

Venue: University of Belgrade, School of Electrical Engineering
Date and Time: Tuesday, November 01th 2022, 12:00 CET
Location: Room 61, main building

Title: **Genome Compiler**

Speaker: **Radoje (Rade) Drmanac**, Ph.D., Chief Scientific Officer
Complete Genomics, Inc.
Mountain View, California, U.S.A.
Senior vice president of BGI, China
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Abstract: The human genome (all DNA in our cells) encodes a genetic program for development and adaptive functioning of all our tissues. Thus, our personal DNA/genome sequence is predictive (conditionally) of our future body and mind functioning.

We need to complete the "reverse engineering" of our human species program and build a "Genome Compiler" to be able to "run" our personal genomes in silico. This will allow us to observe our molecular aging and how our tissues would behave in various environments helping to prevent diseases and extend our healthy productive life.

Several new technologies including efficient larger-scale DNA sequencing, induced pluripotent stem cells and AI are coming together to enable this herculean and most important scientific effort in the history of mankind.

List of selected publications can be found at: <http://www.rdrmanac.com/>.

Biography: Dr. Radoje (Rade) Drmanac is one of the founders of the field of Genomics and serial inventor including the process of massively parallel sequencing (MPS) using DNA nanoarrays. Currently he is CSO at Complete Genomics, Inc. (CGI) he co-founded 2006 in Silicon Valley for efficient genome sequencing using DNBSEQ (Science 2010, Nature 2012, Genome Research 2015, Genome Research 2019; BioRxiv 2020). CoolMPS is his latest invention where base-specific antibodies read DNA sequence.



CGI was acquired by BGI (China) in 2013 and Dr. Drmanac now serves as CSO of MGI, BGI's life-science tool subsidiary, first to sequence human genome for \$100 in 2020. Earlier, he co-founded Hyseq (1994) to discover novel genes, was a group leader at Argonne National Labs (1991-1994) within HGProject, and postdoc (1989-1990) in ICRF (London). He started his career at the Center for Genetic Engineering (IMGGI) in Serbia (1982-1988). He received Ph.D. 1988 in Molecular Biology at Belgrade University for the first MPS technology (Science 1993, Scientia Yugoslavica 1990, Genomics 1989).