

## Flexible Learning Thanks to Digital Media

**Professor Norbert Henze Is Granted the Ars legendi Prize for Excellence in University Teaching – Mathematics by the Stifterverband**



*Professor Norbert Henze. (Photo: Emanuel Jöbstl, KIT)*

**Professor Norbert Henze of Karlsruhe Institute of Technology (KIT) is granted the Ars legendi Prize for Excellence in University Teaching – Mathematics. With this prize, the Stifterverband for Promoting Science and Education in Germany honors Norbert Henze's innovative and trend-setting teaching concept in mathematics. When lecturing, the stochastics expert applies digital media exclusively. Transparencies and videos visualize the contents, decelerate the lecture, and allow for flexible learning by the students.**

In his lecture "Einführung in die Stochastik für Studierende des Lehramts Mathematik" (Introduction to Stochastics for Future Teachers of Mathematics), Professor Norbert Henze was the first to implement a trend-setting teaching concept. He does no longer use the blackboard and conveys the contents with the help of digital media exclusively. Before they are presented, the lectures are compiled in the form of slides using LaTeX software and made available to the students on the ILIAS learning platform. In this way, the students can prepare and bring along the slides for the lecture. Henze takes care that the slides are structured properly in order to decelerate the lec-

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tures. Videos of the lectures recorded in 2014 were published on both Henze's YouTube channel "Stochastikclips" and the iTunes U learning platform.

"In view of the existing technical means and the justified requirements of students regarding flexible learning, I consider a conventional lecture with blackboard charts outdated," Professor Henze says. He appreciates feedbacks of the students. In an evaluation of the lecture, they emphasize that the new concept with digital media gives them more time to follow the lecture and makes them better understand the contents. "The stochastics clips and other online offers for the preparation and follow-up of lectures allow for the flexible learning of our students. Hence, they contribute decisively to the success of the studies," Professor Alexander Wanner, KIT Vice President for Higher Education and Academic Affairs, says. "With Norbert Henze, the Stifterverband honors a highly committed university teacher, who is one of the pioneers in using such innovative learning and teaching formats at KIT." The importance of digital media to research-based learning and scientific education at KIT is also reflected by the ZML – Center for Technology-enhanced Learning of KIT. It was established in January to support and advise teachers in the development and implementation of media-based teaching concepts using e.g. special e-learning services.

For the stochastics clips on YouTube, click:

<https://www.youtube.com/playlist?list=PLtexvciJ0k3GJ32RVHNf5mY8MKyRMihSL>

Professor Norbert Henze has been teaching at the KIT Department of Mathematics since 1991. As a Professor for Mathematical Stochastics, he studies mathematical laws underlying random phenomena and analyzes the inherent rules of random or stochastic processes. Stochastics among others covers probability theory and statistics. It is one of the most application-oriented areas of mathematics and applied in telecommunications, financial mathematics, insurance mathematics, and opinion research. Norbert Henze is responsible for stochastics education of students of various mathematical programs as well as of students of biology, geocology, computer sciences, and mechanical engineering. In his lectures he attaches high importance to examples of applications and interactions with other subjects.

The Stifterverband, the Deutsche Mathematiker-Vereinigung (German Mathematics Association), the Deutsche Physikalische Gesellschaft (German Physics Association), the Gesellschaft Deutscher

Chemiker (German Chemical Society), and the Verband für Biologie, Biowissenschaften und Biomedizin in Deutschland (German Life Sciences Association) have granted the Ars legendi-Fakultätenpreis Mathematik und Naturwissenschaften (Ars legendi Prize for Excellence in University Teaching in Mathematics and Natural Sciences) for the second time in 2014. The winners of each category receive EUR 5,000. On March 05, 2015, the four prizes in the categories of mathematics, physics, chemistry, and biosciences will be handed over during a ceremony at the Berlin-Brandenburg Academy of Sciences.

### **“Hochschulperle digital” for Mathematics Podcast of KIT**

Early this week, the Stifterverband honored another digital format of the KIT Department of Mathematics: In their audio podcast “Modellansatz” (model approach), lecturers of the KIT Department of Mathematics speak about their work with students and other scientists of KIT. This podcast reveals that mathematical solutions are behind many things used in everyday life: From the tap to automatic speed control on motorways, from medical engineering to mobile phones. Listeners of the podcast are informed directly about the projects of researchers, graduates, and teachers. The “Modellansatz” project was granted the “Hochschulperle digital” of the month of February by the Stifterverband. According to the Stifterverband, the podcast shows in a clear and entertaining way how exciting natural science can be.

Click here for the podcast “Modellansatz”:

[www.math.kit.edu/ianm4/seite/modellansatz/de](http://www.math.kit.edu/ianm4/seite/modellansatz/de)

**Karlsruhe Institute of Technology (KIT) is a public corporation pursuing the tasks of a state university of Baden-Württemberg and of a national research center of the Helmholtz Association. The KIT mission combines the three strategic lines of activity of research, higher education, and innovation. With about 9,400 employees and 24,500 students, KIT is one of the big institutions of research and higher education in natural sciences and engineering in Europe.**

This press release is available on the internet at [www.kit.edu](http://www.kit.edu).

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