

**Laudatio on behalf of the honorary doctorate of Albert-László Barabási
at Utrecht University, March 26, 2018.**

Albert-László Barabási is a truly exceptional scientist. He is a pioneer and leading scholar in the science of networks. His large oeuvre of scientific publications, specialist books and popular texts covers an amazing breadth of research topics.

The contributions of László to network science are best understood in the context of reductionism. This is the idea that to understand nature we must decipher its components. However, knowing everything about the pieces from which a system is built does not guarantee that we will comprehend the behaviour of the system as a whole. In fact, to do so we also have to look at the collective interactions of the pieces. Network science is all about how elementary pieces are connected and how they interact.

László has studied many natural and man-made systems to understand how they give rise to organized behaviour. For example, he has found that the structure of the world-wide web is a special kind of network, a so-called scale-free network, which is important for understanding the vulnerability of the internet. Other discoveries he made are in human behaviour, such as the predictability of human mobility and the dynamics of scientific success, and in the behaviour of metabolic networks in living cells. In more recent work, he discovered guiding principles of the control of networks. He applied this to determine the effectiveness of medicine and as such initiated the field of network medicine.

Reading his bestsellers LINKED and BURSTS, we discover László's remarkably broad scientific knowledge and deep curiosity about natural and man-made systems. Through his keen awareness of a problem's context, he is able to formulate the most interesting questions about it. This allows him to find patterns in data that others miss, thus shepherding his community. Moreover, his mathematical-physics background allows him to develop rigorous quantitative theories on the phenomena at hand.

These abilities are combined with his great talent to communicate scientific results, also reflected in his outstanding recent textbook 'Network Science'. It is really rare that all these qualities and capabilities can be found in one scientist, which makes László truly special.

It gives us great pleasure that Utrecht University has decided to award an honorary doctorate to Albert-László Barabási. With this doctorate, Utrecht University recognizes his landmark contributions to network science and his leading efforts to apply complex systems science to societal problems.

Henk Dijkstra, Institute for Marine and Atmospheric Research, and
Henk Stoof, Institute for Theoretical Physics, both at the
Department of Physics, Utrecht University