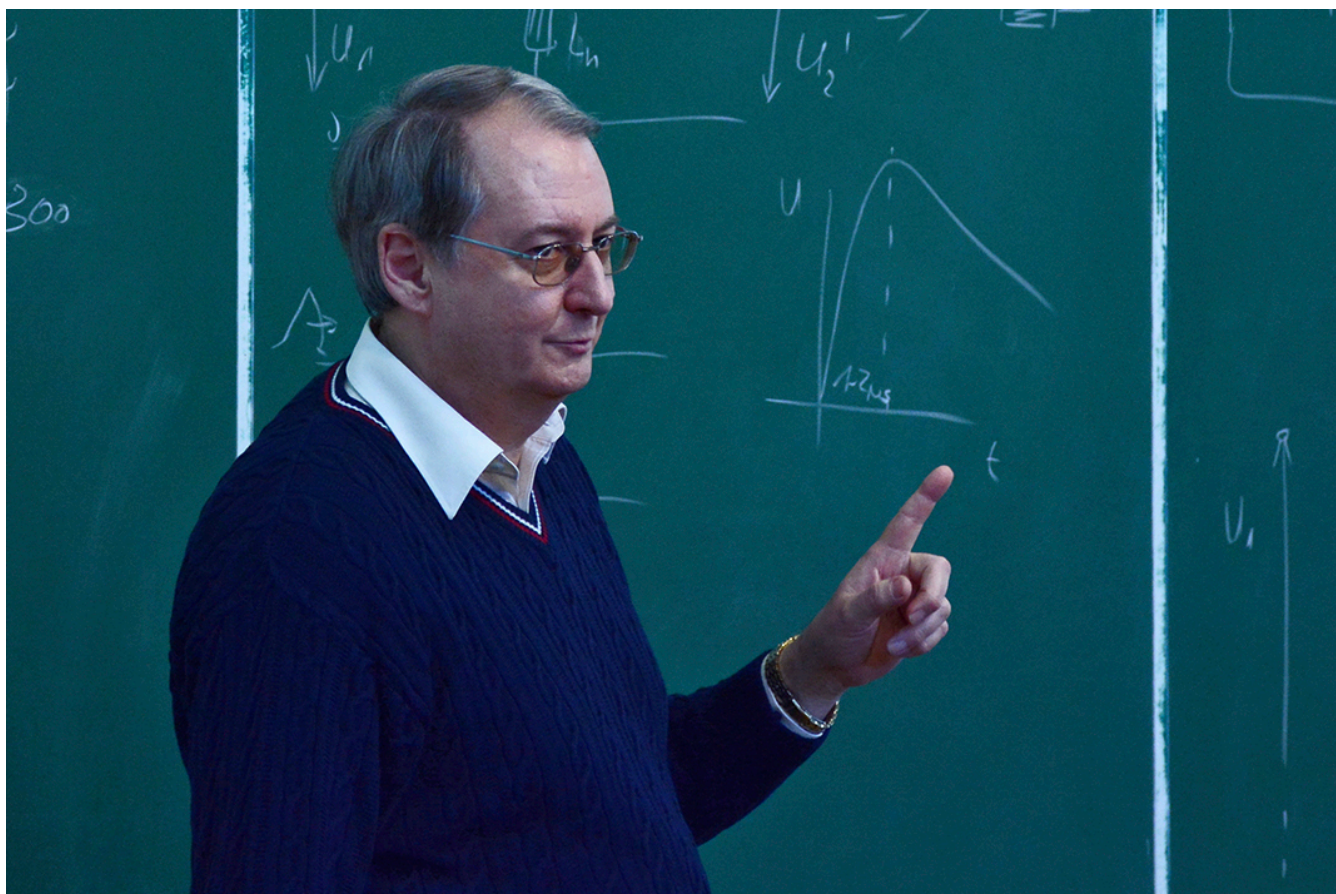


## Professor SCHWARZ: "You Should Know What You Want"

43 visiting professors joined the teaching community of SPbPU in 2017. For instance, Professor, Dr. Eng. Harald SCHWARZ from the Brandenburg University of Technology Cottbus-Senftenberg (BTU Cottbus-Senftenberg) came to the Institute of Energy and Transport Systems (IETS) of SPbPU to lecture on Electrical Power Engineering. In his interview, Professor SCHWARZ told about the importance of smart grids, shared his opinion about online educational courses, and marked three things which make students' studying successful.



**- Professor SCHWARZ, how often do you visit Russia?**

- For the first time I came to your country in 2009 or 2010, when BTU Cottbus-Senftenberg began to look for partners in [Double Degree Programs](#) at other universities. Together with Peter the Great St. Petersburg Polytechnic University, we implement two [Master's Double Degree Programs](#). Since 2010, I've been to Russia for 8 or 9 times. I love St. Petersburg, and visit it with pleasure.

**- What is the best advantage of Double Degree Programs?**

- I think it's an optimized exchange. Normally, you can make an exchange semester at any university in any place in the world. When you go there, you can study several disciplines and back at your university, you have to solicit acceptance for the received grades, marks, and points. If you have a Double Degree Program, it means that the two universities have agreed to organize the study in the such a way that students can study for 2 semesters at a partner university, then return back, and their home university would automatically accept credits for all subjects they would have already studied. That makes it much easier to get better results and to concentrate on studies.

**- As we know, BTU Cottbus-Senftenberg conducts researches in smart grids and micro smart grids. Could you please tell us a few words about it?**

- It is important to note that nowadays a lot of countries want to move to renewable power sources. That is about photovoltaic, wind energy, hydro power, and biomass. So, now the question is how to balance these energy sources? All of them are intermittent energy sources, and they need more sophisticated control system. Smart grids allow to manage energy from renewable sources more effectively. In addition, they enable us to forecast renewable energy production, store energy using lithium-ion batteries, and track energy consumption.

**- Besides smart grids, there are micro smart grids. Where can we use them?**

- There is no difference between smart grids and micro smart grids except for their size. If you use a smart grid for a local territory, it is a micro smart grid. If you use it for some particular house, it would be a nano grid.

**- We've heard that online courses for students were launched at your university. What are their advantages?**

- They are aimed to help students, to support them in their educational process. And it is not only for my university; for example, I gave a course in Electro Magnetic Compatibility at SPbPU, and we could see that some of the students had problems with absorbing all this information within a short period of time. So, we decided to make a video with my lectures, and if the students want, they can download it and do again the whole lecture before, for example, an examination. Also, we have a series of small videos with experiments, so students can watch them and understand their results, and when they go to the laboratory, they will be better prepared for the experiments.

**- What teaching approaches do you find the most efficient?**

- I prefer the classical way of teaching: I give lectures to my students and then test them. Of course, I appreciate discussions, and considering the fact that I often work with international groups of students, their thoughts and arguments sometimes can lead to really amazing results!

**- What is the best motivation for students?**

- According to my opinion, it depends on a person. Someone's motivation is a degree. For someone, it is an educational process and knowledge. For others, it is a science in general. It's complicated!

**- And our traditional question: please, name three things which make the students' studying successful!**

- First: you should know what you want. If you know what you want, you can focus on that. If you don't, you are always jumping between different options. Second: you should be able to organize yourself. And the third: you have to organize how you study.

**- Professor SCHWARZ, thank you very much for the interesting interview! We wish you success with your scientific work!**

Дата публикации: 2017.12.22

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