

the **cogito** foundation

Begrüssung: Der «cogito-Preis 2016»

Prof. Dr. Christof Aegerter, Präsident des Stiftungsrates the cogito foundation

Sehr geehrte Damen und Herren

Um unseren internationalen Gästen und unserem Preisträger Rechnung zu tragen, I'll switch to English and welcome you to the ceremony for the bestowment of the cogito-Award 2016! This is now already the seventh such ceremony for the eighth such award. Those of you who have already been to several of these events, will notice a few differences, especially in the room and the language – those of you who are here for the first time might ask themselves what this award is all about. Let me address both of you in turn and start with what the cogito foundation strives to achieve and therefore every other year bestows an award to an individual (or individuals in one instance) that fulfils these goals in an exemplary way.

In fact, the cogito foundation has two different goals: on the one hand we try to strengthen the understanding and collaboration between the natural Sciences and the Humanities with common projects and workshops and on the other hand we strive to increase the understanding of the general public (including professional scientists) for the process and way of thinking of the natural sciences.

With these two goals in mind, we have so far awarded several individuals who have fostered the collaboration between the Humanities and the Sciences, such as Michael Esfeld who concerns himself with the Philosophy of Physics, Rita Gautschi, who obtains information on Astronomical constellations from the chronology of ancient Egypt (and vice-versa) or Donat Fäh, who studied the extent of a medieval earthquake from the still available ruins and contemporary documents. We have however only once so far honoured someone working on the strengthening of the understanding of Science with Reto Schneider whose monthly columns in the NZZ folio on how experiments are carried out has caught our attention in 2010. At that time, we had also decided to increase the weight of this second goal in our endeavours and this is mirrored in todays award.

Today we are once more recognising an individual who has greatly increased the understanding of Science in general and Physics in particular with a very broad audience in the person of Derek Muller.

This brings me to addressing the more experienced attendees of our award ceremony. With the award being presented to Derek Muller our laureates become younger and more international, which is reflected in the ceremony. While Derek Muller has spent his Doctorate investigating how to address misconceptions in Physics using multimedia education pieces, his main achievements are not academic. What we recognise today even more is the successful implementation of his research insights in the collected works known as the YouTube channel Veritasium, with more than 3.5 Million subscribers and nearly 280 Million views. As with our award to Reto Schneider, we are here honouring the way in which Science as a relentless questioning of results and proper controls is brought to a large public. A large part of the videos of Veritasium are devoted to testing hypotheses, which are mostly wrong. This however shows in the clearest possible way how Science works and that we can never actually prove things scientifically, but only show which of our many ideas about nature turn out to be wrong.

Since this is very fundamental in many different contexts, the videos span an amazing breadth of Physics and if you've ever wondered why heat is not the same as temperature, why the Higgs Boson explains at most 5% of the mass in the Universe (not counting dark matter or energy), whether toilets in Australia whirl the other way or whether the Celsius scale was actually invented by Celsius, you'll have to watch the corresponding Veritasium video to find out.

These more general concepts brought to a wide and young audience in a concise and to the point way are what we are celebrating today and it brings me great pleasure to present the cogito award 2016 to Derek Muller.

But now let me still quickly introduce our laureate's CV:

Derek Muller was born in Vancouver, Canada in 1982, where he also finished high school as the first in 425 graduates. He then studied Physics at Queen's University in Kingston on a chancellor's scholarship from 2000 to 2004, so shortly after another famous graduate of the same programme, Elon Musk. From 2004 to 2008 he subsequently worked on his PhD studies in Physics Education Research at the University of Sydney in Australia. At that time he became interested into how to create effective multimedia for Physics Education, which has stayed with him ever since. First as head of Science at Matrix Education in Sydney (from 2008 till 2012) and since 2010 increasingly as the founder of Thought Works, which runs the successful YouTube Channel Veritasium. But he's not stopping there and has in recent years also had several Science projects with main stream media in the US and the UK, for instance regarding radioactivity and how it has shaped human history. So I am sure that we will also in the future learn more about Science and how to make it known in the public from him and I'm happy to award the 2016 cogito-award to Derek Muller.

for the successful application of his insights how to teach physics concepts effectively.

for his investigations into how misconceptions of physical phenomena have to be addressed before presenting the proper physical concepts;

for his courage to apply these insights practically to an extremely broad audience by founding the YouTube channel Veritasium to produce intelligent videos treating questions of Physics and Science in general;

for his dedication to the channel and many years of hard work creating a collection of insightful clips on everything ranging from Newton's laws of motion to the Higgs Boson;

for his success in reaching a public of millions of subscribers that learn about Scientific thinking and Physics in an entertaining and insightful way.