Dear all,

The PhD course on Vacuum Science and Technology (7.5 hp) will be given this fall semester, starting August 28, 2018 [probably at 13.15, in Jordan-Fermi]. Those who are interested in taking the course should register by e-mailing me as soon as possible. More information, with detailed schedule and reading assignments (see also below), will be sent to all registered participants.

The course is intended – and essential – for PhD students who work, or are going to work, with vacuum in their PhD studies. Other interested attendees are of course welcome as well. The theoretical part of the course will consist of a lecture series with continuous examination with a follow-up home exam. In addition, a laboratory “home” assignment will be given.

The course textbook is John F. O’Hanlon, A User’s Guide to Vacuum Technology, Wiley, 2003 (3rd edition). This book is available as e-book at the LiU library. An alternative textbook is Karl Jousten (editor), Handbook of Vacuum Technology, (Wiley 2008). While entitled “handbook” it rather has the character of a very detailed textbook. It is the only readily available textbook that treats the topic of “Vacuum Technology” at PhD level rather than being “engineering user’s guides” or technician-level texts. It is, however, long and detailed; much more than required for the course. Jousten is available at the LiU library, but not as e-book. Additional material will be provided.

Prior to the first lecture, students will also have the task to (casually) read a short popular-science book on history and philosophy of vacuum and other concepts of nothingness (e.g. in cosmology or absolute zero temperature) - recommended for casual reading during the holidays. Some of the content may show up during the continuous examination or at the final home exam. Choose between

**Nothing: from absolute zero to cosmic oblivion** (New Scientist) and/or
**Nothing – a very short introduction** by Frank Close (Oxford University Press)
Both are available at the LiU library or can be purchased for less than your daily coffee budget as paperback or e-book from any well-run online bookshop (bokus, adlibris, amazon, etc).

The time schedule for the course will tentatively be as follows (Still room for revision):

Lecture bloc (approx. 2 every week)
  - Weeks 35-39 (preliminarily August 28 – September 28)
  - (The first lecture will tentatively be on Tuesday, August 28)

Time for “home” assignment (preliminary)
  - Weeks 40 - 43 (End September – end of October)

Final (home) exam and ending seminar, to be decided later
Best regards,

Course responsible:

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