

context

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

12th CALL FOR SHORT TERM SCIENTIFIC MISSIONS (3 STSMs)

PERIOD AUGUST – OCTOBER 2022

Deadline for applications (July 27th 2022)

We are pleased to announce the opening of the 12th 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.

Eligibility

Individuals affiliated to a legal entity in:

- A COST Full/Cooperating Member
- An European RTD
- A NNC: Near Neighbour Country

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

The financial contribution for each STSM is up to a maximum of EUR 1.800 € in total. *(This amount can be increased up to 3.000€ if the applicant justifies the need. All requests will be*

analysed individually by the Grant Awarding Coordinator who will decide to apply or not the increase).

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

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

The STSMs of this call have to take place between 29th August and 31st October 2022, and up to 3 STSM Grants are available.

The Grantee has 30 calendar days from the end date of the STMS to submit at e-cost the scientific report (https://www.cost.eu/STSM_Report).

The submission of the report is mandatory, or the Grant is cancelled. Late submission, beyond the deadline, can also lead to the cancellation of the Grant.

To learn more about COST rules and about Short-Term Scientific Missions please check the Guidelines:

<https://www.cost.eu/uploads/2021/12/Grant-Awarding-userguide.pdf>

<https://www.cost.eu/uploads/2022/02/COST-094-21-Annotated-Rules-for-COST-Actions-Level-C-2022-02-15.pdf>

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 **July 15th 2022 to July 27th 2022**. The evaluation results will be communicated shortly after the deadline.

The STSM must be completed by October, 31st, 2022!

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

- Encode a grant application
- Complete the **application form template** and attach 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
 - Confirmation of the host on the agreement from the host institution in receiving the applicant

The evaluation of applications will be performed by the Grant Awarding Coordinator.

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)

The grantee must complete the report template, upload, and submit it in e-COST along with the following additional supporting documents:

- Approval of the scientific report by the host.

If you have any questions, do not hesitate to contact to us:

Dr. Ariadna Detrell (Cost Action Chair): adetrell@textils.cat

Dr. Mònica Ardanuy (Grant Awarding Coordinator): monica.ardanuy@upc.edu