Spor Bilimleri
Fakültesi

# FACULTY OF SPORTS SCIENCES

## E-BULLETIN

Future of Sports, Center of Success Istanbul Gelisim University

NOVEMBER 2025

SPORBİLİMLERİ.GELİSİM.EDU.TR

1881-1938

# 10 KASIM

Ulu Önder Mustafa Kemal Atatürk'ü, **fikirleriyle ve eserleriyle sonsuza dek yaşayacak bir lider olarak anıyoruz.**

İSTANBUL GELİŞİM ÜNİVERSİTESİ 2008

**Spor Bilimleri**
Fakültesi

# With gratitude to our heroes who fell as martyrs for the homeland...

**We have learned with deep sorrow that 20 of our heroic soldiers were martyred in the tragic accident that has plunged our nation into profound grief, when a military cargo aircraft crashed during a duty flight.We wish Allah's mercy upon all our martyrs who sacrificed their lives for the homeland, and extend our condolences and patience to their grieving families, the Turkish Armed Forces, and our Noble Nation. May our nation's sorrow be eased.**


## Teachers' Day celebration was held at our faculty.

# KULÜP TANITIM HAFTASI

BAŞLIYOR

**11-12 ARALIK'TA SENİ HEYECAN DOLU BİR DÜNYAYA DAVET EDİYORUZ!**

**92 Kulüp Stantlarını Açıyor!**

**J BLOK - MEHMET AKİF ERSOY KONFERANS SALONU**

İSTANBUL GELİŞİM ÜNİVERSİTESİ 2008

İGÜ

SKS

Sağlık Kültür ve Spor Daire Başkanlığı

# Academic Visit from the Faculty of Sport Sciences to Shymkent University in Kazakhstan

Within the scope of the academic cooperation protocol signed between Istanbul Gelisim University and Shymkent University of Kazakhstan, our Dean of the Faculty of Sport Sciences, Prof. Dr. Ali Kızılet, and our Vice Dean, Assoc. Prof. Dr. Mustafa Can Koç, carried out an academic visit to Shymkent University between October 13–17, 2025. As part of the visit, a meeting was held with the Rector of Shymkent University, Prof. Dr. Seitkulov…

A meeting was held with Nurlybek Akinovich and the university administration. During the discussions, topics such as joint curriculum development, student exchange programs, and collaborative projects aimed at enhancing academic cooperation between the two universities were addressed. In addition, throughout the visit, our faculty members met with Shymkent University students in both theoretical and practical classes, sharing academic experience and knowledge.The visit is regarded as a productive step that strengthens international academic cooperation and interaction between the two universities.

# Recreation Club Organized a Fair Event

**Istanbul Gelisim University Recreation Club organized a series of recreational activities between November 20–22, 2025 at the Faculty of Sport Sciences, aiming to enhance students' social interaction and support an active campus life. The three-day events, centered around themes of games, sports, art, and entertainment, enabled students to spend their leisure time in a productive and enjoyable way.**

**Within the scope of the events, faculty students participated in activities that supported both physical engagement and the development of social skills. In line with the core philosophy of recreation, the aim was for participants to experience enjoyable, voluntary, and stress-relieving activities. Recreation Club President Merve Karanfil expressed their satisfaction with the high level of participation, stating:"Our goal is to ensure that students not only have fun but also interact with one another and strengthen their sense of belonging to the university. In the upcoming period, we will continue to add value to our faculty with more comprehensive events."The club's academic advisor, Dr. Mahmut Ulukan, emphasized the importance of recreational activities for students' psychosocial development and offered the following assessment:"Recreation is not only about physical activity; it is also an important discipline that supports social relationships, creativity, mental health, and overall quality of life. We are very pleased that such events are being organized regularly at our university."The three-day series of activities concluded with positive feedback from students. The Recreation Club plans to continue similar events throughout the year.**

# Coordination Meeting of the Turkish University Sports Federation – Antalya

**Prof. Dr. Ali Kızılet, Dean of the Faculty of Sport Sciences, and Kaan Oğulcan Hanbaba, Sports Coordinator of the Health, Culture and Sports Department, attended the Coordination Meeting of the Turkish University Sports Federation held in Antalya on behalf of Istanbul Gelisim University.Our institution took an active role in the meeting, where the development of university sports, organizational processes, and planning for the new term were discussed.**

# IGU Faculty of Sport Sciences Quality Commission Meeting was held

**The IGU Faculty of Sport Sciences Quality Commission Meeting was held.During the meeting, the following topics were discussed and finalized:**

**📌 Faculty Quality Calendar**

**📌 Faculty Action Evaluation**

**📌 Academic Advising Form**

**📌 Student Feedback and Suggestions**

**One of the most significant points of this term's meeting was the active participation of our 4th-year Sports Management student, Ezginur Sert, who contributed to the process as a stakeholder. The reflection of the student perspective in our faculty's quality culture is of great value to us.We would like to thank all our participating academicians and the student who contributed.The meeting concluded with wishes and suggestions regarding the studies to be carried out in line with the Faculty's 2026 goals and the contributions to be made to our faculty.**

# We held our “Corporate Communication and Web Commission” meeting.

**We Gathered for the Digital Future of Our FacultyAs the Istanbul Gelisim University Faculty of Sport Sciences, we held our “Corporate Communication and Web Commission” meeting.Under the leadership of our Commission Chair, Prof. Dr. Kubilay Çimen, we made important decisions aimed at strengthening our faculty’s presence on digital platforms, making our website more user-friendly, and reviewing our corporate communication strategies.We continue our efforts without interruption to make our communication with our stakeholders and our dear students more effective and efficient.**

# The Conference on “The Role of Sports and Athletes in International Diplomacy” Was Held

**The conference titled “The Role of Sports and Athletes in International Diplomacy,” organized by the Istanbul Gelisim University Faculty of Sport Sciences, was held on Thursday, November 6, 2025, with high participation. The event brought together students, academics, and representatives from the sports community at the Mehmet Akif Ersoy Conference Hall in Building J.The keynote speaker of the conference was İbrahim Halil Korkmaz, Vice President of the Turkish National Paralympic Committee. In his speech, Korkmaz emphasized the use of sports as a form of “soft power” in international relations, the role of athletes in diplomatic processes, and the importance of Paralympic sports in increasing global awareness. He also highlighted the value of the participation of individuals with disabilities in sports in terms of intercultural interaction, inclusivity, and cultural diplomacy.The program was moderated by Lecturer Tekmil Sezen Soyal from the Department of Exercise and Sports Sciences for the Disabled. Soyal guided students’ questions and discussed the career opportunities that sports diplomacy offers young sports scientists.The conference continued with an interactive Q&A session, followed by discussions on current examples, international projects, and the strategic impact of sports in the field of diplomacy. At the end of the event, a certificate of appreciation was presented, and students had the opportunity to speak individually with the guest s**

# The excitement of the new academic year has begun at Istanbul Gelisim University!

**The Faculty of Sport Sciences at Istanbul Gelisim University welcomed the new academic year with an energetic and highly attended orientation program. During today's event, first-year students had the opportunity to get to know the faculty, its academic units, and university culture more closely.The program began with an opening speech by Prof. Dr. Ali Kızılet, Dean of the Faculty of Sport Sciences. Prof. Dr. Kızılet shared inspiring messages with the students, provided important reminders about the academic process, and outlined the faculty's educational vision. Following this, Vice Deans Prof. Dr. Yusuf Can and Assoc. Prof. Dr. Mustafa Can Koç delivered introductory and orientation presentations, offering students comprehensive information about the academic structure of the faculty.The event continued with departmental introduction sessions.• Assoc. Prof. Dr. Mehmet Soyal, Head of Coaching Education• Dr. Okan Kılıçkaya, Head of Exercise and Sport Sciences• Dr. Mehmet Aydoğan, Head of Exercise and Sport Sciences for the Disabled• Dr. Mahmut Ulukan, Head of Recreation• Dr. İrfan Karakendi, Head of Sports ManagementEach provided informative presentations on the academic structure of their departments, course content, practical training processes, and the career opportunities awaiting students.The program, completed with strong participation, allowed students to meet the faculty's academic staff and contributed to a powerful start to the new term.As Istanbul Gelisim University, we wish all our students success in their new academic journey and hope they experience a year full of sports, health, and productivity.**

# IGU AthletesMade History at the European Championship


Students of Istanbul Gelisim University made our university and our country proud with their outstanding achievements at the European Championship held in Madrid, Spain.Berk Erol, Captain of the Turkish National Team and a student of IGU, made history by becoming the European Champion for the 8th consecutive time.

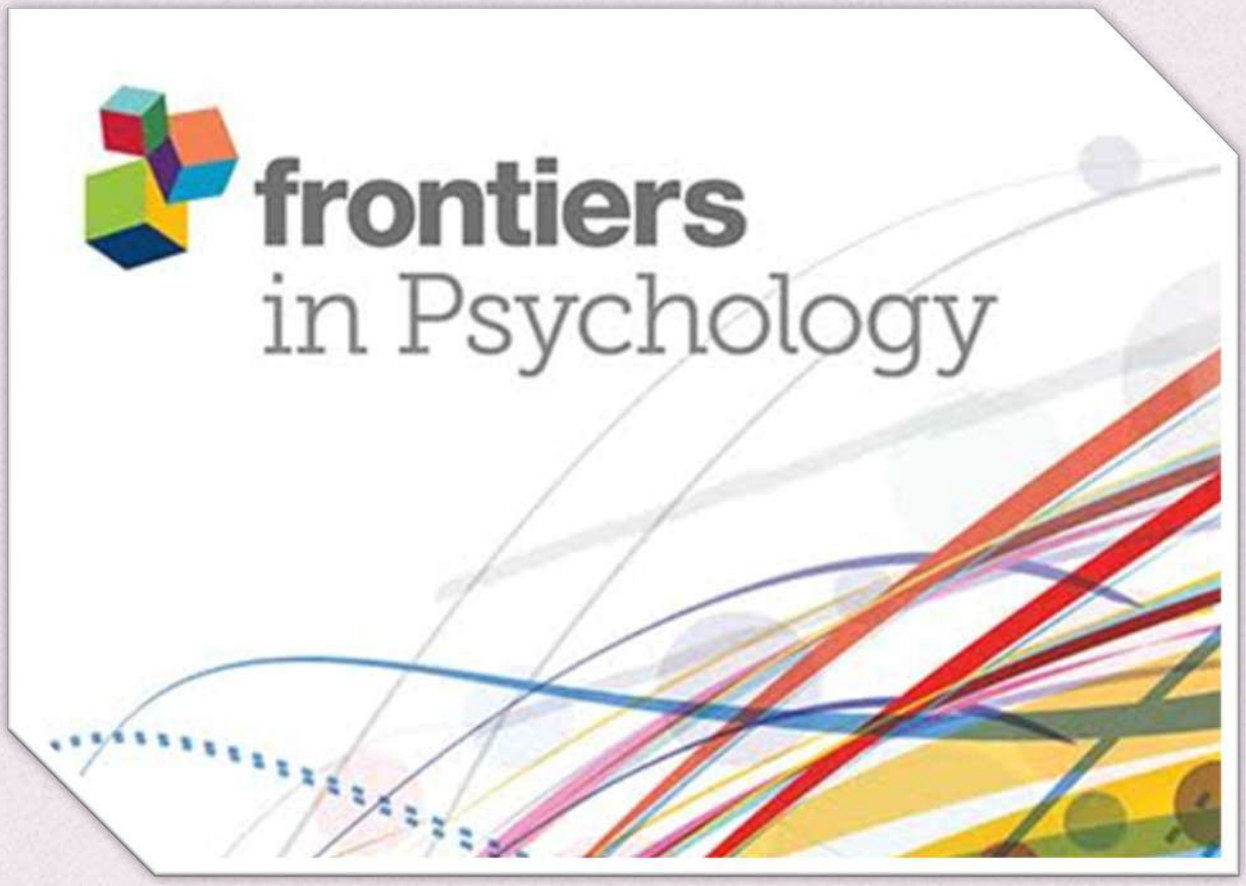
Born in Istanbul in 1998, national athlete Berk Erol has achieved a rare accomplishment in the world of combat sports by winning all 41 official matches of his career. Known for his speed, technical skill, and mental resilience, Erol continues to be one of the most successful athletes on the international stage with 5 World Championships and 8 European Championships.At the championship held in Madrid on October 31, 2025, Berk Erol once again rose to the top of Europe by defeating:• his Spanish opponent 3–0 in the first round,• his Portuguese opponent 5–0 in the semifinals,• and his Romanian opponent 5–2 in the final.The crowd's chants of "El Turco!" during the final match once again highlighted the international impact of the national athlete's performance. The Spanish media labeled Erol as the "star of the championship" and praised his performance as "the Turkish storm on the field."On the second day of the championship, IGU students Akın Can Bingöl, Resul Can Deniz, and Berk Erol achieved another major success by becoming European Champions as a team in the synchronized kata category. The trio received top marks from the judges for their coordinated performance and technical mastery.As Istanbul Gelisim University, we congratulate our students Berk Erol, Akın Can Bingöl, and Resul Can Deniz for their outstanding performances on the international stage and their European Championship titles, and we wish them continued success.

# The Article of Dr. Deniz Şentürk Was Published in the SCI-Q1 Indexed Journal "BMC Sports Science, Medicine and Rehabilitation"

**The research titled "Validity and reliability of Catapult Vector S7 GNSS units in distance measurement," co-authored by Dr. Deniz Şentürk from the Istanbul Gelisim University Faculty of Sport Sciences, Department of Coaching Education, has been published in BMC Sports Science, Medicine and Rehabilitation (SCI – Q1), one of the esteemed journals in the field of sports sciences.The study makes a significant contribution to the literature by demonstrating the validity and reliability of GNSS-based performance tracking systems in distance measurement.We congratulate our esteemed instructor for this prestigious publication.**

# The Article of Assoc. Prof. Dr. Mustafa Can Koç Was Published in the SSCI-Q1 Indexed Journal "Frontiers in Psychology"

**The article titled "A model on leader–member exchange, psychological empowerment and teamwork in esports teams," for which Assoc. Prof. Dr. Mustafa Can Koç, Vice Dean of the Faculty of Sport Sciences, served as the corresponding author, has been published in Frontiers in Psychology, an international journal indexed in SSCI-Q1.We congratulate our esteemed instructor and wish him continued success.**



# Flow:
# Campus Yoga Gathering

**As students of the Istanbul Gelisim University Faculty of Sport Sciences, we came together to balance our bodies and minds!During the “Flow: Campus Yoga Gathering” held with the guidance of Yoga Instructor Eylül Zararsız, participants enjoyed an enriching experience focused on breath awareness and body control.We thank all the students who took part in the event and look forward to meeting again in future campus activities filled with mindfulness.**

# Excess Muscle Is Linked to a ‘Younger’ Brain, While Excess Fat Is Linked to an ‘Older’ Brain

Onur TOPUZ

**A new study shared by the Radiological Society of North America (RSNA) has once again revealed the critical role of muscle mass in brain health. In the study conducted across four different centers, full-body MRI scans of a large sample group consisting of 1,164 healthy adults were analyzed. Fifty-two percent of the participants were women, and the average age was 55.17.**

**In the study, T1-weighted full-body MRI images were used to automatically assess, through an advanced artificial intelligence algorithm, the participants’• total muscle volume,• visceral fat (the “hidden” abdominal fat between the organs),• subcutaneous fat, and• biological brain age.Dr. Raji, one of the study’s lead researchers, emphasized that the findings point to two key conclusions:• As muscle mass increases, the brain appears to have a younger structure.• Higher levels of visceral fat are associated with a biologically older-appearing brain.The study further revealed that subcutaneous fat does not show this effect, and that the primary determining factor is the visceral fat–to–muscle ratio. Dr. Raji stated: “While individuals with more muscle mass displayed younger-looking brains, those with higher levels of hidden abdominal fat had brains that appeared older. Subcutaneous fat showed no such effect.”These results demonstrate that increasing muscle mass through regular resistance training and reducing visceral fat are critical not only for physical health but also for slowing brain aging.**

Radiological Society of North America. (2025, November 25). *The body trait that helps keep your brain young.* ScienceDaily. Accessed November 26, 2025.

# Our National Deaf Team Is the Olympic Champion

Res. Asst.Onur TOPUZ

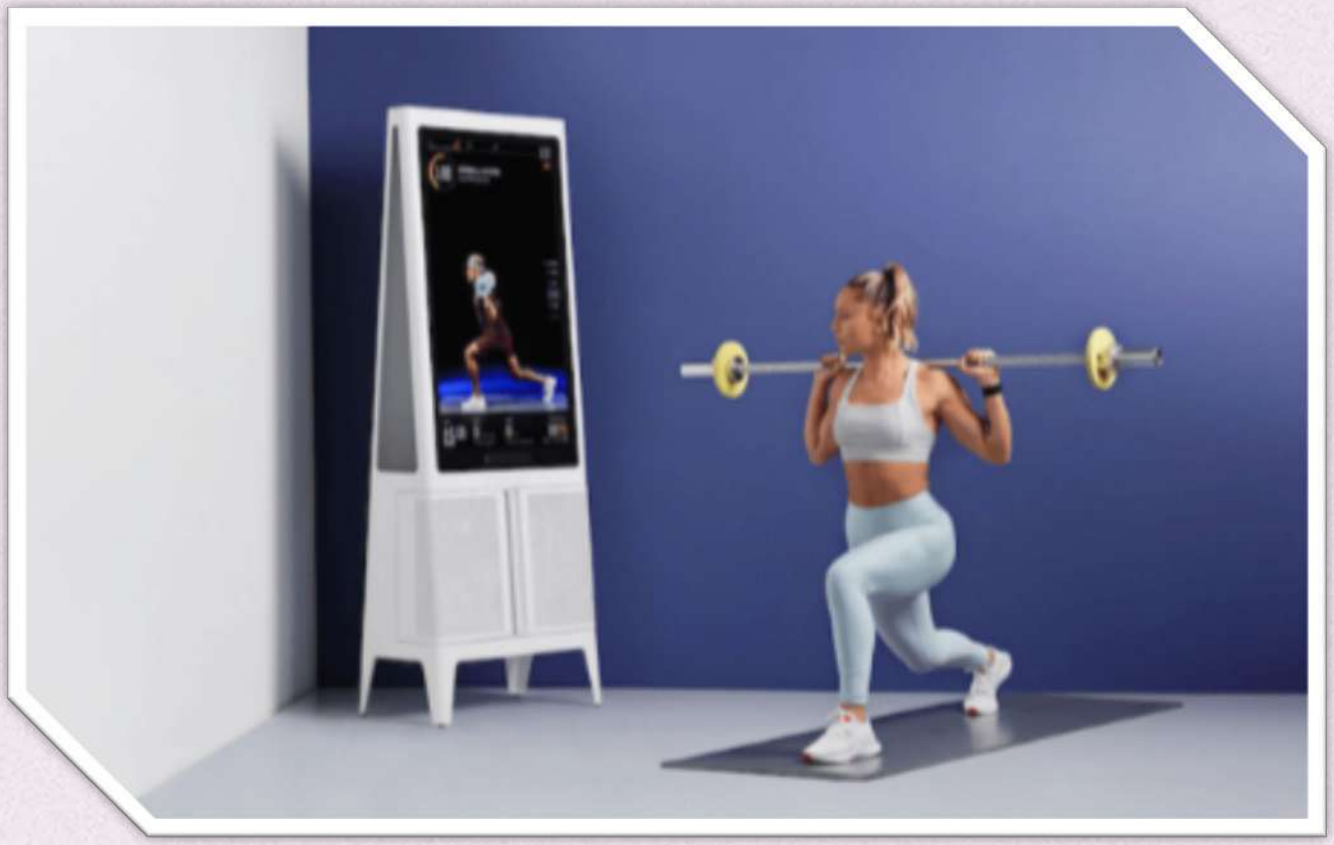

**Supported by the Turkish Football Federation within the scope of the "Turkey Plays Football" project, our National Deaf Men's Football Team, operating under the Turkish Deaf Sports Federation, became the Olympic champion.In the final of the 25th Summer Deaflympics (2025) held in Japan, the national team defeated host country Japan 2–1, securing the Olympic title.**

**Mert Ali Özen scored the goals for the Crescent-Stars in the 5th and 18th minutes, while Japan's goal came from Hayashi.Kerim Vural, Chair of the TFF Disabled Football Coordination Board, commented on the championship:"We always saw the belief in our national players' eyes. No matter what, we were confident that this belief and determination would bring victory. I would like to thank our President İbrahim Ethem Hacıosmanoğlu, our First Vice President Mecnun Otyakmaz, and our Board Member Responsible for Disabled Football Ural Aküzüm for their financial and moral support. They were with the National Team during the camps in Riva as well and consistently showed their support."On behalf of TFF President İbrahim Ethem Hacıosmanoğlu, Kerim Vural congratulated the Head Coach Ramazan Karacif, the players, the entire technical staff, and the President of the Turkish Deaf Sports Federation, Dursun Gözel, for the Olympic championship. He added:"We must remember that this Olympic championship is a highly important measure of success—both for our country and for demonstrating the global value of deaf football."**

# The International Olympic Committee Has Approved a New Artificial Intelligence Model That Predicts Athlete Fatigue and Injury Risk

Res. Asst.Muhammed Ali GÖKÇE

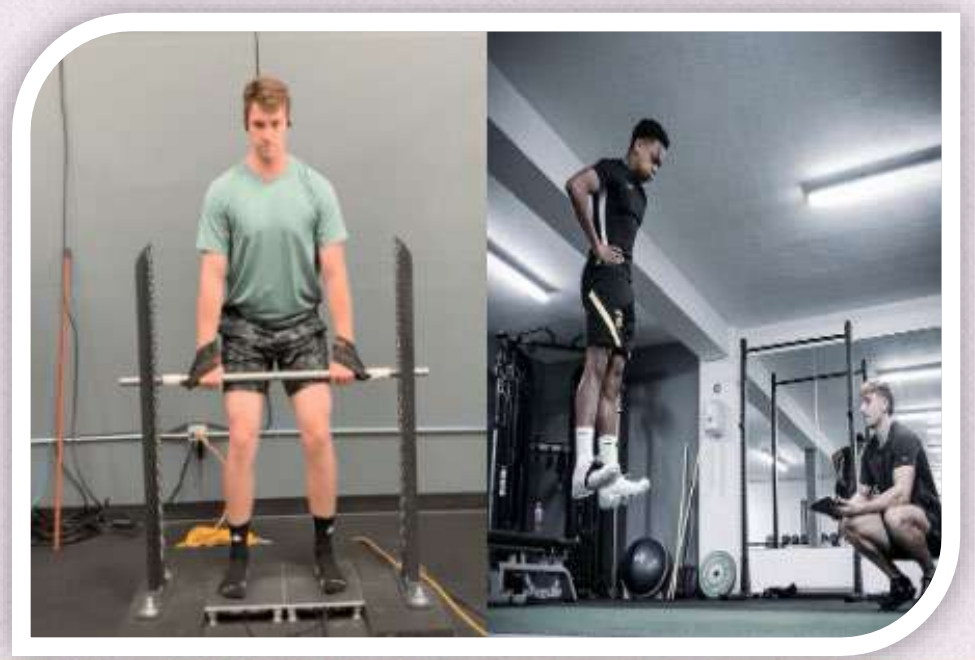
**The International Olympic Committee (IOC) has officially approved the new AI-T2P (Artificial Intelligence Training-to-Performance) system, which was developed to predict athletes' fatigue levels, overtraining risk, and potential injuries in advance.Developed through a joint effort by sports scientists from the United States, Australia, and Japan, this model analyzes athletes' daily GPS data, heart rate variability, jump performance, and sleep quality to estimate injury risk percentages within 48 hours.The system will be made available for use by elite-level sports federations starting in 2026. Prof. Emily Hart, one of the coordinators of the study, stated that the system will fundamentally transform training processes and provide coaches with critical data during "load-optimization" phases.**



# The European College of Sport Science (ECSS) Has Published a New Standard Protocol for Monitoring Strength Development in Young Athletes

Res. Asst.Muhammed Ali GÖKÇE

The European College of Sport Science (ECSS) has published a new international standard testing protocol for reliably monitoring strength development in athletes aged 12–18. The protocol aims to reduce methodological differences between countries in isometric and ballistic performance measurements.In the new guideline, step-by-step procedures were defined for parameters such as:• Isometric Mid-Thigh Pull (IMTP)• Isometric Squat (ISOS)• Countermovement Jump (CMJ)• Reactive Jump TestsAdditionally, a new “biological age correction coefficient” was proposed to incorporate growth and maturation differences into performance analysis.The ECSS Executive Board emphasized that this protocol will help track the development of young athletes more accurately and provide coaches with a universal measurement framework.



# Our IGU Faculty of Sport Sciences Students Achieved Top Rankings at the 47th Istanbul Marathon

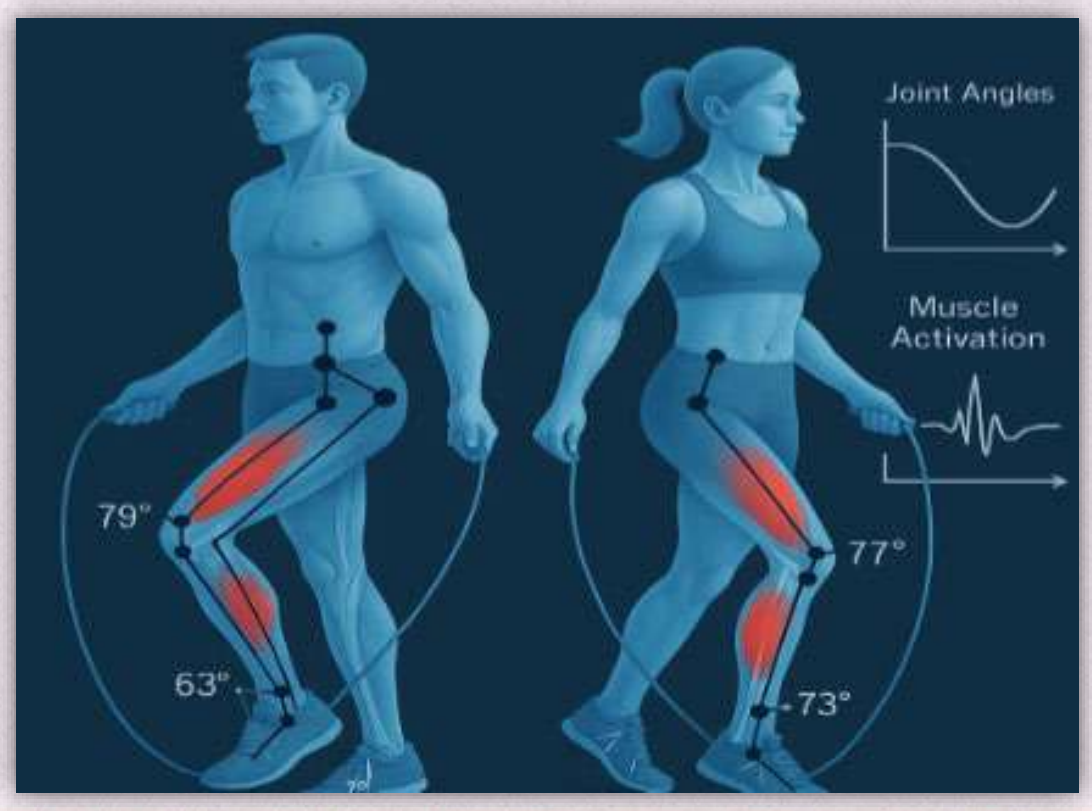
Res. Asst.Bilgehan PEPE

**In the 47th Istanbul Marathon held in November 2025, our students achieved remarkable and pride-worthy successes.Our Sports Management students earned podium placements with their outstanding performances in the 42 km Wheelchair Race Category:2nd Place: Zeynep Acet — Sports Management Department3rd Place: Nurşah Usta — Sports Management DepartmentWe congratulate our students for this meaningful achievement and take great pride in the determination, perseverance, and exemplary dedication to sport with which they represented our university.We wish them continued success.**

# Gender-Based Differences Found in Lower-Extremity Biomechanics and Muscle Activation During Jump Rope Training in Combat Sports

Res. Asst.Bilgehan PEPE

**A study published in issue 13(11) of the journal Sports reported significant differences in lower-extremity biomechanics and muscle activation between male and female combat sport athletes (Muay Thai) during jump rope exercises. The study included 10 female athletes (average age 22.8 ± 0.8 years) and 10 male athletes (average age 22.9 ± 1.4 years).The findings revealed that male and female athletes employ different strategies in terms of leg stiffness and muscle activation patterns while jumping rope. These results indicate that training programs and strength/coordination exercises in combat sports should be restructured in a gender-specific manner.Importance / Key Insight:From a sports science perspective, the study demonstrates that performance approaches should shift from a "one size fits all" model to one tailored to gender and individual biomechanical differences. It provides coaches with new insights particularly concerning lower-extremity deformation, injury risks, and performance optimization.Additionally, it serves as a valuable and up-to-date example for academic publications and thesis studies focusing on the biomechanical effects of gender.**



# Key Trends in Sports Marketing in 2025: Connecting with Fans and Embracing Innovation

Res. Asst.Mustafa Demir

The “2025 Sports Marketing Trends” report and subsequent evaluations reveal that digital transformation is fundamentally reshaping communication and brand strategies within the sports industry. Short-form video formats, influencer collaborations, data-driven personalization, and mobile-first digital experiences have become key elements that redefine how sports brands engage with fans.One of the strongest trends highlighted in the report is the dominance of short vertical videos—such as TikTok, Instagram Reels, and YouTube Shorts—in sports content. During 2024–2025, these formats became not only central to social media algorithms but also dominant in fan content consumption behaviors. Clubs and sports organizations prefer fast, easily shareable videos to maintain continuous engagement with supporters.Influencer marketing and user-generated content (UGC) exceeded 2023 projections and evolved into fundamental strategic tools in sports marketing. Micro- and nano-influencers generate high engagement particularly within niche sports communities, while athletes are now positioned not only as brand ambassadors but also as creators of their own media channels. This has introduced a new dynamic that diversifies communication strategies for clubs.In data collection processes, the “first-party data” approach has come to the forefront. With third-party cookies losing influence, data collection methods based on ticketing, subscriptions, memberships, and mobile app usage have gained strategic importance. The increasing dominance of mobile devices in sports consumption compels brands to invest in mobile-friendly content and interaction models.Purpose-driven marketing and sustainability have become key factors in sponsorship models. Brands now prioritize social impact, environmental responsibility, and ethical positioning more strongly in their sponsorship decisions. Although AR/VR, blockchain, and NFT applications have not gained mass adoption, they continue to add value in selected areas that enhance fan experience.Overall, the sports marketing trends shaped in 2023 demonstrate that success is achieved through an integrated strategic approach built on understanding fan expectations and using technology in the right context. For sports brands, sustainable competitive advantage is becoming possible through speed, flexibility, and personalized digital experiences.

# Healthy Living Through Exercise:The Power of Regular Physical Activity in Athlete Health

Res. Asst.Ünal Can GÖKMEN

Regular exercise stands out as a key determinant in protecting athlete health and sustainably improving performance capacity. Scientific research shows that structured physical activity increases musculoskeletal endurance, strengthens cardiovascular functions, and significantly reduces injury risk. In particular, strength- and endurance-focused training programs accelerate muscle tissue regeneration and positively support biomechanical adaptations.The effects of exercise are not limited to physiological development. From a psychological perspective, regular physical activity is emphasized to reduce stress levels, enhance mental well-being, and improve athletes' concentration skills. Numerous studies indicate that consistent physical activity decreases mood disorders and contributes significantly to overall quality of life.Planning exercise according to scientific principles is critically important for maintaining athlete health. Training programs tailored to individual needs not only support performance improvement but also minimize injury risks associated with overtraining. In this regard, the multidisciplinary collaboration of coaches, sports scientists, and health professionals is considered essential for preserving the holistic health status of athletes.Regular exercise not only improves physical capacity but also enhances psychological resilience, helping athletes perform more balanced and effectively both in sports and daily life. Supporting scientifically based exercise programs in institutional sports settings, clubs, and educational organizations represents an important step toward sustaining athlete health.

# The Relationship Between Running & Sprint Performance and Winning in Football:New Nutrition-Based Findings

Res. Asst.Yalçın MARAŞLI

The comprehensive study by Allen et al., published in the International Journal of Sports Science and Coaching (2025), has renewed discussion on the relationship between running performance and league success in football. Analyzing approximately 3,000 matches played in the English Premier League between 2015 and 2024 using tracking systems, the research demonstrated that total running distance, number of sprints, acceleration data, and high-intensity running are significantly associated with match outcomes.The study found that teams performing more accelerations and maintaining higher rates of high-intensity running tend to occupy higher positions in the league standings. Winning teams were observed to cover more total distance and engage in frequent short accelerations throughout the match. However, the researchers emphasized that “running more alone does not guarantee winning,” though running performance remains one of the fundamental indicators of success in modern football.Positional differences suggest that running load varies by context. Similar studies in the Bundesliga showed that defenders sprint less when their team is ahead, whereas midfielders and forwards maintain sprint and high-intensity running rates even when leading. Additionally, an increase in high-speed runs above 21 km/h was reported to enhance the likelihood of winning.Allen and colleagues also highlighted the critical role of sports nutrition in sustaining high-intensity performance. Muscle glycogen is the primary energy source during sprints and repeated accelerations. Since decreases in glycogen levels negatively affect sprint capacity and decision-making speed, strategic carbohydrate intake before and during matches is essential.Overall, the study underscores that the physical demands of modern football are becoming increasingly “short, explosive, and high-intensity,” indicating that training, load management, and nutrition strategies must be updated scientifically to meet these evolving demands.

# Decoding the Language of Muscles:A New Era in Sports with EMG-Based Smart Sensors

Res. Asst.Ayşe Demet KARADAĞ

One of the most striking innovations in sports science in recent years is EMG-based wearable sensors that can directly measure muscle activation. Performance assessment no longer relies solely on external data such as speed, distance, or weight lifted; instead, how and when muscles work, fatigue timing, and activation levels can now be monitored in real time. EMG technology measures the electrical signals of muscles with micro-electrodes placed on the skin with millisecond precision, allowing movement quality to be analyzed not by external observation but through scientific data coming from within the muscle.How does it differ from traditional systems?While GPS-based devices measure external performance, EMG reveals the internal performance of muscles. For example, two basketball players may jump to the same height, yet EMG data could show that one overuses the quadriceps while the other insufficiently activates the gluteal muscles—an insight that allows injury risks to be identified early.Additionally, EMG creates personalized load maps, clearly showing which muscle groups are overactive or underactive and which muscles carry injury risk. It is already known that hamstring imbalances in football players can predict ACL injuries.Laboratory precision brought to the fieldEMG measurements, once limited to laboratory environments, can now be recorded continuously during training and even matches thanks to wireless sensors. The thigh muscle activation of a sprinting athlete can be instantly transferred to a cloud system and analyzed by a coach within seconds.These advancements bring performance analytics directly onto the field, making load management and injury-risk assessment real-time processes. EMG also enables accurate evaluation of performance indicators such as reactive strength, muscle synchronization, and neuromuscular adaptation.In the near future, EMG sensors are expected to play a critical role in sports science through integration with smart clothing and AI-supported analysis platforms.

Kaynakça:Kim, J., et al. (2024). Real-time electromyography-based wearable system for injury prevention inathletes. Sensors, 24(5), 1259.Noury, N., et al. (2023). Advances in wearable biosensors for sport performance and recoverymonitoring. Frontiers in Sports Science, 5, 1180473.

# Performance Analysis from a Drop of Sweat:Monitoring Hydration and Recovery with Smart Biosensors

Res. Asst.Ayşe Demet KARADAĞ

**In sports science, not even a drop of sweat goes to waste anymore. New-generation biosensor technologies can analyze hydration, electrolyte balance, and recovery status in real time through an athlete's sweat. This allows dehydration or overload to be detected before the athlete even feels it. While traditional measurements relied on heart rate and lactate monitoring, advanced sweat sensors provide far deeper insights. Microscopic patches applied to the skin measure sodium, potassium, glucose, and lactate levels in sweat and transmit the data to a mobile application. The app instantly assesses the athlete's fluid loss, electrolyte balance, and energy utilization. Smart Sweat Analysis: Scientific Monitoring Without the LaboratoryIn the past, hydration status could only be determined using blood or urine samples, but today cyclists, runners, and football players can measure it in real time using a small sensor patch. When sodium levels in sweat rise, the system immediately warns: "Your electrolyte balance is dropping, increase your fluid intake." This not only prevents performance decline but also reduces heat-related risks in hot weather. The sensors can also track lactate levels, which indicate muscle fatigue. Thus, coaches can plan the next training load based on scientific data rather than guesswork. A New Advantage for Female Athletes Research shows that hydration and electrolyte needs vary throughout the hormonal cycle in female athletes. Therefore, biosensor technologies offer significant potential for personalized performance monitoring for women. A study conducted in the United States reported up to an 8% improvement in endurance test performance when female football players used sweat sensors (Nguyen et al., 2024).The Future: Biosensors + Artificial Intelligence = Smart Training ManagementIn the near future, the integration of biosensors with artificial intelligence will allow athletes' physiological states to be assessed instantly, and the system will automatically provide recommendations such as rest, train, or rehydrate. This technology is expected to reach a wide user base, from elite athletes to young athletes and fitness participants.**

Nguyen, T., et al. (2024). Sweat-based biosensors for hydration and electrolyte monitoring in athletes: A systematic review. Sports Medicine Open, 10(3), 85.

Gao, W., et al. (2023). Wearable biochemical sensing for sports performance optimization. Nature Reviews Bioengineering, 1(12), 987–1001.

# Beijing’in Beijing’s Liangma River Transformation: A Recreation Model That Connects the City with Social Life

**Res. Asst.Sinan DEMİRCİ**

**Beijing, In recent years, Beijing has undertaken one of the world’s most comprehensive urban transformation projects, turning the Liangma River into a recreation corridor that has become a model for city planning. Once neglected for many years—losing its function due to urban concrete expansion and suffering severe ecological damage—the river has been revitalized through ecological restoration, landscape redesign, and the creation of expanded social-use areas, becoming one of the city’s most vibrant open spaces.With the project, the river surroundings have been transformed into a sustainable recreational zone actively used by both residents and tourists. As part of the new development along the Liangma River, the following features were introduced:• Over 6 km of walking and running paths• Nature-themed seating areas and large event lawns• Waterfront zones supporting canoeing, paddleboarding, and similar water sports• Lighting systems and aesthetically designed bridges that enhance evening activities• Children’s play areas and culturally themed stopsWith this transformation, the Liangma River has become not only a green space but also a center for socialization, sports, and culture that integrates the city. Experts note that this model sets an important example for global cities in terms of sustainable recreation management, biophilic urban design, promoting active lifestyles, and urban ecosystem restoration.**

The Liangma River: Beijing's
Urban Greening Success Story
Le Monde, 29 Eylül 2025.

# The “Park” Revolution: Technology-Enhanced Recreation Spaces Are Spreading Worldwide

Res. Asst.Sinan DEMİRCİ

Across the world, city parks are evolving from traditional green spaces into technologically integrated smart recreation centers. As of 2025, IoT-based park systems, augmented reality activity zones, smart lighting, and AI-supported management applications have rapidly expanded in many countries, including the United States, South Korea, Japan, and the Netherlands. This transformation is viewed as a key component of urban planning approaches aiming to enhance overall city life quality.New-generation smart parks incorporate various technologies that enrich user experience. Sensor-equipped sports areas offer interactive exercise stations that measure users’ movement data and provide real-time feedback. Augmented reality–based activity trails create interactive learning and entertainment environments for children and adults with themes such as nature, history, and adventure. Additionally, AI-supported security systems improve user safety through automated lighting, camera control, and emergency management based on park density.Green energy applications are also among the defining features of smart parks. Solar-powered seating areas, energy-generating fitness units, and eco-friendly infrastructures provide solutions aligned with sustainable urban living goals. Real-time park management systems allow users to instantly monitor occupancy rates, shaded-area availability, and event announcements.According to experts, smart parks encourage physical activity among younger generations while offering safer and more accessible recreation spaces for older individuals. For municipalities, this model reduces operational costs and increases park usage rates, thereby enhancing public benefit.

Kaynak:The Future of Parks: Top Recreation Trends to Watch in 2025Vocal Media.

# ““From the Department of Exercise and Sport Sciences for the Disabled to Europe:Emin Çağrı Ulaş’s Erasmus+ Experience”

Res. Asst.Selim AKMAN

Hello! I’m Emin Çağrı Ulaş. I am a student in the Faculty of Sport Sciences, Department of Exercise and Sport Sciences for the Disabled. Throughout my university education, I participated twice in Erasmus+ Learning Mobility—first in Portugal, then in Poland. Today, I’m genuinely excited to share my experiences, gains, and advice with you, a valued member of IGU. I hope what I share will inspire and guide you on your journey of self-development.For my first Erasmus, I went to the Polytechnic Institute of Coimbra in Coimbra, Portugal, during the spring semester of my second year in 2023. This was my first time abroad, and I had very little idea of what to expect. The moment you step off the plane and place your feet on new ground, that sweet–sour mix of excitement and nervousness hits you… followed by that famous question that drops into your mind:“Okay… so what do we do now?”This question comes partly from a sense of challenge and partly from a simple survival instinct. That’s why doing some basic research about where you’re going before you leave is very important. Your first mission is to safely get yourself to your accommodation. After that, the rest unfolds like a domino effect—typical of Erasmus life.The first weeks are always an adaptation phase. So try to accept any challenges or emotional ups and downs as normal—especially if this is your first time abroad. New country, new language, new people, new culture… Try to stay present, learn, explore, and enjoy as much as you can. If your English is good, you won’t have many communication problems. In Portugal, most young people speak English, so you don’t need to panic about learning Portuguese. And since you’ll be spending most of your time with other Erasmus students, English naturally becomes the common language.From the first day to the last, I tried to be as outgoing as possible. If going on Erasmus was one of the best decisions I have ever made, being social comes second. Because Erasmus is the last place where you’d want to spend your time doing nothing. Everything I did turned into a memory. Every photo and video I took became the background of a larger story. The more I let myself truly live the “real life” experience, the more I gained when I returned home.Living in the same house with people from different countries, learning to manage a budget, dealing with cultural differences, figuring out how to travel with limited resources, and—most importantly—understanding what it means to stand strong in the world on your own… all of these had a huge impact on my life.You can think of it like the XP system in video games. To unlock certain abilities, you must complete specific tasks. Erasmus is the kind of opportunity where you can unlock those abilities five times faster.

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There were definitely times when I struggled in classes. In Portugal, most universities do not offer separate classes for Erasmus students, which means you attend courses completely in Portuguese together with Portuguese students. Naturally, while the lesson continues at its normal pace, you don’t understand anything. At this point, speaking one-on-one with the instructors is crucial. Some were very supportive both during lessons and exams, while others, unfortunately, made little effort to make things easier. In fact, one of our professors, Arthur—who was around sixty years old—refused to speak English in class despite having two Erasmus students present. Since he gave no indication that he would accommodate us, we were forced to change the course. On the other hand, I also had very kind instructors from whom I learned a great deal. What I learned in those classes truly stayed with me. Therefore, if you do Erasmus in Portugal, I strongly recommend maintaining solid communication with both your teachers and classmates.I could write much more about Portugal, but for now, it is enough to say:“Portugal is my second homeland and will always have a special place in my heart.”I don’t want to speak too boldly, but if you do Erasmus in Portugal and don’t enjoy it, you can come and hold me accountable.For my second Erasmus, I went to AWF Poznań in the city of Poznań, Poland, in the spring semester of my senior year in 2025. I mentioned earlier that when I first arrived in Portugal, I had no idea what to do, but things were very different in Poland. This time, I was much more confident and aware thanks to my previous experience. My goal was not only to see a new country but also to advance academically.My greatest advantage this time was that, like many schools in Poland, AWF Poznań had special classes for Erasmus students. Everyone in my class was an Erasmus student, and all courses were taught in English. This allowed me to both understand the lessons clearly and participate actively. We also became very close as a class, making the lessons incredibly enjoyable. This was the period in my entire university life when I most wanted to go to school.Life is full of emotions, but some truly stand in a different place. After returning from Portugal, I experienced what they call “Post-Erasmus Depression” very intensely. After some time, the feeling that my time there had been nothing but a dream began to settle in. But my Erasmus experience in Poland gave me the chance to turn that dream back into reality. Because loving and missing a place is one thing, that deep feeling called saudade is another… But setting foot again on the same soil years later and breathing in the air—that is something entirely different. It’s impossible to describe in words. Perhaps some emotions are indescribable simply because they belong uniquely to the person who truly feels them. Erasmus became a turning point that revealed these hidden treasures to me.

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I should also mention some of the challenges in Poland. First of all—the weather. It is truly cold. Much colder than what we are used to. I encountered temperatures I had never seen before, like –13 degrees. So you definitely need proper gear: gloves, thermal clothing, and a good-quality coat.As for language, Polish is extremely difficult. I couldn’t learn it as easily as Portuguese, and I couldn’t reach the level I wanted. That was a small disappointment for me. Fortunately, the rate of English proficiency in Poland is very high. You can handle many things in English. In fact, for one of our course projects, we went to a middle school and taught a class in English. Being able to communicate comfortably even with middle school students taught us a lot.During my Erasmus journey, I visited many countries and cities across Europe. Every place I went—its climate, food, history, culture, and people—left a unique mark on me. I loved some cities more than others; some affected me in different ways. Coimbra, Aveiro, Lisbon, Utrecht, Ghent, Poznań, Gdańsk, Kraków, Prague, and many more… When I think of each city, a different story comes to mind; a different taste, a different smell.You know the saying, “Who knows more—the one who travels or the one who reads?” I don’t know which one is wiser, but Erasmus at least gives you the chance to become one of these two wise characters.These two experiences in two different countries showed me one thing:Erasmus is not just studying in another country; it is meeting another version of yourself.Every city, every culture holds up a mirror to you. Sometimes it shows your strengths; sometimes it confronts you with your weaknesses. But when the process ends, you never return as the same person.There are many details I haven’t mentioned so I don’t make this text too long. But I hope what I’ve shared so far touches your life in some way. If you want to learn more, I invite you to my YouTube channel. You can find me by searching “Çağrı Emin” in the app.Thank you for reading this far.Take care of yourself.

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