
T 55.1–55.4	Wed	11:00–12:40	T-H16	<b>Invited Topical Talks 4</b>
T 56.1–56.9	Wed	16:15–18:30	T-H15	<b>Flavour Physics 4</b>
T 57.1–57.8	Wed	16:15–18:15	T-H16	<b>Flavour Physics 5</b>
T 58.1–58.7	Wed	16:15–18:00	T-H17	<b>QCD (Exp.) 2</b>
T 59.1–59.6	Wed	16:15–17:50	T-H18	<b>Neutrino Physics with Accelerators 1</b>
T 60.1–60.9	Wed	16:15–18:30	T-H19	<b>Top Quarks: Decay and CP Violation and Mixing Angles</b>
T 61.1–61.8	Wed	16:15–18:15	T-H20	<b>Higgs Boson: Decay in Bosons</b>
T 62.1–62.9	Wed	16:15–18:30	T-H21	<b>Higgs Boson: Extended Models 2</b>
T 63.1–63.9	Wed	16:15–18:30	T-H22	<b>Search for New Particles 4</b>
T 64.1–64.9	Wed	16:15–18:30	T-H23	<b>Search for New Particles 5</b>
T 65.1–65.8	Wed	16:15–18:15	T-H24	<b>Silicon Strip Detectors</b>
T 66.1–66.9	Wed	16:15–18:30	T-H25	<b>Semiconductor Detectors: Radiation Hardness, new Materials and Concepts 2</b>
T 67.1–67.9	Wed	16:15–18:40	T-H26	<b>Myon Detectors</b>

T 68.1–68.8	Wed	16:15–18:15	T-H27	<b>Detector Systems 2</b>
T 69.1–69.9	Wed	16:15–18:30	T-H28	<b>DAQ and Trigger 3</b>
T 70.1–70.9	Wed	16:15–18:30	T-H29	<b>Experimental Methods (general) 3</b>
T 71.1–71.9	Wed	16:15–18:30	T-H30	<b>Neutrino Astronomy 3</b>
T 72.1–72.9	Wed	16:15–18:30	T-H31	<b>Cosmic Ray 3</b>
T 73.1–73.8	Wed	16:15–18:15	T-H32	<b>Cosmic Ray 4</b>
T 74.1–74.8	Wed	16:15–18:20	T-H33	<b>Neutrino Physics without Accelerators 5</b>
T 75.1–75.9	Wed	16:15–18:35	T-H34	<b>Neutrino Physics without Accelerators 6</b>
T 76.1–76.9	Wed	16:15–18:30	T-H35	<b>Search for Dark Matter 3</b>
T 77.1–77.8	Wed	16:15–18:15	T-H36	<b>Search for Dark Matter 4</b>
T 78.1–78.7	Wed	16:15–18:00	T-H37	<b>Experimental Techniques in Astroparticle Physics 3</b>
T 79.1–79.9	Wed	16:15–18:30	T-H38	<b>Data Analysis, Information Technology and Artificial Intelligence 4</b>
T 80.1–80.3	Thu	11:00–12:30	T-H15	<b>Invited Talks 3 (joint session T/EP)</b>
T 81.1–81.4	Thu	14:00–15:40	T-H15	<b>Invited Topical Talks 5 (joint session T/EP)</b>
T 82.1–82.4	Thu	14:00–15:40	T-H16	<b>Invited Topical Talks 6</b>
T 83.1–83.9	Thu	16:15–18:30	EP-H1	<b>Astroteilchen: Von der Quelle zum Detektor (contributed talks) (joint session EP/T)</b>
T 84.1–84.9	Thu	16:15–18:30	T-H15	<b>Flavour Physics</b>
T 85.1–85.9	Thu	16:15–18:30	T-H16	<b>Beyond the Standard Model (Theory) 2 and QFT and Lattice Gauge Theory 1</b>
T 86.1–86.7	Thu	16:15–18:00	T-H17	<b>Neutrino Physics (Theory) 1 and Theoretical Astroparticle Physics and Cosmology 1</b>
T 87.1–87.8	Thu	16:15–18:20	T-H18	<b>Electroweak Interactions (Exp.) 2</b>
T 88.1–88.9	Thu	16:15–18:30	T-H19	<b>Top Quarks: Production (Exp.) 3</b>
T 89.1–89.7	Thu	16:15–18:00	T-H20	<b>Higgs Boson: Decay in Fermions 2</b>
T 90.1–90.8	Thu	16:15–18:15	T-H21	<b>Higgs Boson: Associated Production 2</b>
T 91.1–91.6	Thu	16:15–17:45	T-H22	<b>Higgs Boson: Rare Decays</b>
T 92.1–92.7	Thu	16:15–18:00	T-H23	<b>Higgs Boson: Extended Models 3</b>
T 93.1–93.10	Thu	16:15–18:45	T-H24	<b>Search for New Particles 6</b>
T 94.1–94.7	Thu	16:15–18:00	T-H25	<b>Silicon Strip Detectors 2</b>
T 95.1–95.8	Thu	16:15–18:15	T-H26	<b>Pixel Detectors 3</b>
T 96.1–96.8	Thu	16:15–18:15	T-H27	<b>Detector Systems 3</b>
T 97.1–97.7	Thu	16:15–18:00	T-H28	<b>Electronics 1</b>
T 98.1–98.7	Thu	16:15–18:05	T-H29	<b>Experimental Methods (general) 4</b>
T 99.1–99.9	Thu	16:15–18:35	T-H30	<b>Neutrino Astronomy 4</b>
T 100.1–100.9	Thu	16:15–18:30	T-H32	<b>Cosmic Ray 5</b>
T 101.1–101.9	Thu	16:15–18:30	T-H33	<b>Cosmic Ray 6</b>
T 102.1–102.9	Thu	16:15–18:35	T-H34	<b>Neutrino Physics without Accelerators 7</b>
T 103.1–103.9	Thu	16:15–18:30	T-H35	<b>Neutrino Physics without Accelerators 8</b>
T 104.1–104.7	Thu	16:15–18:05	T-H36	<b>Search for Dark Matter 5</b>
T 105.1–105.10	Thu	16:15–18:45	T-H37	<b>Search for Dark Matter 6</b>
T 106.1–106.9	Thu	16:15–18:30	T-H38	<b>Experimental Techniques in Astroparticle Physics 4</b>
T 107.1–107.8	Thu	16:15–18:15	T-H39	<b>Data Analysis, Information Technology and Artificial Intelligence 5</b>
T 108	Thu	19:30–21:00	T-MV	<b>General assembly - Particle Physics Division (for DPG members)</b>
T 109.1–109.3	Fri	11:00–12:30	T-H15	<b>Invited Talks 4</b>

## Annual General Meeting of the Particle Physics Division

Thursday 19:30–21:00 T-MV