



# SPORT & TECHNOLOGY

SPGM



**WEARABLE  
TECHNOLOGY**

**INFORMATION  
TECHNOLOGY**

**SPORTS  
COACHING**

## NEWS, NEWS, NEWS

*News of the professorship*

Entdecken Sie mit uns die faszinierende Welt der MINT-Fächer! Letzten Herbst erforschten dreizehn Schülerinnen auf der Zugspitze als "TUM Entdeckerinnen" die Geheimnisse des Permafrosts. Eine Initiative der Professur für Sportgeräte und -materialien an der TUM, unterstützt von der Hg Foundation, um Mädchen nachhaltig zu fördern.

To be continued [here](#)



# REVIEW ON WEARABLE TECHNOLOGY IN SPORTS: CONCEPTS, CHALLENGES AND OPPORTUNITIES



*by Ahmet Çağdas Seçkin, Bahar Ates and Mine Seçkin*

This comprehensive review delves into the expanding role of wearable technology in optimizing sports performance through real-time data analysis. Examining the structure, research articles, and commercial sensors across various sports, the review addresses athletic performance measurement, injury prevention, and rehabilitation. It offers valuable insights for athletes, coaches, healthcare professionals, and researchers, highlighting the potential for future advancements in wearable sensors and biometric data analysis. While acknowledging limitations such as privacy concerns and accuracy issues, the review emphasizes the importance of legal regulations, ethical principles, and technical measures for safe and fair use. Additionally, it underscores the significance of personalized devices and advocates for further research on athlete comfort and performance impact. The promising emergence of wearable imaging devices is discussed, showcasing their potential for sports rehabilitation and performance monitoring, ultimately enhancing athlete health and performance in the sports industry.

Read the publication [here](#)

## RESEARCH ON THE INFLUENCE OF WEARABLE EQUIPMENT ON SPORTS UNDER THE BACKGROUND OF INFORMATION TECHNOLOGY



*by Cao Nan*

In the era of rapid information technology advancement, its influence has permeated every facet of life. This study focuses on the integration of information technology and wearable equipment, examining the impact of wearable devices on sports and exploring their development trends. The research aims to elucidate how the use of wearable technology in sports monitoring can scientifically and efficiently guide individuals in pursuing physical exercise, thereby enhancing overall fitness and health. By investigating the intersection of information technology and wearable equipment, this study provides valuable insights into the evolving landscape of sports technology, laying a foundation and offering reference value for future research on the impact of wearable equipment on sports.

Read the publication [here](#)

## A CONCEPTUAL FRAMEWORK FOR THE GENERATION OF ADAPTIVE TRAINING PLANS IN SPORTS COACHING



*by Zahran Laila, El-Beltagy Mohammed, Saleh Mohamed*

Sports coaches play a crucial role in planning training sessions based on observed athlete performance. However, there is a lack of technology-driven approaches for generating personalized training plans. This paper introduces a conceptual framework leveraging Machine Learning techniques to create adaptive and personalized training plans. The framework incorporates performance indicators, physiological constraints, and behavior-change features, offering athletes automated plans that adapt to their behavior and goals. This innovative approach has the potential to revolutionize sports coaching by enhancing the efficiency and personalization of training regimens.

Read the publication [here](#)