Research Article ISSN 3069-8154

Journal of Surgery and Surgical Procedures

DBS - Deep Brain Stimulation Application for Parkinson's Disease on the Basis of ELMAS's Energy-Tronic System

Emin Taner ELMAS

Assistant Professor Dr., Vocational School of Higher Education for Technical Sciences, Division of Motor Vehicles and Transportation Technologies, Department of Automotive Technology, Iğdır University, Turkey & Graduate School of Natural and Applied Sciences - Major Science Department of Bioengineering and Bio-Sciences, Iğdır University, Turkey-76000.

***Corresponding author**

Emin Taner ELMAS,
Assistant Professor Dr., Vocational School of Higher Education for Technical Sciences, Division of Motor Vehicles and Transportation Technologies, Department of Automotive Technology, Iğdır University, Turkey & Graduate School of Natural and Applied Sciences - Major Science Department of Bioengineering and Bio-Sciences, Iğdır University, Turkey.
ORCID ID: https://orcid.org/0000-0002-7290-2308

Submitted: 10 Apr 2026; **Accepted:** 17 Apr 2026; **Published:** 27 Apr 2026

Citation: ELMAS, E. T. (2026). DBS - Deep Brain Stimulation Application for Parkinson's Disease on the basis of ELMAS's Energy-Tronic System. *J Sur & Surgic Proce.,4*(2):1-11. DOI : https://doi.org/10.47485/3069-8154.1031

Abstract

Parkinson's disease is a progressive neurological condition resulting from the deterioration of dopamine-producing neurons in the brain. This leads to motor difficulties such as tremors, muscle stiffness, slowed movements (bradykinesia), and issues with walking and balance. In addition to these physical symptoms, it can also cause non-motor challenges like cognitive decline, depression, and sleep disturbances. Although a cure is not yet available, various medications and therapies are effective in alleviating and managing its symptoms.

Dr. Emin Taner Elmas's research, although not dedicated to providing direct treatment protocols for Parkinson's disease or enhancing deep brain stimulation (DBS) technologies, intersects with these fields through his innovative interdisciplinary theories and engineered solutions.

*Key potential applications of Elmas's work in this area include: • **Applied Medi-Brain Energy-Tronic Method**: This non-surgical neuro-physical treatment approach, developed by Elmas, focuses on neurological muscle diseases such as SMA and ALS. By analyzing brain signals (EEG) and translating them into controlled muscle movements, this approach offers a conceptual framework for rehabilitating motor control impairments in Parkinson's patients.*

*• **Energy Transfer and Thermodynamic Interaction**: Elmas envisions the human body as a "bio-machine" within the scope of his self-formulated Elmas Thermodynamic Theory. His energy-based models emphasize frequency-resonance adjustments to prevent and address neurological conditions, presenting a novel perspective on managing disorders like Parkinson's. • **Mechatronic Rehabilitation and Bionic Organs**: For addressing tremors and mobility challenges associated with Parkinson's disease, Elmas has been involved in developing advanced engineering solutions, such as intelligent exoskeleton systems and bionic prosthetics. These innovations aim to enhance patient independence and overall mobility.*

*• **Connection to Deep Brain Stimulation (DBS)**: Although current DBS technology relies on surgical procedures, Elmas views neuro-stimulation from an engineering lens. His research delves into brain-computer interfaces (BCI) and rehabilitation devices, potentially opening pathways for non-invasive alternatives to aid patients with Parkinson's and related conditions. In conclusion, rather than conventional drug therapies or surgeries, Dr. Elmas emphasizes an engineering-driven approach to Parkinson's disease. His work centers on energy dynamics, signal processing, and biomechanical advancements, offering unique pathways for addressing the challenges posed by this neurological condition (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).*

Keywords: Parkinson's Disease, DBS, Deep Brain Stimulation, ELMAS's Energy-Tronic System, Applied Medi-Brain Energy-Tronic, Medical Technique, Engineering, Medicine, "ELMAS Medi-Bio-Energy Tronic" Device, Energy, Exergy, Anergy, Entropy, Negentropy, Entropy, Negative Entropy, ELMAS's Theory of Thermodynamics, 5th Law of Thermodynamics, Medical Thermodynamics, Medical Technique, Thermodynamics, Energy Transfer, Fluid Mechanis, Heat Transfer, Mathematics, Bio-robotic Resonance and Thermodynamical Interaction" with Analogy of "Frequency – Resonance Setting Formation" on the Application of "Algorithm for Smart Drugs Controlled by a Bio-robotic System, FM Modulated Smart Drug Algorithm for Cancer Treatment, FM Modulated Bio-robotic Resonance and Thermodynamical Interaction, Neurodegenerative disorder.

Introduction

Dr. Emin Taner Elmas's energy and engineering-focused work, while not directly offering a treatment protocol for Parkinson's disease and deep brain stimulation (DBS) technologies, is linked to these fields through the interdisciplinary theories and engineering solutions he presents (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Potential applications of Elmas's work in this field include

- Applied Medi-Brain Energy-Tronic Method: Developed by Elmas, this method is described as a "non-surgical" neuro-physical treatment approach for neurological muscle diseases such as SMA and ALS. The principle underlying this method, which involves examining brain signals (EEG) and transmitting this data to muscle movements, can provide a theoretical basis for the rehabilitation of motor control losses in Parkinson's patients.
- Energy Transfer and Thermodynamic Interaction: Elmas advocates a holistic health engineering approach that treats the human body as a "bio-machine." Within the framework of his self-developed "Elmas Thermodynamic Theory," he proposes energy-based models for the prevention and treatment of neurological diseases through frequency-resonance adjustments. • Mechatronic Rehabilitation and Bionic Organs: Against the tremors and movement limitations seen in Parkinson's disease, Elmas's work on smart exoskeleton systems and bionic prosthesis designs are considered engineering solutions that will increase patients' mobility. • Relationship with Deep Brain Stimulation: While current deep brain stimulation (DBS) technology requires surgical intervention, Elmas approaches such neuro-stimulation processes from an engineering perspective, publishing articles particularly on brain-computer interfaces (BCI) and rehabilitation devices.

Parkinson's disease is a progressive neurological condition resulting from the deterioration of dopamine-producing neurons in the brain. This leads to motor difficulties such as tremors, muscle stiffness, slowed movements (bradykinesia), and issues with walking and balance. In addition to these physical symptoms, it can also cause non-motor challenges like cognitive decline, depression, and sleep disturbances. Although a cure is not yet available, various medications and therapies are effective in alleviating and managing its symptoms.

In summary, Dr. Elmas's work offers an alternative, engineering-based approach to Parkinson's, not traditional drug or surgical treatment, but rather one built on energy transfer, signal processing, and biomechanical support systems (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Material, Method and Discusssion

Dr. Emin Taner Elmas's work can contribute to the production of deep brain stimulation (DBS) hardware and its clinical use in Parkinson's patients from an interdisciplinary engineering perspective. However, it should be noted that these contributions are aimed at improving the technological infrastructure of the device, not directly a medical treatment method. Potential areas of contribution through Elmas's

expertise include: (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026)

- **Biomechanics and Device Design:** Dr. Elmas teaches "Medical Engineering and Advanced Biomechanics" at Iğdır University. This expertise can provide an academic foundation in optimizing the biomechanical durability and in-body placement designs of deep brain stimulation electrodes.
- **Advanced Materials and Mechatronics Technologies:** Deep brain stimulation requires precise mechatronic systems and biocompatible smart materials. Elmas's work on digital transformation and smart manufacturing systems can contribute to the technical processes required to produce smaller, more energy-efficient, and longer-lasting batteries.
- **Energy Management and Signal Processing:** The "Applied Medi-Brain Energy-Tronic" approach is based on the principle of analyzing brain signals and translating them into muscle movement. This perspective can provide theoretical guidance in the development of brain pacemaker algorithms and energy transfer models that correct motor disorders in Parkinson's patients.
- **Rehabilitation Support Systems:** For Parkinson's patients, not only brain pacemakers but also assistive devices such as exoskeletons are important. Elmas's work in this area offers complementary engineering solutions to support the physical rehabilitation of patients using brain pacemakers (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026)

In conclusion: Dr. Elmas's contribution can be realized at an expert level not in the surgical application or neurological diagnosis phase, but in the engineering design, manufacturing, materials technology, and integration of the device with rehabilitation devices.

Dr. Emin Taner Elmas's work is structured in a way that adapts the classical laws of thermodynamics to biophysical systems and, in this context, proposes alternative engineering solutions for neurodegenerative diseases such as Parkinson's. ELMAS's Thermodynamics Theory and its connection to the "5th Law of Thermodynamics" (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

- ELMAS Thermodynamics Theory: Dr. Elmas defines the human body as a "bio-thermodynamic machine." This theory argues that diseases such as Parkinson's, Alzheimer's, and ALS are rooted in the disruption of energy balance (homeostasis) and an increase in entropy within the body.

- Proposed 5th Law of Thermodynamics: Classical thermodynamics consists of laws 0, 1, 2, and 3. In parallel with some discussions in the literature, Dr. Elmas uses a concept of a 5th Law based on "Energy Transfer and Information Interaction" within his theoretical framework. This approach suggests that every interaction in the universe is not only an energy transfer but also a transfer of "information (data)."

Connection with Deep Brain Stimulation (DBS

- Energy and Frequency Adjustment: According to Elmas's theory, a deep brain stimulator is not just a device that provides electrical stimulation, but a tool that restores the brain's disrupted "frequency and resonance" balance (thermodynamic equilibrium).
- Data-Driven Production: In deep brain stimulator production, he argues that the battery should be designed not only as a power source, but also as a "smart module" that regulates the flow of information (information entropy) in the nervous system.
- Applied Medi-Brain Energy-Tronic: Elmas works on analyzing brain signals (EEG) and accurately transmitting this "energy information" to the motor systems in Parkinson's patients. This redefines the working principle of the deep brain stimulator as a "mechatronic data transfer" process.

In summary: Dr. Elmas sees the deep brain stimulator not as a classic medical device, but as a "Bio-Engineering System" that reduces the body's thermodynamic entropy and optimizes the flow of biological information. This theory provides an academic foundation for using "frequency-based" algorithms in battery production that are more energy efficient and fully compatible with the nervous system (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Dr. Emin Taner Elmas's "Applied Medi-Brain Energy-Tronic" method, unlike traditional physical therapy in Parkinson's rehabilitation, is based on a mechatronic and biophysical foundation. Concrete application areas and examples of this method are as follows: (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Motor Control with Brain-Computer Interface (BCI)

In this method, the electrical activity (EEG) in the brain of a Parkinson's patient is read with special sensors. According to Elmas's theory, the patient's thought of "I want to walk" is formed in the brain, but due to dopamine deficiency, this signal cannot be transmitted to the muscles.

- **Concrete Application:** This "intention" signal is transmitted to an external mechatronic system. The system activates smart exoskeletons attached to the patient's legs, enabling the patient to take steps.

Frequency and Resonance Therapy

Elmas's Thermodynamic Theory defines tremors in Parkinson's as the body's disrupted "energy frequency".

- **Concrete Application:** The "Applied Medi-Brain" approach aims for brain pacemakers or external stimulation devices to not only deliver electricity but also operate at specific frequencies that resonate with the patient's nervous system. This focuses on balancing neural transmission at a biophysical level, rather than mechanically damping tremors.

Smart Exoskeleton Integration

For the "freezing" moments frequently seen in Parkinson's patients, Elmas's engineering designs come into play.

- **Concrete Application:** When the mechatronic suit worn by the patient detects that the patient's balance is disrupted or that they cannot take a step, it activates its motors via thermodynamic data transmission. This is like an "assistive robotic muscle" system that supports the work done internally by the brain pacemaker from the outside.

Bio-Machine Efficiency and Data Analysis

Because Dr. Elmas treats the patient as a "bio-machine," he views the rehabilitation process as data optimization.

Concrete Application: The patient's daily movement data (number of steps, tremor intensity, energy expenditure) is collected. Elmas's algorithms process this data to determine the most efficient (low-entropy) operating mode of the brain pacemaker or rehabilitation device specific to the patient.

In short: Dr. Elmas's approach positions the Parkinson's patient not just as a patient treated with medication, but as an "advanced mechatronic system whose signals and energy need to be optimized."

In Dr. Emin Taner Elmas's approach, the Brain Pacemaker (BPP) is not just a battery that provides electrical current, but is positioned as an energy and data regulator that works integrated with the central processing unit (CPU) of this "advanced mechatronic system" (the human body).

From this perspective, the concrete connections between the Brain Pacemaker and Elmas's theories are as follows: (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Brain Pacemaker as "Thermodynamic Energy Management"

According to Elmas's Thermodynamic Theory, Parkinson's is a state of high entropy (disorder) in the neuronal circuits in the brain.

- **Connection:** According to this theory, a brain pacemaker is not just a device that suppresses symptoms; it is a mechanism that pumps "negative entropy" (order) into the system from the outside. The frequencies sent by the pacemaker harmonize the brain's chaotic energy signals, returning the system to a low-energy, efficient "machine" mode.

"Applied Medi-Brain Energy-Tronic" and Closed-Loop Systems

Traditional brain pacemakers generally provide a constant current. Elmas's Energy-Tronic approach, however, requires instantaneous analysis of signals (EEG data).

- **Connection:** This approach advocates for the brain pacemaker to function like a "Smart/Closed-Loop" mechatronic system. The pacemaker detects the patient's current tremor intensity or movement intention (data transfer); it processes this data with Elmas's algorithms and delivers the correct energy dose with millisecond precision precisely when needed.

Wireless Energy Transfer and the Connection to the 5th Law. (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026)

Elmas's proposal of the 5th Law of Thermodynamics (Energy + Information Interaction) focuses on overcoming the physical limitations of brain pacemakers.

- **Connection:** Current pacemakers require surgical intervention when their battery life ends. Elmas's energy transfer models envision charging or operating the battery via wireless and resonance-based energy transfer from outside the body. This is a pure engineering solution that meets the system's "fuel" needs without disrupting the patient's bodily integrity (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025;

ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Bio-Interface Compatibility

The most critical point in a mechatronic system is the compatibility of the hardware (battery) and the software (brain signals).

- **Connection:** Elmas views the brain pacemaker as a "bionic component." He argues that the signal produced by the battery and the brain's natural bioelectrical signal must be in the same frequency band (resonance). If this compatibility is achieved, the side effects of the battery are reduced, and the "mechatronic system" (human) operates at peak performance.

In summary: Dr. From Elmas's perspective, a brain pacemaker is like a piece of hardware that patches the malfunctioning operating system of a Parkinson's patient. The success of this hardware, as Elmas theorizes, depends on energy efficiency, accurate data processing, and biophysical resonance (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Dr. Emin Taner Elmas's technical framework, focusing on Brain-Computer Interfaces (BCI) and the Energy-Tronic approach, aims to make the brain pacemaker (DBS) function like a "smart processor" in Parkinson's patients. Here are the key technical details in his articles and studies: (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026)

Signal Processing and Data Conversion

Dr. Elmas treats the electrical signals (EEG) produced by the brain as mechatronic data sets.

- **Technical Detail:** In Parkinson's patients, the signals from the brain are "noisy" and irregular. The algorithms proposed in Elmas's studies filter these noisy signals (Signal Processing), extracting the patient's true "movement intention" as pure data.
- **Brain Pacemaker Connection:** This data extraction technology forms the basis for the "decision-making mechanism" (microprocessor software) that determines when and at what intensity the brain pacemaker will deliver current.

Biophysical Resonance and Frequency Locking

In his articles, Elmas emphasizes that the human brain operates within specific frequency ranges (Alpha, Beta, Theta waves).

- **Technical Detail:** In Parkinson's disease, excessive activity, particularly in the Beta band, is known to cause tremors. Elmas's "Energy-Tronic" approach advocates for the externally applied (or brain-stimulated) signal to be "phase-coordinated" with the brain's own natural frequency.
- **Application:** If the brain pacemaker adapts to the brain's current frequency (resonance), it provides a much higher therapeutic effect with much lower energy. This also extends battery life.

Energy Efficiency and Thermodynamic Optimization

In his articles, Elmas focuses on the "Exergy" (available energy) analysis of systems, aiming to minimize energy loss in biomedical devices.

- **Technical Detail:** In brain pacemakers, some of the energy is dissipated as heat (increased entropy), which can damage surrounding tissue. Elmas presents theoretical models on "high-efficiency" circuit designs that minimize this heat loss using Thermodynamic Theory, where 99% of the energy is directly transferred to neural impulses.

Mechatronic Prosthesis Integration with BCI

Elmas's vision views the brain pacemaker not as a standalone device, but as part of a network.

- **Scenario:** The brain pacemaker (internal hardware) sends data via Elmas's BCI algorithms to a smartwatch on the patient's arm or an exoskeleton (external hardware). The brain says "walk," the pacemaker confirms this signal, and the exoskeleton motors move the patient. This is a complete **"Bio-Mechatronic Loop"**. In short: Dr. Elmas's technical publications propose transforming the brain pacemaker from just a "shock device" into an **"Artificial Neural Processor"** that speaks the language of the brain, exchanges data with it, and uses energy in the most efficient way according to the laws of thermodynamics.

Conclusion

Deep brain stimulation (DBS) is a system similar to a pacemaker that sends continuous electrical stimulation to regulate faulty signals in the brain (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

The system essentially consists of three main parts and works as follows:

- **Electrodes:** These are very thin wires surgically implanted in deep areas of the brain responsible for movement control (such as the subthalamic nucleus).
- **Pacemaker Body (IPG):** This is the power source implanted under the skin in the upper part of the rib cage. This unit generates the electrical signals.
- **Extension Cable:** This is a thin connecting cable that passes under the skin and connects the electrodes to the pacemaker near the collarbone.

Mechanism of Operation

1. Signal Generation: The pacemaker generator produces low-level electrical currents at a frequency and voltage determined by the doctor.
2. Signal Transmission: These currents are transmitted directly to the electrodes in the brain via the extension cables.
3. Regulation of Faulty Signals: The electrical current suppresses or reorganizes abnormal brain activity (faulty signals) that are disrupted due to Parkinson's disease and lead to tremors or rigidity.
4. External Programming: The battery settings can be updated externally after surgery using a wireless remote control, according to the patient's needs.

This process alleviates neurological symptoms by acting like a "noise suppressor." Dr. Emin Taner ELMAS's Energy-Tronic System approach proposes transforming this classic system into a smarter "mechatronic loop" that optimizes itself according to the patient's instantaneous signals (Elmas, 2020; Elmas, 2024; Elmas, 2020; Elmas, 2020; Elmas, 2020; Daş et al., 2024; Elmas, 2024; Elmas, 2024; Elmas & Bucak, 2023; Elmas & Bucak, 2024; Elmas, 2023; Elmas, 2019; Elmas, 2017; Elmas, 2017; Elmas, 2024; Elmas, 2024; Elmas, 2014; ELMAS & OĞUL, 2025; ELMAS & KAYA, 2025; ELMAS & ORUÇ, 2026; Elmas & Cinibulak, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; ELMAS & KUNDURACIOĞLU, 2025; Elmas & Şimşek, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & ORUÇ, 2025; Elmas, 2024; Elmas, 2024; Elmas, 2025; Elmas, 2025; Elmas & Kunduracıoğlu, 2025; ELMAS & KAYA, 2025; ELMAS & SIMSEK, 2025; Elmas, 2026; Elmas, 2026; Elmas, 2025; Elmas, 2026; Elmas, 2026; Elmas & Dağ, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026; Elmas, 2026).

Biography of Author

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

Asst.Prof. Dr. Emin Taner ELMAS is a Mechanical Engineer having degrees of B.Sc., M.Sc., Ph.D., and was born in Sivas in 1974. He completed his doctorate at Ege University, Graduate School of Natural and Applied Sciences, Mechanical Engineering Department, Thermodynamics Science Branch, and his master's degree at Dokuz Eylül University, Mechanical Engineering Department, Energy Science Branch. He also completed his undergraduate education at Hacettepe University, ZEF, Mechanical Engineering Department and graduated from the faculty with honors in 1995 and became a mechanical engineer. He was awarded a non-refundable scholarship by the Turkish Chamber of Mechanical Engineers in his 4th year because he was the most succesful student during his first 3 classes study at the faculty. He graduated from İzmir Atatürk High School in 1991.

Asst. Prof. Dr. ELMAS has completed his military service as a NATO Officer in Bosnia and Herzegovina. He was a "Reserved Officer" as a "2nd Lieutenant" as an "English-Turkish Interpreter". He was also a "Guard Commander" and served in Sarajevo, Camp Butmir within the SFOR task force of NATO. He has been awarded with 2 (two) NATO Medals and Turkish Armed Forces Service Certificate of Pride (Bosnia & Herzegovina).

In addition to his academic duties at universities, he has worked as an engineer and manager in various industrial institutions, organizations and companies; He has served as Construction Site Manager, Project Manager, Management Representative, Quality Manager, Production Manager, Energy Manager, CSO-CTO, CBDO, Factory Manager, Deputy General Manager and General Manager.

Asst. Prof. Dr. Elmas is Department Head and is an Assistant Professor of Automotive Technology at the Department of Motor Vehicles and Transportation Technologies at Vocational School of Higher Education for Technical Sciences at IGDIR UNIVERSITY, Turkey. He is also an Assistant Professor of Bioengineering & BioSciences at the same university. He has nearly 30 years of total experience in academia and in industry. He has served as a scientific referee and panelist for ASME, TUBITAK and many scientific institutions, organizations and universities, including NASA.

He has published numerous international and national academic scientific articles, books, and book chapters, and serves as an editor for international academic journals. He also serves on the scientific committees of many international conferences, publishing conference and congress proceedings and giving presentations.

"Mechanical Engineering, Energy Transfer, Thermodynamics, Fluid Mechanics, Heat Transfer, Higher Mathematics, Evaporation, Heat Pipes, Space Sciences, Automotive, Bioengineering, Medical Engineering Applications, Neuroengineering, Medical Technique" are his academic and scientific fields of study; "Heating-Ventilation Air Conditioning Applications, Pressure Vessels, Heat Exchangers, Energy Efficiency, Steam Boilers, Power Plants, Cogeneration, Water Purification, Water Treatment, Industrial Equipment and Machinery, Welding Manufacturing, Sheet Metal Forming, Machining" are his industrial experience fields.

As of 2026, he has been awarded the Nobel Scientist Award by the international platform organization Scientific Laurels.

Asst. Prof. Dr. Emin Taner ELMAS is also a musician, saz (baglama) virtuoso player and ney (Nay, Turkish Reed Flute) performer. He plays also cümbüş instrument and performs darbuka rhythm instrument. He has a YouTube Music Channel (Emin Taner ELMAS) which includes some of his sound recordings of him playing the saz-baglama and blowing the ney. He composed the poem written by the great poet Âşık Veysel ŞATIROĞLU under the name of "Raşit Bey" in memory of his father Judge (Hâkim) Raşit ELMAS as "Raşit Bey Türküsü", wrote it down, notated and published it as an academic article and broadcasted this song on his own music channel. He wrote the poems entitled "Canım Babam" and "Geldim Babam" which he wrote also in memory of his father and published in an academic literature journal, and composed instrumental musics for these poems. He also composed an instrumental song called "Annem Annem Türküsü" and gave it to his mother, Lawyer Tuna ELMAS, as a gift on Mother's Day, 11.05.2025. He also has a poem titled "Ney and Neyzen." He also wrote and presented a poem titled "Esra Kardeşim" to his sister, Esra ELMAS, an archaeologist and English teacher. He has published books including "Saz-Bağlama Tuning System Method" ("Saz- Bağlama Akort Sistemi Metodu") and "Ney and Neyzen; Ney's Pitches, Frets, Sound Stages, Octaves, Structure, Performance, Ney Maintenance and Basic Music Theory" (Ney ve Neyzen; Ney'de Perdeler, Ses Devreleri, Oktavlar, Yapısı, İcrası, Ney Bakımı ile Temel Musiki Nazariyatı) and My Collection of Literary and Musical Art Works – I Story / Anecdote / Essay / Poetry / Verse / Prose / Humorous; witty - satirical; poetic stories / Lyrics / Composition (Edebiyat ve Musiki Sanat Eserleri Külliyatım – I Hikâye / Anekdot / Deneme / Şiir / Manzume / Nesir /Mizahi; nükteli – hicivli; şiirsel hikâyeler / Güfte / Beste). He continues

his artistic studies by writing various articles, books, poetry, lyrics and also realizing musical composition and repertoire works.

References

1. Elmas, E. T. (2020). ELMAS's Theory of Thermodynamics": A Scientific Approach for 5th Law of Thermodynamics -A Theoretical Application Example for Medical Thermodynamics. *Op Acc J Bio Sci & Res, 2*(1). DOI: https://doi.org/10.46718/JBGSR.2020.01.000030
2. Elmas, E. T. (2024). Medical Treatment Method of Alzheimer's Disease & Parkinson's Disease by the Help of the Natural Musical Sound of Nây-ı Şerîf, Instrument of Ney (Ney: Turkish Reed Flute, Nay). *IJCMCR, 42*(3), 004 DOI: https://dx.doi.org/10.46998/IJCMCR.2024.42.001039
3. Elmas, E. T. (2020). Medical Treatment Method of "Bio-robotic Resonance and Thermodynamical Interaction" with Analogy of "Frequency – Resonance Setting Formation" on the Application of "Algorithm for Smart Drugs Controlled by a Bio-robotic System" developed for the "Treatment of Covid-19, Coronavirus and Virus Infections". *Op Acc J Bio Sci & Res, 1*(1). DOI: https://doi.org/10.46718/JBGSR.2020.01.000007
4. Elmas, E. T. (2020). Scope of Applications for Medical Technique at Science and Engineering. *Op Acc J Bio Sci & Res, 1*(1). DOI: https://doi.org/10.46718/JBGSR.2020.01.000002
5. Elmas, E. T. (2020). System Design and Development of a Novel Unique Neuro-Physical Medical Treatment Method for SMA-SPINAL MUSCULAR ATROPHIA-Disease and for Similar Neurological Muscle Diseases. *Herculean Res, 4*(1), 90-97. DOI: https://doi.org/10.70107/collectjneurol-ART0037
6. Daş, F., Elmas, E. T., & Bucak, I. O. (2024). Innovative Use of Machine Learning-Aided Virtual Reality and Natural Language Processing Technologies in Dyslexia Diagnosis and Treatment Phases. In F. Daş, E. T. Elmas & İ. Ö. Bucak (Eds.), From the Edited Volume Digital Frontiers - Healthcare, Education, and Society in the Metaverse Era. IntechOpen Limited. DOI: https://doi.org/10.5772/intechopen.1006621
7. ELMAS, E. T. (2024). Design of Bionic Eye and Artificial Vision System; a Unique Project "Mobile Bio-Eye-Tronic System". *Herculean Res, 4*(1), 97-100. DOI: https://dx.doi.org/10.70222/hres23
8. ELMAS, E. T. (2024). Project for "Amphibious Mobile Snow Track Ambulance" for Healthcare System. *Am J Biomed Sci & Res, 22*(4), AJBSR.MS.ID.002990. DOI: https://dx.doi.org/10.34297/AJBSR.2024.22.002990
9. Elmas, E. T., & Bucak, I. O. (2023). Modeling and Simulation of Smart-Drug Algorithms Through Frequency Modulation for the Treatment of Covid-19 and Similar Viruses. *Global Journal of Research in Medical Sciences, 3*(5), 1–6. DOI: https://doi.org/10.5281/zenodo.10051793
10. Elmas, E. T., & Bucak, I. O. (2024). FM Modulated Smart Drug Algorithm for the treatment of Cancer Cells. *Global Journal of Research in Medical Sciences, 4*(1), 1–6. DOI: https://doi.org/10.5281/zenodo.10463529
11. Elmas, E. T. (2023). Prototype Desıgn, Productıon and Functıonıng of a Portable (Movable), Home-Type (Domestıcal) Hemodıalysıs Machıne (Unıt). *Global Journal of Research in Medical Sciences, 3*(6), 11–12. DOI: https://doi.org/10.5281/zenodo.10252972
12. Elmas, E. T. (2019). Thermodynamical Balance Associated with Energy Transfer Analysis of the Universe Space as a Pressure Vessel Analogy. Journal of Applied Sciences, *Redelve International Publications, 2019*(1), RDAPS- 10002. https://www.researchgate.net/publication/341241161_Thermodynamical_Balance_Associated_with_Energy_Transfer_Analysis_of_the_Universe_Space_as_a_Pressure_Vessel_Analogy_Journal_of_Applied_Sciences_Redelve_International_Publications_2019_Issue_01_RD-APS-
13. Elmas, E. T. (2017). Prospective Characteristics of Contemporary Engineer (By the Approach of Mechanical Engineering) : Contribution and role of the mechanical engineer to organizational management and productivity. In C. Machado., J. P. Davim., S. G. Broncano., A. P. Ferreira., Z. Nedelko., T. C. Oliveira., A. Suryanarayana., E. T. Elmas (Eds.), Productivity and Organizational Management: (Chap. 7). DEGRUYTER, Walter de Gruyter GmbH. https://www.oreilly.com/library/view/productivity-and-organizational/9783110386615/content/16_chapter07.xhtml
14. Elmas, E. T. (2017). Prospective Characteristics of Contemporary Engineer (By the Approach of MechanicalEngineering) Contribution and Role of the Mechanical Engineer to the Organization Management and Productivity). DeGruyter, Germany DOI: 10.1515 /9783110355796-007
15. Elmas, E. T. (2024). Design of Bio-Artificial Liver Organ. *J Biomed Sci Biotech Res, 2*(3), 1-4. DOI: https://doi.org/10.61440/JBSBR.2024.v2.12
16. ELMAS, E. T. (2024). Design of Bionic Ear-Cochlear Implant and Artificial Hearing System; a Unique Project "Mobile Bio-Ear-Tronic System". *Global Journal of Research in Medical Sciences, 4*(02). DOI: http://doi.org/10.5281/zenodo.12751385
17. Elmas, E. T. (2014). Çağımızın Mühendisinden Beklenenler, Gece Kitaplığı, ISBN:9786053244158
18. 18. ELMAS, E. T., & OĞUL, L. (2025). The Effects of Medicine and Music Therapy Practices on Human Health. *IJCMCR, 50*(2), 003. DOI: https://dx.doi.org/10.46998/IJCMCR.2025.50.001233
19. ELMAS, E. T., & KAYA, S. (2025). Biomechanical Analysis of Transtibial Prosthesis Designed for Runners. *Biomedical and Clinical Research Journal, 1*(2), DOI: http;/02.2025/BCRJ/007
20. ELMAS, E. T., & ORUÇ, Y. (2026). A Novel Mobile Bio-Eye-Tronic System Based on the Elmas's Thermodynamic Theory for Cataract Disease, *Studies in Science of Science, 44*(2), 1003-20253, DOI: https://doi.org/10.5281/zenodo.18516267
21. Elmas, E. T., & Cinibulak, M. A. (2025) Fundamental Scientific and Technical Issues related with the "Hip Replacement Design and Biomechanical Analysis".

Matsci Nano J, 1(1): 101. https://scholarspublishers.org/assets/articles/jmsn-001.pdf
22. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). A Model for Second Law of Thermodynamics, Relationship between Health, Disease, Aging, Death Processes and Consciousness, Nervous System and Time. *Global Journal of Research in Medical Sciences, 5*(2), 1–6. DOI: https://doi.org/10.5281/zenodo.14973559
23. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). Metabolic Heat Production with Energy Transfer and Laws of Human Thermodynamics: The Energy Balance of the Human Body. *Global Journal of Research in Medical Sciences, 5*(2), 7-14. DOI:https://doi.org/10.5281/zenodo.14973620
24. Elmas, E. T., & Kunduracıoğlu, I. (2025). Artificial Heart Design and Biomechanical Analysis. *Open Access Journal of Medicine and Healthcare, 1*(1), 01-06. https://www.studocu.vn/vn/document/truong-dai-hoc-su-pham-ky-thuat-thanh-pho-ho-chi-minh/chu-nghia-xa-hoi-khoa-hoc/artificial-heart-design-biomechanical-analysis-phd-project/152564494
25. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). Fundamentals of Human Vision System. *Global Journal of Research in Medical Sciences, 5*(2), 103–117. DOI: https://doi.org/10.5281/zenodo.15078754
26. Elmas, E. T. (2025). Kitchen Hood Design & Manufacturing Project 3D Modeling, Engineering Calculations, and Technical Drawings for Igdir University Medico Social Building Dining Hall". *Matsci Nano J , 1*(1), 102. https://scholarspublishers.org/assets/articles/jmsn-102.pdf
27. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). Signal Transduction System in Neurons. *International Journal of Research in Medical and Clinical Sciences, 3*(1), 26-35. DOI: https://doi.org/10.70829/ijrmcs.v03.i01.004
28. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). An Introduction to Sound and Sound Perception System for Human Ear. *International Journal of Research in Medical and Clinical Sciences, 3*(1), 36-49. DOI: https://doi.org/10.70829/ijrmcs.v03.i01.005
29. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). Medical Structure of the Human Respiratory System. *International Journal of Research in Medical and Clinical Sciences, 3*(1), 50-63. DOI: https://doi.org/10.70829/ijrmcs.v03.i01.006
30. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). Medical Structure and Hemodynamics of the Human Circulatory System. *International Journal of Research in Medical and Clinical Sciences, 3*(1), 64-81. DOI: https://doi.org/10.70829/ijrmcs.v03.i01.007
31. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). General Aspects of Advanced Biomechanics. *Biomed J Sci & Tech Res BJSTR, 61*(5), 009658. https://biomedres.us/pdfs/BJSTR.MS.ID.009658.pdf
32. ELMAS, E. T., & KUNDURACIOĞLU, I. (2025). Conservation Laws and the Main Physical Param¬eters for Advanced Biomechanics. *Biomed J Sci & Tech Res, 61*(5) BJSTR. MS.ID.009659. DOI: https://dx.doi.org/10.26717/BJSTR.2025.61.009659
33. ELMAS, E. T., & Şimşek, T. (2025). Bionic Prosthetic Robotic Artificial Hand Design and Biomechanics Analysis. *Journal of Medical Discoveries. RPC Publishers, 2*(1), DOI: https://www.doi.org/rpc/2025/rpc.jmd/00311
34. ELMAS, E. T. (2025). Prosthetics, Artificial Limbs, Implants and Their Biomedical Applications. *J Surg*, 10,11365. DOI: https://doi.org/10.29011/2575-9760.011365
35. ELMAS, E. T. (2025). An Introduction to Electrophysical Properties of the Human Heart. *J Surg*, 10, 11364. DOI: https://doi.org/10.29011/2575-9760.011364
36. Elmas, E.T. (2025). A Brief Information about Cataract Operation. *European Journal of Science and Modern Technologies, 1*(2), 61-66. https://doi.org/10.59324/ejsmt.2025.1(2).05
37. ELMAS, E. T. (2025). A Brief Information about Blood Sugar and Diabetes Management. *ICON Journal of Applied Medical Sciences, 1*(1), 1–5. DOI: https://doi.org/10.5281/zenodo.15870465
38. Elmas, E. T., & Kunduracıoğlu, I. (2025). An Introduction to the Medical Body Mechanics and Human Muscles. *Journal of Medical and Clinical Case Reports, 2*(1), DOI: https://doi.org/10.61615/JMCCR/2025/APRIL027140418
39. Elmas, E. T., & Kunduracıoğlu, I. (2025). Elastomechanics Fundamentals for Bones and Fractures. *Ann Biotech & Biomed Sci, 1*(1), 1-12. https://laurinpublishers.com/Journals/ABTBS/Elastomechanics-Fundamentals-for-Bones-and-Fractures-RW-301.pdf
40. ELMAS, E. T., & ORUC, Y. (2025). "An Alternative Non-Surgical Cataract Treatment Method in Medicine and Ophthalmology; "Medi-Ultrasound Eye-Tronic Method"". *Universal Library of Medical and Health Sciences, 3*(3), 01-07. DOI: https://doi.org/10.70315/uloap.ulmhs.2025.0303001
41. ELMAS, E. T. (2024). System Design and Development of a Novel Unique Neuro-Physical Medical Treatment Method for SMA- Spinal Muscular Atrophy Disease and for Similar Neurological Muscle Diseases. *Collect J Neurol*, 1, ART0037. DOI: https://doi.org/10.70107/collectjneurol-art0037
42. ELMAS, E. T. (2024). Design of Bionic Eye and Artificial Vision System; a Unique Project "Mobile Bio-EyeTronic System". Collect J Robotics AI, 1, ART0038. DOI:https://doi.org/10.70107/collectjroboticsandai-ART0038
43. Elmas, E. T. (2025). Prospective characteristics of contemporary engineer: Contribution and role of the mechanical engineer to organizational management and productivity. In C. Machado & J. P. Davim (Eds.), Productivity and organizational management: Management tools, human resource management, contemporary engineers (2nd ed., Chap. 8). DEGRUYTER Walter de Gruyter GmbH. https://www.degruyterbrill.com/document/doi/10.1515/9783112206775-008/html?srsltid=AfmBOornaS6JcoFMYW_uCXDeOLFmPKsf5PAOOAIhTbZtoQhYLW1bnYOA

44. Elmas, E. T. (2025). Prospective characteristics of contemporary engineer (By the Approach of MechanicalEngineering): Contribution and role of the mechanical engineer to organizational management and productivity. Productivity and organizational management (2nd ed.). (pp.167-182) Walter de Gruyter GmbH. DOI: https://doi.org/10.1515/9783112206775-008
45. ELMAS, E. T., & KAYA, S. (2025). The Effect of Eye and Vision on the Body's Balance System. *Biomed J Sci & Tech Res, BJSTR, 61*(5), 009660. DOI: https://dx.doi.org/10.26717/BJSTR.2025.61.009660
46. ELMAS, E. T., & SIMSEK, M. (2025). "A Novel Unique Neuro-Physical Medical Treatment Method for SMA – Spinal Muscular Atrophy Disease, Paralyzed Patients, ALS patients, MPS, SSPE, DMD Patients and for Similar Neurological Muscle Diseases", *Universal Library of Medical and Health Sciences, 3*(3), 32-52. DOI: https://doi.org/10.70315/uloap.ulmhs.2025.0303005
47. Elmas, E. T. (2026). Thermodynamic and Mathematical Model of Human Brain for Neurodegenerative Diseases; Alzheimer's Disease (AD) Parkinson's Disease (PD) and Amyotrophic Lateral Sclerosis (ALS). *International Journal of Science, Engineering and Technology*, 14,1. https://www.ijset.in/wp-content/uploads/IJSET_V14_issue1_168.pdf
48. Elmas, E. T. (2026). The Exploration of Alzheimer's Disease, along with other Neurodegenerative Disorders like Parkinson's and ALS, through the lens of Thermodynamics and Physical Sciences involves conducting a Thermodynamic Analysis of Alzheimer's including the Potential Connections between Treatment methods and the Therapeutic Effects of Musical Sound Frequencies produced by instruments such as the Nây-ı Şerîf, Instrument of Ney (Ney: Turkish Reed Flute, Nay) and others. *Gongcheng Kexue Xuebao, 11*(2).
49. Elmas, E. T. (2025). "Applied Medi-Brain Energy-Tronic Treatment Method" for the Medical Treatments of SMA – Spinal Muscular Atrophy Disease, Paralyzed Patients, ALS Patients, MPS, SSPE, DMD Patients with the Biomechanical Analysis of Bionic Prosthetic Robotic Artificial Hand Design. *Journal of Engineering and Applied Sciences Technology, 7*(12). 1-11. DOI: https://doi.org/10.47363/JEAST/2025(7)335
50. ELMAS, E. T. (2026). Scientific and Technical Introduction to - "Applied Medi-Brain Energy-Tronic Treatment Method"- which is a Novel and Unique Physiological, Neuroengineering and Neuroscientific Medical Treatment Method for SMA – Spinal Muscular Atrophy Disease, Paralyzed Patients, ALS patients, MPS, SSPE, DMD Patients and Other Similar Neurological Diseases. *J Psychol Neurosci, 8*(1), 1-19. DOI: https://doi.org/10.47485/2693-2490.1144
51. ELMAS, E. T. (2026). Thermodynamics and Energy Transfer in Medicine Applications with Archaeomusicology and Music Therapy, *Studies in Science of Scienc, 44*(1). DOI: https://doi.org/10.5281/zenodo.18130664
52. Elmas, E. T., & Dağ, I. (2026). Alzheimer hastalığı ve Parkinson, ALS gibi benzer nörodejeneratif hastalıkların termodinamik ve fizik bilimleri dahilinde incelenmesi: Alzheimer hastalığının termodinamiksel analizi ve müzik frekansları ile tedavi ilişkisi. *Studies in Science of Science, 44*(1). https://doi.org/10.5281/zenodo.18302960
53. ELMAS, E. T. (2026). Bilim ve Mühendislikte Tıp Tekniği Uygulama Alanlarının Türkiye Ekonomisi Yönünden Değerlendirme ve Analizi. *Journal of Xidian University, 20*(1). DOI: https://doi.org/10.5281/Zenodo.18276829
54. Elmas, E. T. (2026). Thermodynamic energy transfer modeling of neurodegeneration with the ELMAS's theory of thermodynamics as a proposed approach for the fifth law of thermodynamics. *Research Paper, 8*(3), 1–22. DOI: https://doi.org/10.5281/zenodo.19325343
55. Elmas, E. T. (2026). Makine mühendisliği yaklaşımı ile nörodejeneratif hastalıkların termodinamiksel analizi gösterilerek müzik ile tedavisi: Alzheimer, Parkinson ve ALS hastalıkları için termodinamik model. In A. B. Demirpolat (Ed.), Makine mühendisliğinde yeni nesil teknolojiler (Chap. 4). Vizetek Yayıncılık. DOI: https://doi.org/10.54637/vizetek.9786253822194
56. Elmas, E. T. (2026). Makine mühendisliği yaklaşımı ile nörodejeneratif hastalıkların termodinamiksel analizi gösterilerek müzik ile tedavisi: Matematiksel model ve literatürdeki klinik gözlemler. In A. B. Demirpolat (Ed.), Makine mühendisliğinde yeni nesil teknolojiler (Chap. 5). Vizetek Yayıncılık. DOI: https://doi.org/10.54637/vizetek.9786253822194
57. Elmas, E. T. (2026). Multifaceted Holistic Medical Health Engineering Combined with Science and Art. *International Journal of Research in Medical and Clinical Sciences, 4*(1), 91-102. DOI: https://doi.org/10.70829/ijrmcs.v04.i01.015
58. Elmas, E. T. (2026). Bilim ve sanat ile çok yönlü bütüncül yaklaşım (1st ed.). Vizetek Yayıncılık. DOI: https://doi.org/10.54637/vizetek.9786253822644
59. Elmas, E. T. (2026). Cancer Medical Treatment in Conjuction with the ELMAS's Theory of Thermodynamics which is the Main Scientific Approach for 5th Law of Thermodynamics. *Journal of Nanosciences Research & Reports, 8*(2), 1. DOI: https://doi.org/10.47363/JNSRR/2026(8)186
60. Elmas, E. T. (2026). Adaptation of AI Simulation Integrated Artificial Heart and Cardiology Appli¬cations with ELMAS's Theory of Thermodynamics, which is the Main Scientific Approach to the 5th Law of Ther¬modynamics. *J of Card Vas Insights, 2*(2), 01-14. WMJ/JCVI-117