

ICFO Colloquium | Intersections of AI, Photonics, and Scientific Discovery

MARIN SOLJA?I?

June 12, 2026
10:00 to 11:00
ICFO Auditorium

PROFILE:
Marin Solja?i? is a Professor of Physics at MIT. He is a founder of a few companies, including WiTricity Corporation (2007), Lightelligence (2017) and Axiomatic (2024). His main research interests are in artificial intelligence as well as electromagnetic phenomena, focusing on nanophotonics, non-linear optics, and wireless power transfer. He is a co-author of more than 300 scientific articles, more than 100 issued US patents, and he has been invited to give more than 100 invited talks at conferences and universities around the world. He is a recipient of the Adolph Lomb medal from the Optical Society of America (2005), and the TR35 award of the Technology Review magazine (2006). In 2008, he was awarded a MacArthur fellowship i¿½geniusi¿½ grant. He is an international member of the Croa ian Academy of Engineering since 2009. In 2011 he became a Young Global Leader (YGL) of

the World Economic Forum. In 2014, he was awarded Blavatnik National Award, as wel as Invented Here! (Boston Patent Law Association). In 2017, he was awarded "The Order of the Croatian Daystar, with the image of Ru?er Boskovi?", the Croatian President's top medal for Science. In 2017, the Croatian President also awarded him with "The Order of the Croa ian Interlace" medal. He was a Highly Cited Researcher according to WoS for 2019, 2020, 21, 022, 2023 ,2024 & 2025. In 2023, he was awarded Max Born award of Opt

ABSTRACT:
Artificial intelligence is beginning to transform the way we do science and engineering-not only by analyzing data, but increasingly by generating hypotheses, designing experiments, and even running them. Photonics plays a dual role in this story: it provides some of the most promising physical platforms for AI hardware, while also serving as a rich testbed for applying AI itself. I will discuss how interpretable AI approaches can uncover structure in complex systems, and how large language models point toward a future where significant parts of scientific discovery may be automated. I will also highlight how robotics, combined with AI, is moving us closer to self-driving laboratories. While my examples will often come from photonics, the broader message is that these developments foreshadow a profound shift in how science is practiced across disciplines.
Hosted by: Frank Koppens