European Research Council

Established by the European Commission

EURECOM
Sophia Antipolis

SONATA

The SONATA project will provide a new unified theory and algorithms for a holistic redesign of the entire process of information generation, transmission and usage, under the prism of the Semantics of Information.

>> Marios Kountouris

Professor, Communication Systems Department at EURECOM.
ERC CoG for his project SONATA.
www.eurecom.fr

The ERC grant, which lasts for five years and amounts to € 2 million - the maximum sum for the Consolidator Grants - will help Marios develop SONATA, his breakthrough project that will revolutionize our fundamental understanding of when, what, and how to generate, process, and transmit data.

"Being awarded the prestigious ERC Grant is indubitably a major milestone in one's career. I am deeply honored and very pleased to be among the ERC CoG recipients this year. This generous grant will provide me with the necessary creative freedom and independence for exploring highly ambitious, high-risk research paths."

Getting a grant from the European Research Council is not an easy task but this is what Marios Kountouris, Professor in the Communication Systems Department, has just accomplished with his project SONATA. He is the fourth EURECOM professor to obtain an ERC grant.

Marios, can you tell us about yourself?

After an engineering degree from NTUA in Greece and an MSc from Telecom Paris in France, I pursued my PhD at EURECOM. Then, I went to the United States and joined the University of Texas at Austin as a postdoctoral fellow. Returning to Europe, I have spent about 7 years at CentraleSupelec as a Faculty and 4.5 years in industry as a Principal Scientist. After this fascinating journey, I joined EURECOM last year, my doctoral alma mater, as a Professor.

EURECOM is strongly committed to research excellence and has provided me with all necessary resources, time, and freedom to prepare my ERC grant. Located in the sunny French Riviera, its dynamic and stimulating environment, the excellent colleagues and the effective administration, played a pivotal role in my success.

My main field of expertise is Communication Theory. The core themes of my past research have been stochastic modeling, analysis, and optimization of heterogeneous dense networks and low-latency networking. My recent interests have been on novel transmission schemes for next-generation communication systems and on communication-efficient decentralized learning at the wireless edge.

Now, the ERC CoG grant will allow me to realize the vision of the SONATA project. This is a high-risk, high-reward project, which envisions a radically new goal-oriented communication paradigm. Our approach capitalizes on the Semantics of Information, i.e., the significance and usefulness of messages with respect to the goal of data exchange. SONATA will transform our fundamental understanding of when, what, and how to generate, process, and transmit data.