SELÇUK BAYRAKTAR

BAYKAR Chairman / Chief Technology Officer

Selçuk Bayraktar—the architect of Türkiye's first indigenous UAV/UCAV systems, including Bayraktar TB3, the world's first UCAV capable of operating from short-runway vessels, and Bayraktar KIZILELMA, Türkiye's first indigenous unmanned fighter aircraft—serves as Chairman of the Board and Chief Technology Officer at Baykar. He also chairs the Board of Trustees of the T3 Foundation, the Culture and Heritage Foundation, and the CANSAĞLIĞI Foundation.

Upon completing his primary education at Sarıyer Elementary, Bayraktar graduated from the prestigious Robert College in 1997 and received his bachelor's degree in Electronics and Communication Engineering from Istanbul Technical University in 2002. He proceeded to earn his first master's degree from UPenn's Department of Electrical and Systems Engineering in 2004. His groundbreaking research on UAV formation flights, the coordination of aerial and ground robot teams, and flight control and guidance systems has since become the subject of scientific publications.

Upon completing the master's program at UPenn, Bayraktar received an offer from the Massachusetts Institute of Technology (MIT) to pursue graduate and doctoral degrees there with full funding. During his time at MIT, he studied automatic flight control algorithms which would enable unmanned helicopter systems to perform aggressive maneuvers. Having received his second master's degree in Aerospace Engineering from MIT in 2006, he began to pursue his PhD at Georgia Tech yet returned to Türkiye the following year to resume Baykar's efforts to develop unmanned aerial vehicle technologies.

Selçuk Bayraktar's work at Baykar focuses on the avionics architecture of indigenous UAV systems, the development

of flight control and cruise algorithms, system kinematics and dynamics, and electronic equipment and embedded software.

At Baykar, Bayraktar previously led the team that developed the Bayraktar Mini UAV, Türkiye's first indigenous drone which began its service with the Turkish military in 2014, and the Bayraktar TB2 (armed) UAV, which experts have described as the world's best drone in its class. Having operated for more than 1.25 million flight hours, the Bayraktar TB2 has been exported to 36 countries as of October 2025. Bayraktar and his team also developed the Bayraktar AKINCI UCAV, Türkiye's first combat drone with a maximum takeoff weight of 6 tons, delivered it to the Turkish Armed Forces in 2021, and exported it to 16 countries by October 2025.

Selçuk Bayraktar currently leads the teams developing the Bayraktar TB3 UCAV, which was the world's first-ever aircraft to take off and land on a short-runway vessel (19 November 2024 – TCG Anadolu), and the Bayraktar KIZILELMA, Türkiye's first unmanned fighter jet which completed its maiden flight on 14 December 2022 – ahead of the original target of 2023. Selçuk Bayraktar currently leads the teams developing the Bayraktar TB3 armed UAV, which became the first UCAV worldwide to take off and land on a short-runway vessel (19 Nov. 2024 – TCG Anadolu), and the Bayraktar KIZILELMA, Türkiye's first unmanned fighter jet which completed its maiden flight on 14 December 2022 – ahead of the original target of 2023. As part of the development efforts led by Bayraktar, the Bayraktar KIZILELMA successfully conducted formation flights, for the first time in global aviation history, as two combat UAVs, AKINCI UCAV and KIZILELMA Unmanned Fighter Jet, completed multiple close formation flights – another unprecedented achievement.

Bayraktar also focuses on space research with his technology venture, Fergani Space Technologies, where he leads the development of low-orbit satellite clusters, orbital transfer vehicles, and launch systems.

In response to the Coronavirus pandemic, Selçuk Bayraktar led Türkiye's efforts to build indigenous intensive care ventilators, which was ultimately co-produced by BIOSYS, BAYKAR, ASELSAN and ARÇELIK and exported or gifted to countries around the world. He also continues his work with the CANSAĞLIĞI (Canan Bayraktar Public Health) Foundation, which he founded and where he serves as Chairman of the Board of Trustees, to support scientific projects on genetics, immunology and rare diseases and to promote individual and public health.

Selçuk Bayraktar was awarded the Order of Karabakh by President Ilham Aliyev of Azerbaijan on 1 April 2021 in recognition of the Bayraktar TB2 armed UAV's contributions to Karabakh's liberation. He also received the State Order of Merit on orders from Ukrainian President Volodymyr Zelensky in 2022. Having received the Medal of Military Cooperation from Azerbaijani Defense Minister Zakir Hasanov on 4 April 2023, Bayraktar was awarded the Azerbaijani Medal of Service to Citizens and Social Innovations Agency (ASAN Hizmet), which recognizes individuals for their contributions to the country, on 2 October 2023 per the Azerbaijani Presidency's decision.

On 18 October 2023, Selçuk Bayraktar received the National Order of Mali, the country's highest honor, for his contributions and service to Mali by President Assimi Goita.

On February 28, 2024, he was awarded the Order of the National Security (First Degree) and Defense Council of Ukraine" by the National Security and Defense Council of Ukraine for his significant contributions to Ukraine's national security and defense, and for enhancing its defense capabilities under martial law.

On October 9, 2024, he was honored with the 'Kyrgyzstan Dank State Order' by Kyrgyz President Sadyr Japarov for his contributions to the country's defense capacity and military potential.

At the Turkish Technology Team (T3) Foundation, where he serves as Chairman of the Board of Trustees, Bayraktar promotes the participation of talented young people and individuals of all ages in technology development processes. The T3 Foundation supports enterprises, research and projects focusing on strategically important products, systems and components whose indigenous production bears importance due to global competition. Bayraktar leads the

Foundation's scientific efforts as Chairman of the Board of Trustees to realize Türkiye's National Technology Initiative vision. Together with his team and stakeholders, he hosts TEKNOFEST, Türkiye's first and only aerospace and technology festival, to spread his passion for aviation and space with the entire population, which he considers crucial for the National Technology Initiative. TEKNOFEST took place in Azerbaijan in 2022 and in the Turkish Republic of Northern Cyprus in 2025 – a reflection of its growing impact beyond Türkiye's borders.

Additionally, he serves as Chairman of the Board of Trustees at the KÜME (Culture and Heritage) Foundation, which he established to promote the holistic analysis of the history of human civilization and the development of solutions to contemporary social issues with the help of ancient values.

Selçuk Bayraktar married Sümeyye Erdoğan Bayraktar in 2016. The couple has two children. Selçuk holds a private pilot license.

Patents

- Autonomous Takeoff and Landing System for Aerial Vehicles (Turkish Patent Institution 2015/07928)
- Electromechanical Servo Motor-Controlled Actuator System and Control Method for Detecting Dynamic Working Conditions (Turkish Patent Institution 2015/14111)
- Triply-Redunant Flight Control System (Turkish Patent Institution Ref: PT2015-00693) EKG Device (Turkish Patent Institution Ref: PT2015-00693)
- ECG Device (Turkish Patent Institute Ref: PT2015-00693)

Scientific Publications

Scientific Papers (scholar.google)
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Synergies in Feature Localization by Air-Ground Robot Teams B Grocholsky, S Bayraktar, V Kumar, CJ Taylor, G Pappas Experimental Robotics IX, 352-361
Flight Modeling and Experimental Autonomous Hover Control of a Fixed Wing Mini- UAV at High Angle of Attack HD Blauwe, S Bayraktar, E Feron, F Lokumcu AIAA Guidance, Navigation and Control Conference and Exhibit, 6818
UAV and UGV Collaboration for Active Ground Feature Search and Localization B Grocholsky, S Bayraktar, V Kumar, G Pappas Proc. of the AIAA 3rd" Unmanned Unlimited" Technical Conference
Experiments With Small Helicopter Automated Landings at Unusual Attitudes S Bayraktar, E Feron arXiv preprint arXiv:0709.1744
Experiments With Small Unmanned Helicopter Nose-Up Landings S Bayraktar, E Feron Journal of Guidance, Control, and Dynamics 32 (1), 332-337

Hybrid Modeling and Experimental Cooperative Control of Multiple Unmanned Aerial Vehicles
S Bayraktar, G Fainekos, GJ Pappas
Technical Report, Department of CIS, University of Pennsylvania

Aggressive Landing Maneuvers for Unmanned Aerial Vehicles
S Bayraktar
Massachusetts Institute of Technology

Hybrid Modeling and Experimental Cooperative Control of Multiple Unmanned Aerial Vehicles
S Bayraktar, GE Fainekos, GJ Pappas

Aggressive Landing Maneuvers for 3-DOF Helicopter UAV
S Bayraktar, E Feron
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A Novel Mosaic Quality Measurement Method for UAV Surveillance and Remote Sensing
T Buyukyazi, S Bayraktar, I Lazoglu
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Real-Time Image Stabilization and Mosaicking by Using Ground Station CPU in UAV Surveillance
T Buyukyazi, S Bayraktar, I Lazoglu
Proceedings of the IEEE 6th International Conference on Recent Advances in …

Real-Time, Hardware Independent Stabilization and Mosaicing in Low Altitude UAV Surveillance
Tolga Büyükyazı, Selçuk Bayraktar, Prof. Dr. İsmail Lazoğlu;
Journal of Field Robotics: Special Issue on Low Altitude UAV Flight

Multiple Unmanned Aerial Vehicle Systems Technology: Design and Development Studies
Ömer İnak, Haluk Bayraktar, Selçuk Bayraktar, SAVTEK 2006, ODTÜ

Design Features of Bayraktar Mini Unmanned Aerial Vehicle
Haluk Bayraktar, Selçuk Bayraktar, Prof. Dr. Ünver Kaynak, SAVTEK 2006, ODTÜ

Bayraktar Mini Unmanned Aerial Vehicle System Components and Performance Analysis
Haluk Bayraktar, Selçuk Bayraktar, HASEM 06, Kayseri

An Unmanned Aircraft Project from Ideal to Reality
Selçuk Bayraktar, Haluk Bayraktar; HITEK 2004 Symposium, Air Force Academy