KEMIJSKI INŠTITUT

Vabilo na Preglov kolokvij / Invitation to the Pregl colloquium

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National Institute of Chemistry
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AI Biosensors for Precision Medicine & Health

Artificial intelligence (AI) and wearable sensors are two fields that are instrumental in realizing the goal of precision medicine—tailoring the best treatment for individual patient. Recent development between these two fields is enabling better patient data acquisition and improved design of wearable sensors for monitoring the wearers' health, fitness, and their surroundings. The growing field of wearable sensors aims to tackle the limitations of centralized, reactive healthcare by giving individuals insight into the dynamics of their own physiology. However, causality between disease and therapeutic platforms are much extremely complex, thus results in analysis of their output extremely difficult. Integration of AI approaches can bridge this gap, using pattern analysis and classification algorithms for improvement of diagnostic and therapeutic accuracy. The future AI-biosensors (AI wearable sweat biosensor, AI- eatable biosensor, AI-glass biosensor, AI-implantable biosensor et al.) mainly have the function of AI-diagnosis (The diagnostic algorithm in the microprocessor can verify the output of the sensor and present the diagnostic information), Big data processing (The use of self-contained space for historical data and various necessary parameters of data storage, greatly improving the performance of the controller.) and Self-learning/adaptive (Embedded microprocessor with advanced programming function. In the working process, the AI-biosensor can reconstruct the structure and parameters according to certain behavioral criteria, and has adaptive functions).

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Vljudno vabljeni / Kindly invited