

Horizon 2020

Call: H2020-SC1-BHC-2018-2020

(Better Health and care, economic growth and sustainable health systems)

Topic: SC1-DTH-12-2020

Type of action: RIA

Proposal number: 965247

Deadline Id: H2020-SC1-2020-Single-Stage-RTD

Proposal acronym: KOPOSIS



1 - General information

Topic: SC1-DTH-12-2020

Type of Action: RIA

Call Identifier: H2020-SC1-BHC-2018-2020

Deadline Id: H2020-SC1-2020-Single-Stage-RTD

Acronym: KOPOSIS

Proposal title:

“A Smart end-to-end Platform for Monitoring and Managing Chronic Fatigue Syndrome”

Duration in months: 36



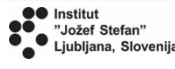



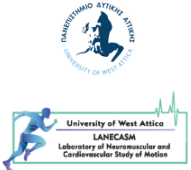


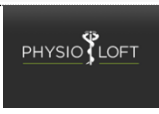


Free keywords: *Chronic fatigue symptoms, real world data, artificial intelligent.*

Abstract



KOPOSIS is a consortium aiming to design, implement and validate a novel person-specific management workflow for patients suffering from Myalgic Encephalomyelitis / Chronic Fatigue Syndrome (ME/CFS). The proposed workflow will comprise a suite of Artificial Intelligence (AI) clinical tools and decision support systems which will utilize data coming from both wearable sensing devices and Real-World Data. Thus, a new “augmented” window will open for the clinical and medical specialists who are managing patients with CFS, enabling patient tailored day-to-day management and intervention schemes.

ME/CFS is an acquired, chronic, multi-systemic disease characterized by significant relapse after physical, cognitive, or emotional exertion of any sort. ME/CFS has a prevalence of 0.3%. The KOPOSIS platform will also offer to clinicians and researchers a complete infrastructure, including wearable sensors, AI models and cloud computational engines, which will facilitate the deployment of future models related to Chronic Fatigue Syndrome. The KOPOSIS consortium comprises thirteen partners, formulating a balanced set of academic, clinical and industry partners. More specifically, five of the partners are academic institutes and/or research centers, five of the partners are clinical, two of the partners are small and medium sized enterprises (SMEs) and finally, one partner is an association related to MF/CFS. Multidisciplinary expertise in the areas of machine learning, big data analytics, sensor management, natural language processing are combined with excellent knowledge in the area of MF/CFS, aiming to produce solutions that will improve the quality of life of patients suffering from the syndrome.

2 - Participants & contacts

No.	Participant organisation name	Short name	Country
1	 Institute of Communication and Computer Systems	ICCS	GREECE
2	 Leibniz Universität Hannover – Institut für Rechtsinformatik	LUH - IRI	GERMANY
3	 Institut "Jožef Stefan" Ljubljana, Slovenija	JSI	SLOVENIA
4	 University of Ioannina	UOI	GREECE
5	 Universidad Politécnica de Madrid	UPM	SPAIN
6	 University of Antwerp	UZA	BELGIUM
7	 University of West Attica	UNIWA	GREECE
8	 Servicio Madrileño de Salud	SERMAS	SPAIN
9	 Roessingh Research and Development	RRD	NETHERLANDS
10	 G. PAPAGIANNIS, & A. TRIANTAFYLLOU PHYSIOTHERAPY G.P.	PHYSIOLOFT	GREECE
11	Napix di Paolo Stofella & C SaS	Napix	ITALY
12	 Univerzitet U Novom Sadu – Medicinski Fa Kutlet	UNS	SERBIA
13	 Asociación de Afectados por SFC y por SQM de la Comunidad de Madrid	SFC-SQM Madrid	SPAIN

4.2.7 University of West Attica

Part. No.	Partner Name	Short Name	Type	Country	
7	University of West Attica	UNIWA	Public Institute	Greece	 
Description of the Organisation					
<p>The University of West Attica (UNIWA) was founded in March 2018. The foundation of the newly established University resulted from the merging process of the former Technological Educational Institute of Athens and the Piraeus University of Applied Sciences.</p> <p>UNIWA is a dynamic and constantly evolving institution that strives to fulfil its vision and mission, and to achieve its goals investing in the development of modern teaching methods, adapted to students' needs and responsive to competitive labor market and society requirements, as well as in its modern facilities and infrastructure (i.e., teaching resources, classrooms, laboratories/workshops, scientific equipment).</p> <p>UNIWA offers contemporary Undergraduate and Postgraduate study programmes, which give our graduates the opportunity to acquire specialized scientific knowledge, skills and competences, linking academia to both society and the labor market.</p> <p>At UNIWA, there are twenty-seven (27) Departments operating under the academic umbrella of five Schools, covering a wide range of scientific fields, such as social, administrative and economic sciences, engineering sciences, health and welfare sciences, as well as food sciences and applied art and culture studies.</p> <p>According to official data, UNIWA is the third largest university in Greece with regard to the number of undergraduate students whereas it hosts over 50,000 students in total. The University employs, on permanent basis, 608 faculty members, 138 special laboratory teaching and technical staff members, and 345 administrative staff members qualified to accomplish its high-standard teaching, research and administrative goals.</p> <p>This combination of highly-skilled and experienced human resources, together with the existing modern infrastructure, has laid the foundation for further academic development of the University.</p> <p>UNIWA offers a wide range of educational and lifelong learning services, including:</p> <ul style="list-style-type: none"> • The undergraduate studies that lead to 4-year Bachelor's (Level 6) and 5-year Engineering Diploma degrees. • Postgraduate studies leading to the completion of a postgraduate diploma (Level 7). • Doctoral studies (Level 8). • Lifelong learning and vocational training programmes. 					
Description of any significant infrastructure and/or any major items or technical equipment relevant to the proposed work					
<p>The Laboratory of Neuromuscular and Cardiovascular Study of Motion – LANECA SM was founded in 2018 and aims to conduct research in the fields of Neuromuscular and Cardiovascular Study of Movement and Exercise with applications in prevention and in the management of neuromuscular and cardiovascular diseases and dysfunctions.</p> <p>In particular, LANECA SM contributes:</p> <ul style="list-style-type: none"> • In the development of methods and techniques for the evaluation of cardiovascular function, the evaluation of neuromuscular function (balance, gait), muscle tone, control and evaluation of falls in the elderly, etc. 					

The methods and techniques developed by LANECAASM, in combination with the tools and scales already weighted by its members (chronic fatigue, depression, physical activity, functionality, musculoskeletal pain, quality of life, motor disability, etc.) will contribute to the improvement of the evaluation and rehabilitation in both the general population and population groups with special and special health problems.

- In the development of interventions and rehabilitation protocols for the management of population groups with special problems, such as patients with motor disabilities, stroke, multiple sclerosis, Parkinson disease, muscle tone disorders, dementia, chronic fatigue syndrome, cognitive deficits, spinal cord injuries, traumatic brain injuries.

During the years, LANECAASM's members have published more than 20 research articles in indexed peer-reviewed journals and international peer-reviewed conferences in the domain of Complex Chronic Conditions and Chronic Diseases.

Figure 6: Geographical distribution of the KOPOSIS partners

