

SCIENCE AND ART
with a Multifaceted and Multidisciplinary
Holistic Approach

Editör

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Yazar

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ISBN: 978-625-382-284-2

E-ISBN: 978-625-382-285-9

DOI: 10.54637/vizetek.9786253822859

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Kitap içeriğinin tüm sorumluluğu yazar(lar)ına aittir.

Yayın Tasarımcısı / Koordinatörü: Büşra ÇOLAKOĞLU

Kapak Tasarımı & Mizanpaj: Ahmet TUNÇDEMİR

Baskı: Ankara | Nisan, 2026



Seyranbağları Mah. İncesu Cad. 10/2 Çankaya/ANKARA

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Yayıncı Sertifika No: 41575

Baskı: Vadi Grafik Tasarım ve Reklamcılık

Matbaa Sertifika No: 47479

PREFACE

“Science and Art with a Multifaceted and Multidisciplinary Holistic Approach”

My interest in science began in middle school when I served as the spokesperson for my school's knowledge competition team. Later, in the years when there were only 10 science high schools in Turkey, I passed the two-stage science high school entrance exam and was accepted to Istanbul Üsküdar Science High School. Due to its distance from my hometown, I continued my education at İzmir Atatürk High School, which currently has the highest entrance exam score in İzmir, where I completed my Mathematics degree. In the same year, I was accepted to the Mechanical Engineering Department, my ideal, and graduated with honors from Hacettepe University in 1995, becoming a Mechanical Engineer. Due to my outstanding achievements during my faculty years, I was awarded a monetary prize and a non-refundable scholarship by the Chamber of Mechanical Engineers, and after graduation, I was offered a job as a control engineer at the İzmir Branch of the Chamber of Mechanical Engineers. In the fall of 1995, I passed the written science exam for my Master's degree in Mechanical Engineering/Energy at Dokuz Eylül University's Institute of Science, scoring 75 points and ranking second. I graduated first in my first year at Dokuz Eylül University's School of Foreign Languages and was invited to Purdue University in the USA for my Master's and Doctorate in Energy with a full scholarship, but I did not go. I completed my Doctorate in Mechanical Engineering/Thermodynamics at Ege University.

After passing the English Translation exam, I completed my reserved officer service as an English Turkish Interpreter, Second Lieutenant (2nd Lt.) Guard Commander in Sarajevo, Bosnia and Herzegovina, within NATO. During my military service, I received two NATO Medals (with ribbon, badge, and certificate), coins, a Turkish Armed Forces Service Commendation Certificate, and numerous Service Commendations. I represented my country in the best possible way in an international environment and was appreciated and respected as an exemplary Turkish officer. I established Turkey's second Energy Institute as its Director, and I also opened the Department of Energy Systems Engineering (Head of Department), admitting master's and doctoral students and contributing to education.

Simultaneously, I designed and produced Turkey's first 4x4 (four-wheel drive) "Electric Automobile," which was awarded the "Promotion and Dissemination Award" by TÜBİTAK (The Scientific and Technological Research Council of Turkey). The 4x4 drive system in this car was attributed to me as a Free Invention by my university. This car can operate as a front-wheel drive 4x2, a rear-wheel drive 4x2, or a 4x4 system with independently synchronized front and rear axles.

Through my role as a reviewer and observer for TÜBİTAK, I contributed to the production of the "Electric Teletruck," a first in our country.

I have also served as a reviewer and panelist for numerous projects for NASA and ASME. I served as a member of the MMO Energy Efficiency Commission for at least five terms. Over time, my main research focus has become "Medical Technology." "Medical Technology" is a multidisciplinary scientific field that can be achieved by connecting classical and conventional engineering principles and applications with health and medicine through analogies. In a way, we can say that "Medical Technology" is the application of engineering to medical science. I have tried, and continue to try, to combine the fields of medicine and engineering by blending them with music, art, and literature, and to establish this as a culture. While doing this, I have also strived, and continue to strive, to train postgraduate students by opening courses related to "Medical Technology" at the master's and doctoral levels at the university. It would not be wrong to say that I am one of the academics who teaches the most courses in universities in terms of the variety and number of courses; to date, I have taught and continue to teach approximately 60 different undergraduate and postgraduate courses. I receive numerous invitations every week from international conferences and congresses in various parts of the world. My work is of a nature that benefits humanity as well as contributing to our country's economy. It aims to produce high-quality products that will contribute to our economy.

I established the Iğdır University Energy Park, personally completing its construction, including excavation work, by volunteering during the summers. The wind turbine there is Iğdır's first wind power plant. The solar dish is also mathematically significant as it is the first dodecagonal structure ever manufactured. Within the scope of the Energy Management System studies at Iğdır University, I commissioned energy analyses and ensured the university's

ISO 50001 EMS certification. I provided consultancy to the University's Construction Works Technical Department and contributed to the realization of many projects such as heating systems, conference hall ventilation, acoustic sound systems, cafeteria hoods, etc.

I conducted research on the utilization of geothermal hot waters as an energy source in the Diyadin region. I prepared a project for the evaluation of the Tuzluca salt caves as an energy storage system. My interviews with the press and TRT (Turkish Radio and Television Corporation) on this subject are also on record.

I developed the "Amphibious Tracked Snow Ambulance" project for use in the harsh winter conditions of the Eastern Anatolia Region. I personally prepared the technical projects. My work has received appreciation and interest on international platforms. All my work is original and scientific.

In addition to my academic career, I also have 20 years of industrial experience. I held engineering and management positions in prominent industrial organizations in İzmir and Manisa, primarily Yaşar Holding and Teba Group of Companies. During this time, I also continued my academic career and simultaneously taught engineering courses at the university. The machine mentioned in my article on cooling granular materials was designed and engineered by me, and subsequently manufactured under my supervision. This machine is the first of its kind in Turkey for solid-liquid-gas energy transfer.

I have contributed to the training of many engineers and technical personnel not only in academia but also in industry. The power plants and factory facilities I was involved in building, as well as the steam boilers, pressure vessels, reactors, and industrial equipment I was involved in manufacturing, have been successfully operating for years in the most prestigious companies in Turkey, Europe, and America, and in various parts of the world.

*As I described in my books, **Prospective Characteristics of Contemporary Engineer (By the Approach of Mechanical Engineering) Contribution and Role of the Mechanical Engineer to the Organization Management and Productivity** and **“Çağımızın Mühendisinden Beklenenler - "Expectations of the Engineer of Our Time"** engineering is a profession that uses experience and practice gained through learning mathematics and*

fundamental sciences to develop methods for economically utilizing materials and resources available in nature for the benefit of humanity. The aim of engineering is to improve existing technology and to provide humanity with new systems through design and production. The most important infrastructure for producing technology is trained human resources and fundamental research. The skills and contributions of engineers are extremely important in evaluating the trained human potential of a society. Among the aims of engineering is to conduct technical and scientific studies to ensure the utilization of the country's natural resources, the increase in production, and the development of national industry in line with national interests.

To date, I have trained numerous students in academia and helped some of them find employment.

Many of my articles are included in the databases of leading university libraries worldwide, inspiring and contributing to academics globally. Combining my academic and industrial knowledge and experience, I have focused my work in the fields of medical technology, medical engineering, and bioengineering. My research has centered on treatment methods for SMA and similar muscle diseases, Alzheimer's, Parkinson's and similar neurodegenerative diseases, Coronavirus and similar viruses, and cancer, as well as the development of bionic eyes and various artificial organs and limbs. As of 2026, I have been awarded the "Nobel Scientist Award" by the international platform organization Scientific Laurels.

My aim in writing this book is not so much to introduce myself, but rather to instill a love of science and art in future generations, to be an example for them, and to guide and encourage them towards science and art. The data and analyses presented in this book are entirely objective, systematic information resulting from the holistic evaluation of all my scientific, technical, literary, and artistic works using an artificial intelligence system; they contain no personal interpretations. A world full of beauty is possible through culture, art, literature, and music, blended with scholarly approaches guided by a wise and serene mind and illuminated by a loving heart. "Science" is the guide. "Reason" arises from a compassionate and kind heart, imbued with emotion and knowledge, accompanied by patience. Reason, blossoming and maturing in "clear minds," reveals "divine intelligence." While "intelligence" alone is related to speed of thought and processing capacity, "reason" combines these

elements with maturity, wisdom, and conscientious values. The "brain" and the "heart" must always work together, consulting each other, so that the most correct and just attitudes, behaviors, and statements can emerge and be displayed throughout the entire being. Literature and music are art, and art means culture. All these points mentioned here are indispensable elements for being a "good person" and for living together in brotherhood and peace, ensuring a peaceful and prosperous life. In this way, good people will gather around you. It is also extremely important that the words spoken are of a philosophical and scholarly nature and possess a "beneficial" content; I am a person who believes that if words or statements do not contain "goodness," they should not be spoken at all. In addition to reaching living and non-living beings by crossing the bridge of hearts built by music and literature, the main goal should always be to direct all the material and spiritual resources that humanity uses for conflicts and wars towards the health, well-being, and happiness of our planet Earth, which appears as only a pale blue dot in the universe, and its people. The principle of thermodynamics, "for every gain, there is always a loss," should also be considered as a balancing element. In order to become "jewelers who recognize and appreciate the value of the gem," by bringing a "multi-faceted holistic approach with science and art,"

With the hope of benefiting my readers...

I offer my respects.

Asst. Prof. Dr. Dipl.-Ing. Emin Taner ELMAS

Mechanical Engineer, B.Sc., M.Sc., Ph.D.

03.04.2026, Iğdır

ACKNOWLEDGEMENTS AND DEDICATIONS

I would like to express my gratitude to my father, **Judge “Raşit ELMAS”**, who initiated me on my journey in science, culture, art, and literature, who was also my saz-baglama teacher, and who encouraged me to play the "Ney" (Turkish flute), enabling me to become a "Neyzen" (Ney player/performer), and from whom I learned to write literary compositions; to my mother, **Lawyer “Tuna ELMAS”**, who always encouraged and educated me in the fields of science and art, as well as in writing this book, and whom I consulted at every stage; and to my very precious sister, **Archaeologist and English Teacher “Esra ELMAS”**.

I dedicate this book to my father, **“Raşit ELMAS”**, whom I lost in Akhisar on January 11, 2023, to my mother, **“Tuna ELMAS”**, and to my sister, **“Esra ELMAS”**.

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03.04.2026, Iğdır