



## *Clinical Key for Electrical Stimulation in Physiotherapy and Rehabilitation*

KA220-VET Cooperation partnerships in vocational education and training

Project No: 2021-1-TR01-KA220-VET-000032970



### **Dear Reader,**

Clinical Key for Electrical Stimulation in Physiotherapy and Rehabilitation (CK4Stim), is a KA220-VET - Cooperation partnerships in vocational education and training project supported by Turkish National Agency. The project is on the electrical stimulation approach and will be carried out in 30 months in partnership between six institutions from Türkiye and EU. Hatay Mustafa Kemal University (HMKU - Türkiye), Başkent University (BU - Türkiye), Süleyman Demirel University (SDU - Türkiye), University of Craiova (UCV - Romania), Šiauliai State University of Applied Sciences (ŠVK - Lithuania), and Tartu Health Care College (THCC - Estonia) are the partners of the project that is being coordinated by Pamukkale University (PAU - Türkiye).

The 1st Transnational Meeting of CK4Stim was held on 8th-9th of June 2022 in Denizli, Türkiye. Besides the Tartu Health Care College (THCC) (which participated online), participants from all other partners physically attended the meeting that was held at Pamukkale University, Faculty of Physiotherapy and Rehabilitation, Denizli, Türkiye. Pamukkale University Rector Prof. Ahmet KUTLUHAN (PAU), Dean Prof. Ali KİTİŞ (PAU, Faculty of Physiotherapy and Rehabilitation), Dean Prof. Osman Nuri AĞDAĞ (PAU, Faculty of Technology) and International Relations Office Coordinator Prof. Zeha YAKAR (PAU) supported the meeting with their participation as well. In addition to the undergraduate (BSc) and graduate (MSc/PhD) level students and physiotherapists, members of Faculty of Physiotherapy and Rehabilitation (PAU), Health Sciences Vocational School (PAU), and Turkish Physiotherapy Association also attended on the first day of



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the project meeting. At the meeting, all activities to be carried out within the first 6 months and throughout the project were reviewed and strategic targets were determined.

Electrical stimulation (ES) approach has been commonly used for neuromodulation, strengthening, pain, and somatosensorial management in physiotherapy and rehabilitation disciplines for many years. The specific functional objectives and capability of target structures are the primary criteria for the choice of stimulus parameters. Unit pulses are characterized by current, polarity, width, intensity, frequency, amplitude (volts or amperes), duration (pulse width), shape (rectangular, triangular, sinusoidal), transcutaneous or invasive application, and stimulation site (the nerve, muscle). The methodologies and applications that concern these parameters are mainly focused on the functional and bodily treatment and assessment objectives. Although ES approaches are commonly used in physiotherapy and rehabilitation, the mechanisms of action are still not well known and there is no standardization even in definitions, such as ES, neuromuscular electrical stimulation (NMES), transcutaneous electrical stimulation (TENS), somatosensorial electrical stimulation...etc. Because of different denominations and treatment protocols (frequency, intensity, etc...) high-quality evidence has not been gained yet. However, in general, the application procedures are mainly not standardized but have great potential for use in clinical practice for diagnosis, in progress monitoring of patients, in guidance for further therapy and rehabilitation depending on the capabilities affected, and allowing rehabilitation where the active motion is forbidden or could not be initiated, etc. Besides the limited evidence of ES approaches in literature, a common language for ES approach in physiotherapy and rehabilitation education and practice is needed in European dimension and all over the world.

Project aims to motivate the use of innovative practices among university students, academic staff, clinical and researcher physiotherapists in order to increase the competencies of academics and students with in-place training. This project is being carried in accordance with the European Union's strategy of developing cooperation, increasing quality, and encouraging learning and vocational activities of physiotherapists,





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researchers, and students (both undergraduate and graduate level) with the aspect of vocational education and training, and life-long learning.

In line with these goals, necessary studies have been initiated to develop training modules with comprehensive content for academic staff, university students, and physiotherapists in order to raise awareness on electrical stimulation approaches in physiotherapy and rehabilitation.

The decisions that were raised and the work that was output at the meeting are summarized below:

- Determining the basic knowledge level of target groups on approaches by preparing surveys and interviews, work started in all partner countries.
- Developing a curriculum on electrical stimulation approaches in physiotherapy and rehabilitation was initiated. The curriculum will contribute to the training of qualified physiotherapists in clinical practice.
- Preparation of Lecture Guide Book studies was initiated.
- The studies on production of education materials with innovative and open access educational resources were started.

You can follow the developments regarding the CK4Stim project, where all project outputs will be prepared as open access newsletters that will be prepared every 6 months.

Let's be aware of the electrical applications in physiotherapy and rehabilitation for standardization, variation, and to support evidence-based studies.

### **Project Partners:**

Pamukkale University, TÜRKİYE

Ahmet KUTLUHAN, MD.Prof.



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**Associated Partners** (in alphabetic order)

Estonian Association of Physiotherapists

Lithuanian Physiotherapy Association

Order of Physiotherapists in Romania

Turkish Physiotherapy Association

### **Contacts**

You can follow and access the project outputs and news via our website:

For all kinds of questions and information

CK4Stim Project e-mail: [ck4stim.2022@gmail.com](mailto:ck4stim.2022@gmail.com)

CK4Stim Project Facebook page: <https://www.facebook.com/CK4Stim-109320221807989/>

CK4Stim Project Twitter page: <https://twitter.com/ck4stim>

CK4Stim Project Instagram page: <https://www.instagram.com/ck4stim>

### **News:**

<http://haber.pau.edu.tr/Haber/paunun-projesi-125-proje-arasindan-destek-almaya-hak-kazanan-21-projeden-biri-oldu>

<http://haber.pau.edu.tr/Haber/paunun-projesi-fizyoterapi-ve-rehabilitasyon-alaninda--klinik-anahtar-olacak>



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<https://www.instagram.com/p/CeokLnno45d/?igshid=YmMyMTA2M2Y=>

<https://www.etis.ee/Portal/Projects/Display/ea972e08-ddc4-4f09-929f-6a6298812f60>

<https://www.nooruse.ee/et/teadus-ja-arendustegevus/projektid/kaimasolevad-rahvusvahelised-projektid>

<https://et-ee.facebook.com/ttkartu/>

<https://www.facebook.com/152299624797353/posts/5897565936937331/>

<https://svako.lt/lt/naujienos/pirmasis-erasmus-bendradarbiavimo-partnerystes-projekto-susitikimas-turkijoje>

<http://efl.ee/rahvusvaheline-projekt/>

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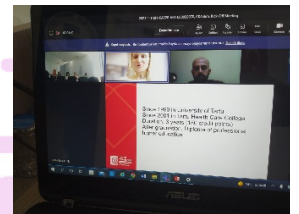
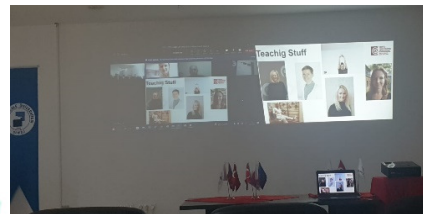
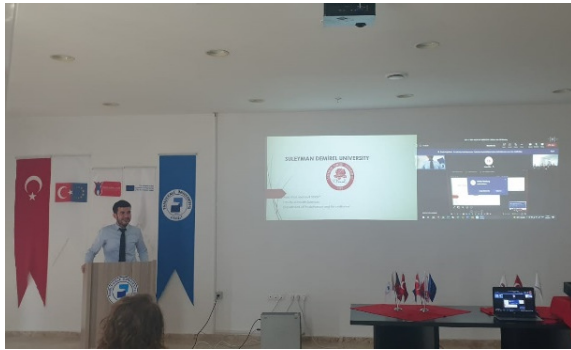


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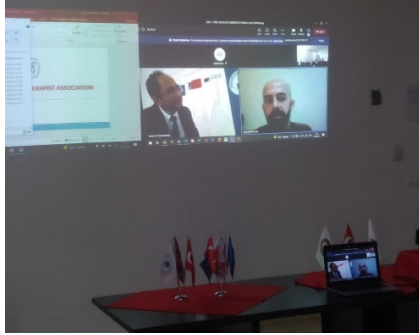
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