COST Action "European Network to connect research and innovation efforts on Advanced Smart Textiles" (CONTEXT) CA17107

Funded by the Horizon 2020 Framework Programme of the European Union

7th CALL FOR SHORT TERM SCIENTIFIC MISSIONS (6 STSMs)

PERIOD MARCH 2021 – MAY 2021

Deadline for applications (**February 26th 2021**)

We are pleased to announce the opening of the 7th Call for Short Term Scientific Missions (STSMs) of the COST Action CONTEXT (CA17107) (https://www.cost.eu/actions/CA17107) (https://e-services.cost.eu/files/domain_files/CA/Action_CA17107/mou/CA17107-e.pdf)

WHAT ARE STSMs?

STSMs are institutional visits aimed at supporting individual mobility, fostering collaboration between individuals and are primarily addressed to PhD students or postdoctoral fellows.

A STSM grant is a fixed contribution based on the requested budget which is evaluated by the STSM Coordinator. The grant is for travel and subsistence costs only. It does not necessarily cover all such expenses.

STSMs must have a minimum duration of 5 calendar days and a maximum duration of 90 calendar days.

The financial contribution for each STSM is up to a maximum of EUR 2.000 € in total and up to a maximum of EUR 160 per day for accommodation and meal expenses.

After the STSM, the STSM participant must submit a scientific report to the Host and to the STSM Coordinator within 30 days after the end of his/her stay.

The STSM has to take place abroad (in other COST country) and the candidate should get in touch with the proposed hosting institution individually.

The STSMs of this call have to take place between 15th March and 31st May 2021, and up to 6 STSM Grants are available.

To learn more about COST rules and about Short-Term Scientific Missions please check the COST Vademecum that can be downloaded from: **www.cost.eu/Vademecum**

PROPOSED TOPICS

We invite you to apply for one of proposed topics related to specific Working Group objectives:

WG1: Smart textiles for health and medical applications, such as bio-monitoring of cardiovascular, neural, muscle and respiratory activity or thermoregulation, from one side and bandages and wound care during surgery, uniforms for medical personal, or drug-release systems such as bandages or plasters, from the other side.

For this WG the key technological challenges are: (1) development of controlled drug release fibre and textile structures for therapeutics of different skin conditions; (2) development of garments and home textile products with fully integrated bio-monitoring, active systems to improve life quality and ICT systems enabling remote monitoring of patients and assisted living services for "better ageing concepts"; (3) development of fibre and textile structures with enhanced thermal/breathability electro-active properties with integration of new surface functionalities for improving barrier (antiviral and antibacterial) properties.

WG2: Smart textiles for automotive and aeronautic applications, such as structural applications, light weight components, tailored reinforcement structures, heated seats, and passenger sensing systems working on the integration of novel eco sustainable materials and integration of ubiquitous computing sensing-actuation onto materials structures.

For this WG the key technological challenges are: (1) integration of fully integrated and printed electro active and interactive sensors and actuators that enable the development of ubiquitous sensing and interactive surfaces, while also integrating fully embedded (or printed and/or fibre and yarn integrated) haptic feedback systems via both lighting integration and mechanical stimuli responses; (2) integration of fully customizable self-lighting materials based on active fibres and yarns, and integration or programmable textile matrixes for interactive sensing.

WG3: Smart textiles for personal protection applications, for example monitoring the safety of workers during work and exercises (e.g. fireman, mineworkers, …).

For this WG the key technological challenges are: (1) the integration of geo tracking and personal GPS systems (Global Positioning Systems), physiological and biometric monitoring, embedded and integrated communications and energy harvesting, with all data monitoring systems sharing data in real-time; (2) integration of cooling/heating systems into garments.

WG4: Smart textiles for building and living applications, including textile reinforced concrete, geotextiles, colour changing materials (wallpapers), smart lighting, etc.

For this WG the key challenges are (1) development of new functional textile materials using nano-materials and industrial waste, eco-friendly technologies (like ultrasonic deposition, bi/tri-component fibres, UV curing coatings), considering multilayer approaches; (2) focus on high thermal performance (applying eco-efficient heating and cooling systems, together with low thermal conductivity and diffusivity coatings and additives, infrared reflective and phase change materials), in order to achieve Net Zero Energy Buildings (NZEB); (3) textile functionalization with smart and efficient systems like sensorization, communication systems and actuators, considering printing electronics approaches, in order to maximize comfort, well-being; (4) develop interoperability between connected devices.

WG5: Smart textiles for sports and wearables' applications like connected skies, tennis racquets, ski clothes with embedded sensors, GPS, airbags for skiers, etc.

For this WG the key technological challenges are: (1) development of light weight performance garments having new textile surface coatings enhancing thermal management (insulation), controlled drug release for muscle care, and also proving optimized comfort, low pill, low shrink and fast drying; (2) integration of low power/autonomous bio-monitoring and/or integrated ICT and IoT communication systems for training monitoring and performance assistance and integration concepts of training analytics, always connected and data sharing for garment/textile structures "peripherals".

DEADLINE AND APPLICATION

The regular call application is open from **February 5th to February 26th 2021**. The evaluation results will be communicated shortly after the submission.

If the 6 STMS grants are not taken or the total budget is not spent after this regular call, applications will be accepted on a rolling basis until March, 30th, 2020 (until the 6 places are taken or the total budget is spent).

The STSM must be completed by May, 31st, 2021!

If you are interested in applying, please follow the procedure:

- complete the **on-line application form** (at https://e-services.cost.eu/stsm)
- download the **formal application** and send it as an e-mail attachment to the STSM Coordinator (**monica.ardanuy@upc.edu**) together with the necessary supporting documents:
    - Full CV including award date of the applicant PhD, their current position and a list of academic publications (if applicable)
    - Work plan proposal addressing one of the scientific WG of CONTEXT Cost action
    - Motivation letter
    - Letter of support from the home institution
    - Letter of invitation from the host institution

The evaluation of applications will be performed by the Core Group, on behalf of the MC.

The selection criteria will consider:

- Scientific quality of application (30%)
- Relevance to proposed topic for the CONTEXT Cost Action (30%)
- Contribution to personal development of the candidate (10%)
- Curriculum vitae of the applicant (20%) (specific encouragement for Early Career investigators)

If you have any questions, do not hesitate contact to us:
Prof. Dr. Mònica Ardanuy (STSM Coordinator) (monica.ardanuy@upc.edu)
Prof. Dr. Barbara Simončič (STSM co-coordinator) (barbara.simoncic@ntf.uni-lj.si)