

July 1-5 2013 Low-Power Analog IC Design

Personal Course Evaluation

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First of all, I certainly would like to thank MEAD Education and EPFL for giving me the opportunity of this great experience. General information and details provided before the beginning of the course has been very satisfactory. In particular, really thanks to Caroline Huber for all her support and time.

Background experience and knowledge of course speakers are very high, leading to high level and very interesting lectures. Precise and detailed prof. Christian Enz, I would say explosive prof. Willy Sansen, captivating and interactives professors Kofi Makinwa and Marcel Pelgrom.

Very nice the social event organized on Wednesday evening on the Montreaux boat. Maybe the table organization has been quite a mess for people like me that took the ship from the S. Sulpice dock.

All lectures greatly contributed to decrease my lack of knowledge about microelectronics, analog circuit design and transistor modeling, which are certainly intrinsic of my Physics degree background with a limited number of electrical engineering courses. Furthermore, coming from the academic world, it was also very interesting for me to discuss and share personal experiences with other people working in the IC industry.

In my opinion, a few negative aspects can be pointed out indeed. At first, prof. Enz's and Makinwa's course notes for Thursday lectures have not been available well in advance. Moreover, I have been quite disappointed for the compression of last Pelgrom's lecture, resulting in too many interesting slides roughly commented or just skipped. I would have preferred to end the course on Friday at 5.00 PM instead of 3.00 PM. Maybe too many formulas and too intensive lectures, with an evident decrease of the attention during the last hour in the afternoons. Despite prof. Sansen gave an exhaustive treatment about the design of operational amplifiers and references, no in-depth discussion about voltage comparator topologies and their offset compensation has been provided, actually neither by prof. Makinwa in his lecture. These topics play a central role in A/D and D/A converters design, which actually are a very important component of my Ph.D. research activity. Last but not least, I found that only a few design examples with detailed transistor sizing have been discussed, with the lack of a systematic approach to this topic, including g_m/I_D methodology and table-based transistor sizing for weak and moderate inversion operating regions in deep-submicron technologies. These aspects could be improved.

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