

## **Third (and The Last?) Golden Age of AI**

*Okyay Kaynak  
Bogazici University and  
Turkish Academy of Sciences, Turkey*

During the last two decades, profound technological changes have occurred around us, supported by disruptive advances both on the software and hardware sides. Additionally, we have witnessed a cross-fertilization of concepts and an amalgamation of information, communication, and control technology-driven approaches. This has led to what is termed as digital transformation, i.e., the integration of digital technology into all areas of business, fundamentally changing how companies operate and deliver value to customers. The most recent development is integrating Artificial Intelligence (AI) in digital transformation as the primary enabler and the facilitator. It is expected that the applications of AI will truly transform our world and impact all facets of society, economy, living, working, healthcare and technology.

The study of artificial intelligence (AI) has been a continuous endeavor of scientists and engineers for over 70 years. The simple contention is that human-created machines can do more than just labor-intensive work; they can develop human-like intelligence. In this presentation, in addition to the technical aspects of AI technology leading to the three golden ages and the winters in between, thoughts and insights are also presented regarding the symbiotic relationship of AI and humans. Agentic AI is discussed in this respect. The talk concludes pondering whether an end is reached due to the question of sustainability.