

PROF. DR. METİN SİTTİ:
KOÇ UNIVERSITY'S VISIONARY
APPROACH TO GLOBAL
IMPACT



Prof. Dr. Metin Sitti, President of Koç University— Türkiye's leading research university as ranked by Higher Education Council (YÖK) and the nation's top recipient of Horizon Europe grants and ERC projects shared his vision for the institution and highlighted its groundbreaking research in a captivating interview. He also offered intriguing insights into the pivotal milestones that shaped his remarkable academic journey.

As the president of Koç University, A Vehbi Koç Foundation institution, what is your vision for the university and what top priorities do you aim to focus on during your presidency? As the new president, I have a vision and specific goals to further elevate Koç University. My top priority is excellence across teaching, research and entrepreneurship. Quality is fundamental; it's not just about numbers but ensuring a topnotch environment. This commitment extends to our students, faculty, staff, and the overall academic atmosphere.

My goal is to push the boundaries of excellence further and advance the overall quality of Koç University to become a top university in the world. As a university, our mission is to create a positive impact not only in the realms of science and technology but also within our society, industry and people's lives. This entails creating new jobs, nurturing industry-ready individuals, and promoting startups, innovation, and entrepreneurship. We strive to make a positive impact on society by contributing to advancements in healthcare, technology, artificial intelligence, and robotics, ultimately positively enhancing people's lives.

Additionally, diversity and inclusion remain our top priorities. Diversity means bringing together individuals from different backgrounds, ethnicities, genders, knowledge bases, and cultures so that we can truly have adaptable and enjoyable perspectives from different angles. Inclusion is equally vital because it ensures that diverse people can live and work together.

While our university is already strong in these aspects, I aim to further enhance it to ensure that everyone not only enjoys being part of this institution during their studies but also maintains a connection and sense of pride even after graduation. Another mission I envision for Koç University revolves around sustainability. I believe that in Türkiye, insufficient attention is attributed to this subject. It is crucial to raise awareness and knowledge about environmental issues and climate change. As a university, it is our responsibility to contribute to the preparation of our country and the world for upcoming challenges and to prevent them with proper measures. In the years ahead, we aim to have fully solar energy-powered campuses at both Rumelifeneri and Topkapı, including our hospital. I aspire for our university to take an active role in a prestigious network, similar to the recently founded School of Sustainability at Stanford University, and we are actively working to achieve this goal.

Koç University is a leading institution for research in Türkiye. According to the Higher Education Council's (YÖK) Research Universities Performance Monitoring Index in 2023, we were recognized as the top research university in Türkiye. Our faculty includes the highest number of recipients of prestigious awards from TÜBİTAK (The Scientific and Technological Research Council of Türkiye) and TÜBA (Turkish Academy of Sciences). Additionally, we lead Turkish universities in securing European Union research grants, with 31 of the 53 ERC (European Research Council) grants awarded in Türkiye. We take great pride in being the foremost research university in the country and we remain committed to our pursuit of achieving the highest global rankings.

We are in the process of advancing our infrastructure significantly in the next few years in innovative fields such as life sciences and biomedical engineering. Our newly planned research and innovation building will serve as a strong foundation for pioneering projects in these critical areas. Our ambition extends beyond maintaining leadership in Türkiye; we aspire to play a pioneering role in the global scientific and technological landscape. Through this investment, we aim to enhance our research capabilities and foster breakthroughs with global impact.

What excites you most about Koç University?

What excites me most about Koç University is its remarkable journey to excellence in education, research, and its societal impact within just 31 years. The unique synergy between high-caliber individuals—students, faculty, and staff— has positioned this university as one of Türkiye's leading universities.

Our campus features a unique cultural environment, harmonizing beautifully with our diverse faculty and staff, all working toward a common goal. Koç University distinguishes itself not nationally but also on international

platforms, showcasing a unique identity. My goal is to propel Koç University's status beyond its current standing one of Türkiye's premiere universities, elevating it to becoming a globally recognized institution, strengthening its position among the world's foremost academic institutions.

As you look to the New Year and the near future, what are your top priorities?

My priorities include the launch of our new long-term Endowment Fund program "Act for Impact", and advancing sustainable, long-term financial resources to support research and education initiatives under its framework. This initiative aligns with our vision of expanding the reach of Koç University beyond Türkiye, establishing it as a globally recognized institution that fosters innovative research and drives meaningful change. The core objective of the Act for Impact program is to attract the brightest and most accomplished academics and students to our university, providing them with a dynamic academic environment and the sustainable infrastructure necessary to excel in education, research, and innovation. With a unique environment that promotes interdisciplinary collaboration and innovation, we are confident in the success of this program.

As a cornerstone of the university's new ten-year vision, this initiative represents a sustainable support and investment model, laying the foundation for future scientific breakthroughs. Our aim is to recruit talent that will achieve exceptional academic outcomes, support groundbreaking research, and make a significant societal and global impact. Act for Impact is designed to secure scientific achievements today and tomorrow, marking a powerful step

toward meaningful contributions to both society and the broader world.

You are one of the leading researchers in the field of robotics. Could you share a bit about your journey into this field?

Robots are incredibly useful. By mastering the art of building a robot, you can physically and experimentally change people's lives. It transcends theoretical research; that's the allure of robots—we can work and live with them. More examples will emerge, and they will become parts of our lives. There is even the looming potential that they may gradually replace certain tasks, which is not fully science fiction but an unfolding reality.

In 1992, as an undergraduate, I considered becoming a theoretical physicist. Concurrently, I found myself drawn to engineering. While deciding on my graduation project, my advisor, from Yale University, who specialized in robots, showed me a project titled "How to make robots that can navigate without hitting obstacles." This captivating project ignited my interest in robots, combining my scientific interests with my passion for building things. It began on a large scale at the Marmara Research Center at TÜBİTAK. We pioneered the construction of robotic arms in Türkiye. I was responsible for making it intelligent with a camera vision system to track unknown objects. We developed a computer vision system for Arçelik that automatically detects manufacturing defects on the surfaces of white goods on the production line. During my PhD studies in Japan, my research focus shifted from intelligent robotic systems to the development of small robots. Fueled by my deep interest in miniaturization and nature, I later dedicated myself to creating extremely small, nature-inspired robots.



'I assumed the role of President of Koç University at the start of the Autumn term in 2023. I perceive my new role as an extension of my long-standing dream to impact society through research.'

Over the past 21 years, I have had the privilege of mentoring more than 75 PhD students and over 70 postdoctoral researchers. More than 60 of them have become professors in various parts of the world, over 40 are contributing to various sectors with their expertise, and 4 have founded startup companies. Since 2019, I've been a part-time professor at Koç University, a role I accepted after having received the 2018 Koç University Rahmi M. Koç Medal of Science. This connection and collaboration led me to consider what other impact I could generate. When the opportunity to become president at Koç University arose, it posed a challenging decision. I had to choose between continuing my role as a top researcher in the Max Planck Society environment, where everything I dreamed of in terms of research was provided, and taking on the responsibilities associated with being a university president.

Ultimately, I considered the impact I could have beyond my individual research efforts. I realized that returning to my native country and giving back to both Türkiye and Koç University, by leading the institution and influencing not only a group of researchers but the entire university, the country, and potentially even the



world in different ways was an opportunity I could not have passed on. Accepting this position was influenced by a convergence of many factors, with one of the primary motivations being the question of "how I could contribute to my country at this moment." In addition to holding significant responsibilities in this position, I established a research team at our university to advance my work, at least partially. Our team has initiated efforts to apply the small medical robots we developed to patient care.

'I consider my greatest achievement to have my family—my wife and my two daughters—and the experience of becoming a father.'

Balancing the roles of a researcher, father, partner, and active member of society is a significant challenge. I take pride in successfully navigating and maintaining this balance.

In our research, we are on the verge of introducing groundbreaking innovations in medical devices through the development of small robots capable of detecting and treating diseases painlessly in humans. Additionally, inspired by the adhesive properties of the hairs on the feet of geckos, nature's most agile climbers, we developed innovative microfiber adhesives. These were successfully transformed into a product at Setex Technologies, the startup I founded in the USA. It brings me immense satisfaction to see how our research has translated into reality, found its way into the market, and impacted the lives of many.

'My personal scientific aspiration is to see the machines we have been designing and building over the last few decades truly functioning in real-life medical scenarios.'

I genuinely want to contribute to saving the lives of actual patients. I envision sitting alongside doctors, witnessing our robots effectively treating patients who may have been considered incurable by traditional means. My dream for the upcoming years is to realize this technology's potential and, for the first time, save a patients' life using these advancements at the Koç University Hospital.

How do you think Koç University's education, research, and social contributions align with Vehbi Koç Foundation's mission and vision of serving society? What are your thoughts on the role and impact of Koç University in advancing this mission?

Vehbi Koç Foundation's mission to serve society aligns seamlessly with Koç University's core focus on education, research, and social contributions. As a university, we strive not only to educate individuals to become qualified professionals but also to advance social development and welfare through scientific research and innovative projects. Our research addresses critical global challenges, offering sustainable solutions in areas such as health, the environment, and technology. In terms of social contributions, our initiatives are designed to generate solutions to societal, economic, and environmental challenges. By leveraging interdisciplinary projects and innovative approaches, Koç University brings academic expertise into the field, pioneering meaningful transformations both locally and globally. We prioritize strategic partnerships and long-term projects that meet society's diverse needs, from education and health to environmental and technological development. Guiding our students and researchers with the responsibility to create social impact, particularly in alignment with sustainable development goals, is at the heart of what we do.



Prof. Dr. Metin Sitti, appointed as the new President of Koç University in Fall 2023, worked as a Director at the Max Planck Institute for Intelligent Systems in Stuttgart, Germany, during 2014-2023 as the only Turkish fellow of the Max Planck Society in Germany.

Prof. Dr. Metin Sitti has opened up new horizons and achieved many scientific breakthroughs with his work on the improvement of human health at the very intersection of sciences, engineering and technology. His research encompasses a wide variety of subjects in small-scale robotics and intelligent systems, including wireless miniature medical robots, miniature robots and new materials inspired by nature, and physical intelligence.

Having completed his undergraduate studies at the Boğaziçi University Department of Electrical and Electronics Engineering in 1992, Prof. Dr. Sitti received his Master's degree from the same department in 1994. He completed his doctoral research at the Tokyo University Department of Electrical Engineering in Japan in 1999. From 1999 to 2002, Prof. Dr. Sitti worked as a research scientist and lecturer at the University of California at Berkeley in the United States.

From 2002 to 2014, he was a tenured professor at the Robotics Institute and the Department of Mechanical Engineering at Carnegie Mellon University in the United States. From 2011 to 2012, he was a Visiting Professor at Harvard University, EPFL and Sorbonne University.

Prof. Dr. Metin Sitti was the recipient of the 2018 Koç University Rahmi M. Koç Medal of Science and worked as a part-time professor at Koç University School of Medicine and College of Engineering from 2018-2023. He received the "Breakthrough of the Year" Award in Engineering and Technology at the Falling Walls World Science Summit in Berlin in 2020.

He has been a Highly Cited Researcher in 2021, 2022, 2023, and 2024 by Clarivate, which each year identifies the small fraction of the global research scientists and social scientists who have demonstrated significant and broad influence in their field(s) of research and has been elected as a Member of the National Academy of Engineering (NAE) in recognition of his distinguished contributions to engineering, "for bioinspired adhesives and small-scale mobile robotics" in 2024.