Electronics Class – Prof. A. Spinelli

Lesson recordings for AY 2024-2025 (access restricted to PoliMI students)

Lesson 0: Class overview
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=72ceb13ca660d16bbec72e94300f3d17

Lesson 1: Review of equivalent circuits and feedback amplifiers
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=96caa6f1e57bf6541f2a3fe2418b4f10

Lesson 2 - Linear applications of OAs
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=a1289894ee78def536db3d937c77d4a9

Lesson 3 - Offset voltage and bias currents
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=772fdfe70d48473aedbe6cd762c43e58

Lesson 4 - G_{loop} and G_{OL} calculation in feedback circuits. Input-output impedances
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=d90529c024cf5831e1fad2c5ed766205

Lesson 5 - Frequency response and stability of feedback amplifiers
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=d9abd6b7d6939f139c73f5dee11b4ae9

Lesson 6 - Frequency compensation of OA circuits
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=176433f9431728e2c2af97288d49fa4c

Lesson 7 - CMRR of the subtractor stage. Instrumentation amplifiers
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=9af4d8fde52cb6191926222c7e5b7790

Lesson 8 - OpAmp parameters and simulation using Simulink. Wheatstone bridge
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=2d8dfe57903ba53eb45e882f8effb247

Lesson 9 - Bridge output, 2- and 3-wire connection
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=8750172360688158cbcbca5e8a916ebc

Lesson 10 - Temperature compensation of Wheatstone bridge. Energy and power signals
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=c504e6d0b2478dd156f05b32e2b9336e

Lesson 11 - Random processes
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=4ab81ba14b6512c5ac1a14d82e4b4c31

Lesson 12 - Thermal, shot and flicker noise. LTI systems response to signal and noise
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=4c93ef2c89ed0eb55ce3190e69c19a9c

Lesson 13 - Noise in amplifiers, noise factor and figure. Effect of feedback on noise
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=ef7a621564c1de0b4fd610b3c7d4d4e8

Lesson 14 – LPF
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=7c79b1f57e86f03230d7344cc3d786b0

Lesson 15 - Gated integrators and Boxcar averagers
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=451dbb99ee80e2b77bbaf6760d86ec3d

Lesson 16 - Boxcar weighting function, equivalent time sampling. Discrete-time filters
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=37f89f496a76c4ab24e1d4d6b38a0cf2

Lesson 17 - DT filters with non-uniform weights. Optimum filter for WN
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=921d2c6a4e44e4b0dcf2f288b344c390

Lesson 18 - Optimum filter for non-white noise. HPF
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=3b611be3d8be07be7e0b68a62a9e7b56

Lesson 19 - Baseline restorers. Amplitude modulation-demodulation systems and weighting function
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=7314d8dcd62760673bb0aff926b7bf33

Lesson 20 - S-N ratio of synchronous detection systems. LIAs
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=6ac3f44f404d4e0761f29e7839d2f2db

Lesson 21 - LIA structure and parameters. Auto-zero OAs
https://politecnicomilano.webex.com/politecnicomilano/ldr.php?RCID=81f97a3905817fab60c04b32c2505803