

Dear Colleagues,

I would have loved to welcome you in person on this delightful occasion. The Hungarian Engineering Academy has always had a special meaning for me and I am grateful for their adoption of the Rubik Foundation that I established in the '80s to foster talented youth. It is wonderful that the Academy is now hosting our peers from around the globe.

This occasion is especially important as the discussion on brain sciences and engineering is a most welcome endorsement of interdisciplinary research - in the hope of cutting edge applications of its findings.

I have always been a staunch advocate of interdisciplinary approaches based in a deep professionalism that engineers - as scientists and creators - must strive to attain. We must respect knowledge - but we should also consciously edge towards its boundaries.

Knowledge is a precious gift, but it also is a weight, restricting free thinking. That is why young kids have more original questions than their omniscient parents - and this is also why interdisciplinarity is so important to innovation.

When we leave the comfort-zone of knowledge, our creative mind opens up. When we leave disciplinary barriers, it is like leaving gravity and start free floating: it feels strange, but also very liberating!

Acquiring knowledge increases our sense of control and as such is emotionally reassuring. By contrast, the unknown creates tension and excitement. In recent years, I have been most preoccupied by this balancing act between mastering knowledge and unleashing creativity - and how this should be translated into education.

One attitude to life is to take things for granted. Another is to question everything: how it works, why, how could it be changed and what else would be possible? The difference between the two attitudes is curiosity. Curiosity is the motivation to engage in the unknown or the unfamiliar - and then to understand it and acquire new knowledge.

Education should endorse and foster curiosity. This takes courage and patience. These are often missing from today's education, that tends to be uniform and speak to an abstract "average" student. We need to foster curiosity and let students discover their own solutions.

Thus, great education is a series of "a-ha moments" that can create a lifelong passion for learning.

In this spirit, I am wishing you a fruitful and exciting discussion and a very pleasant stay in Budapest.

Erno Rubik