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**The Road to Discovery:
Creativity and
Scientific Research**

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Abstract

In this lecture I'll be talking about the role of creativity in scientific research. After briefly discussing the issue of whether creative processes can be implemented by machines, I'll take the audience through a journey into the thought of the most creative thinkers of the twentieth century, including Poincaré, Hadamard, Polya, etc., who have devoted much of their (late) work to understand the psychology of invention in mathematics and allied fields. I'll then conclude the lecture by discussing the connections between creativity and the notion of scientific progress as described by Thomas Kuhn and his followers.

Bio sketch: Marcello Pelillo is Full Professor of Computer Science at Ca' Foscari University in Venice, Italy, where he directs the Computer Vision and Pattern Recognition group. He held visiting research positions at Yale University, McGill University, the University of Vienna, York University (UK), the University College London, and the National ICT Australia (NICTA). He has published more than 200 technical papers in refereed journals, handbooks, and conference proceedings in the areas of pattern recognition, computer vision and machine learning, and he is a recipient of the 2013 Advanced Ca' Foscari Research Award. He is General Chair for ICCV 2017 and has served as Program Chair for several conferences and workshops (EMMCVPR, SIMBAD, S+SSPR, etc.). He serves (has served) on the Editorial Boards of the journals *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, *Pattern Recognition*, *IET Computer Vision*, *Frontiers in Computer Image Analysis*, *Brain Informatics*, and serves on the Advisory Board of the *International Journal of Machine Learning and Cybernetics*. Prof. Pelillo is a *Fellow* of the IEEE and a *Fellow* of the IAPR.