Summer Student Lectures 2017

Visit: [cern.ch](https://cern.ch/)

1. Particle World (1/3): <http://cds.cern.ch/record/2271970?ln=en>
2. Particle World (2/3): <http://cds.cern.ch/record/2271896?ln=en>
3. Particle World (3/3): <http://cds.cern.ch/record/2272020?ln=en>
4. Detectors (1/5): <http://cds.cern.ch/record/2272037?ln=en>
5. Detectors (2/5): <http://cds.cern.ch/record/2272299?ln=en>
6. Detectors (3/5): http://cds.cern.ch/record/2272391?ln=en
7. Detectors (4/5): http://cds.cern.ch/record/2272867?ln=en
8. Detectors (5/5): http://cds.cern.ch/record/2272994?ln=en
9. Accelerators (1/5): http://cds.cern.ch/record/2272127?ln=en
10. Accelerators (2/5): <http://cds.cern.ch/record/2272298?ln=en>
11. Accelerators (3/5): http://cds.cern.ch/record/2272866?ln=en
12. Accelerators (4/5): http://cds.cern.ch/record/2273207?ln=en
13. Accelerators (5/5): http://cds.cern.ch/record/2273286?ln=en
14. Theoretical Particle Physics (1/5): <http://cds.cern.ch/record/2272863?ln=en>
15. Theoretical Particle Physics (2/5): http://cds.cern.ch/record/2272864?ln=en
16. Theoretical Particle Physics (3/5): http://cds.cern.ch/record/2272865?ln=en
17. Theoretical Particle Physics (4/5): http://cds.cern.ch/record/2272981?ln=en
18. Theoretical Particle Physics (5/5): http://cds.cern.ch/record/2273252?ln=en
19. Introduction to CERN: <http://cds.cern.ch/record/2272397?ln=en>
20. Electronics, DAQ and Triggers (1/3): <http://cds.cern.ch/record/2273245?ln=en>
21. Electronics, DAQ and Triggers (2/3): http://cds.cern.ch/record/2273391?ln=en
22. Electronics, DAQ and Triggers (3/3): http://cds.cern.ch/record/2273584?ln=en
23. Raw Data to Physics (1/3): <http://cds.cern.ch/record/2273390?ln=en>
24. Raw Data to Physics (2/3): http://cds.cern.ch/record/2273407?ln=en
25. Raw Data to Physics (3/3): <http://cds.cern.ch/record/2273585?ln=en>
26. Phenomenology of Standard Model (1/4): <http://cds.cern.ch/record/2273587?ln=en>
27. Phenomenology of Standard Model (2/4): http://cds.cern.ch/record/2273710?ln=en
28. Phenomenology of Standard Model (3/4): http://cds.cern.ch/record/2273788?ln=en
29. Phenomenology of Standard Model (4/4): http://cds.cern.ch/record/2274899?ln=en
30. Standard Model Physics at Hadron Colliders (1/3): <http://cds.cern.ch/record/2273789?ln=en>
31. Standard Model Physics at Hadron Colliders (2/3): http://cds.cern.ch/record/2274071?ln=en
32. Standard Model Physics at Hadron Colliders (3/3): http://cds.cern.ch/record/2274116?ln=en
33. Nuclear Physics at Isolide (1/3): <http://cds.cern.ch/record/2273993?ln=en>
34. Nuclear Physics at Isolide (2/3): http://cds.cern.ch/record/2274093?ln=en
35. Nuclear Physics at Isolide (3/3): http://cds.cern.ch/record/2274285?ln=en
36. Overview of HL-LHC: <http://cds.cern.ch/record/2274112?ln=en>
37. Superconductivity and SC magnets (1/2): <http://cds.cern.ch/record/2274281?ln=en>
38. Superconductivity and SC magnets (2/2): http://cds.cern.ch/record/2274423?ln=en
39. Flavour Physics and CP violations (1/4): <http://cds.cern.ch/record/2274283?ln=en>
40. Flavour Physics and CP violations (2/4): http://cds.cern.ch/record/2274659?ln=en
41. Flavour Physics and CP violations (3/4): http://cds.cern.ch/record/2274947?ln=en
42. Flavour Physics and CP violations (4/4): http://cds.cern.ch/record/2275074?ln=en
43. What is String Theory?: <http://cds.cern.ch/record/2274419?ln=en>
44. Beyond Standard model (1/4): <http://cds.cern.ch/record/2274756?ln=en>
45. Beyond Standard model (2/4): http://cds.cern.ch/record/2274949?ln=en
46. Beyond Standard model (3/4): http://cds.cern.ch/record/2275064?ln=en
47. Beyond Standard model (4/4): http://cds.cern.ch/record/2275233?ln=en
48. Introduction to Statistics (1/5): <http://cds.cern.ch/record/2275037?ln=en>
49. Introduction to Statistics (2/5): http://cds.cern.ch/record/2275042?ln=en
50. Introduction to Statistics (3/5): http://cds.cern.ch/record/2276080?ln=en
51. Introduction to Statistics (4/5): http://cds.cern.ch/record/2276244?ln=en
52. Introduction to Statistics (5/5): http://cds.cern.ch/record/2275984?ln=en
53. Astroparticle Physics (1/2): <http://cds.cern.ch/record/2275230?ln=en>
54. Astroparticle Physics (2/2): <http://cds.cern.ch/record/2275393?ln=en>
55. Heavy Ions (1/3): http://cds.cern.ch/record/2275404?ln=en
56. Heavy Ions (2/3): http://cds.cern.ch/record/2275545?ln=en
57. Heavy Ions (3/3): http://cds.cern.ch/record/2275826?ln=en
58. Beam Loss and Machine Protection (1/2): <http://cds.cern.ch/record/2275720?ln=en>
59. Beam Loss and Machine Protection (2/2): http://cds.cern.ch/record/2276090?ln=en
60. Introduction to Cosmology (1/3): <http://cds.cern.ch/record/2275778?ln=en>
61. Introduction to Cosmology (2/3): http://cds.cern.ch/record/2275982?ln=en
62. Introduction to Cosmology (3/3): http://cds.cern.ch/record/2276085?ln=en
63. Neutrino Physics (1/3): <http://cds.cern.ch/record/2275825?ln=en>
64. Neutrino Physics (2/3): http://cds.cern.ch/record/2278548?ln=en
65. Neutrino Physics (3/3): <http://cds.cern.ch/record/2275980?ln=en>
66. Physics and Medical Applications (1/3): http://cds.cern.ch/record/2276008?ln=en
67. Physics and Medical Applications (2/3): http://cds.cern.ch/record/2276118?ln=en
68. Physics and Medical Applications (3/3): http://cds.cern.ch/record/2276155?ln=en
69. Future Collider Technologies (1/2): <http://cds.cern.ch/record/2276088?ln=en>
70. Future Collider Technologies (2/2): http://cds.cern.ch/record/2276424?ln=en
71. Search for BSM Physics at Hadron Colliders (1/3): <http://cds.cern.ch/record/2276329?ln=en>
72. Search for BSM Physics at Hadron Colliders (2/3): http://cds.cern.ch/record/2276455?ln=en
73. Search for BSM Physics at Hadron Colliders (3/3): http://cds.cern.ch/record/2276715?ln=en
74. Introduction to Monte Carlo Techniques (1/2): <http://cds.cern.ch/record/2276330?ln=en>
75. Introduction to Monte Carlo Techniques (2/2): http://cds.cern.ch/record/2276454?ln=en
76. Antimatter in the lab (1/3): <http://cds.cern.ch/record/2276350?ln=en>
77. Antimatter in the lab (2/3): http://cds.cern.ch/record/2276661?ln=en
78. Antimatter in the lab (3/3): http://cds.cern.ch/record/2276796?ln=en
79. Simulation of Particle Interaction in a Detector: <http://cds.cern.ch/record/2276428?ln=en>
80. Physics at Future Colliders (1/3): <http://cds.cern.ch/record/2276699?ln=en>
81. Physics at Future Colliders (2/3): http://cds.cern.ch/record/2276807?ln=en
82. Physics at Future Colliders (3/3): <http://cds.cern.ch/record/2276915?ln=en>

CERN OpenLab Lectures 2017

1. Machine Learning 1: <https://cds.cern.ch/record/2273588>
2. Machine Learning 2: <https://cds.cern.ch/record/2273934>
3. Computing Security: <https://cds.cern.ch/record/2273515>
4. Computing in High Energy Physics: <https://cds.cern.ch/record/2273204>
5. DAQ - Filtering Data from 1 PB/s to 600 MB/s: <https://cds.cern.ch/record/2274401>
6. Finding the Higgs Boson : the story from the software and computing perspective: <https://cds.cern.ch/record/2275039>
7. From Grids to Clouds: <https://cds.cern.ch/record/2275246>
8. How to Give Presentation and Pitches: https://indico.cern.ch/event/635417/attachments/1496482/2329286/great\_presentations\_2017.pdf
9. Machine Learning Part 3: https://cds.cern.ch/record/2277640
10. Machine Learning Part 4: <https://cds.cern.ch/record/2276914>
11. Best Practices of Writing Code: <https://cds.cern.ch/record/2277618>
12. Code Optimizations and Practical Examples: <https://cds.cern.ch/record/2278357>
13. HLS4ML: deploying deep learning on FPGAs for L1 trigger and Data Acquisition: http://cds.cern.ch/record/2315491?ln=en