SUSTAIN Deliverable

D8.4 Dissemination of first year project reports and publications

Grant Agreement number	101071179
Action Acronym	SUSTAIN
Action Title	Smart Building Sensitive to Daily Sentiment
Type of action:	HORIZON EIC Grants
Version date of the Annex I against which the assessment will be made	28th March 2022
Start date of the project	1st October 2022
Due date of the deliverable	M12
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Lead beneficiary for the deliverable	AALTO
Dissemination level of the deliverable	Public

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European Innovation Council

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Abstract
This Deliverable, D8.4 Dissemination of first year project reports and publications, presents the SUSTAIN project dissemination efforts.

Contents

1 Dissemination Plans

The partners have planned to disseminate results of the project at national and international scale:

• >20 top-tier high impact publications: IEEE Transactions (Mobile Computing, Signal Processing, Wireless Commun., Evol. Comput.), IEEE Magazines (Commun., Signal Process.), APS/EPS publications (Phys Rev.), ACM IMWUT. IEEE PerCom, IEEE ICDCS, ACM GECCO, EWSN. (Open Sci. & Gl. Challenge – innovation, economic development, and competitiveness)

• use arXiv for early and open sharing of research output. All publications will be made available (green open access) in Aalto's ACRIS archive (https://research.aalto.fi) as well as via the European Open Science Cloud (https://eosc-portal.eu). (Open Science).

• exhibit results at fairs to explain and demonstrate solutions and findings: Mobile World Congress (Spain), SLUSH (Finland). (Establishing new markets & Global Challenge – cluster 4)

• summer schools will be arranged jointly to attract young researchers and teach in the fundamental areas related to the project. Tutorials on the technologies behind SUST(AI)N will be presented in public outreach events and scientific venues. Social media (Twitter, YouTube, ResearchGate), leaflets & promotional videos (Open Science – early sharing)

• Standardization: Active participation to standardization through involvement in IETF groups

• Aalto, UNITN, YTU, IMT, UPC national / international news channels (dissemination to gen. public)

2 Journal Articles, Conference Papers

Authors	Tentative Title	Related WP(s): add description of what Project Results you will use in the Article	Consortium Partners involved	Persons from outside the Consortium (name, organization, country)	Journal /conference foreseen	Foreseen Submission date
Lingyun Yao, Martin Trapp, Karthekeyan Periasamy, Jelin Leslin, Gaurav Singh, Martin Andraud	"Logarithm-Approximate Floating-Point Multiplier	First results related to PC computation (WP2) - workshop paper	Aalto	Martin Trapp, Aalto	Workshop on Tractable Probabilistic Modelling (TPM), collocated with UAI conference	Accepted (open source publication)
Manel Gasulla and Matias Carandell	for Hardware-efficient Inference in Probabilistic Circuits"	Maximum power point tracking (WP5)	UPC	Matias Carandell, UPC, Spain	Sensors (MDPI)	29.4.2023
Sahar Golipoor, Stephan Sigg	Accurate RF-sensing of complex gestures using RFID with variable phase-profiles	WP4- proposing signal processing technique for distinguishing two different hands to facilate gesture recognition	Aalto		2023 IEEE 32nd International Symposium on Industrial Electronics (ISIE)	19.6.2023
Zhang Lei, Ma Yazhou, Fan Xiaojie, Fan Xiaochen, Zhang Yonggang, Chen Zhenxiang, Chen Xianyi, Zhang Daqing	Wi-Diag:Robust Multi-subject Abnormal Gait Diagnosis with Commodity Wi-Fi	Wireless sensing (WP4)	IMT	Zhang Lei, Ma Yazhou, Fan Xiaojie (Tianjin University, China) ; Fan Xiaochen (Tsinghua University, China) Zhang Yonggang (Jilin University, China); Chen Zhenxiang (University of Jinan);Chen Xianyi (Nanjing University of Information Science and Technology, China)	IEEE Internet of Things Journal	07.08.2023
Pei Wang, Xunjun Ma, Rong Zheng, Luan Chen, Djamal Zeghlache, Xiaolin Zhang, and Daqing Zhang	SlpRoF: Improving the Temporal Coverage and Robustness of RF-based Vital Sign Monitoring during Sleep	Wireless sensing (WP4)	IMT	Rong Zheng (McMaster University, Canada); Luan Chen (ENSEA, France); Xiaolin Zhang (Peking University First Hospital, China) ; Djamal Zeghlache (IMT, France)	IEEE TRANSACTIONS ON MOBILE COMPUTING	Under minor revision
Marco Crespi, Andrea Ferigo, Leonardo Lucio Custode, Giovanni Iacca	A Population-Based Approach for Multi-Agent Interpretable Reinforcement Learning	Concept for social interpretable models for reinforcement learning tasks (WP3) - conference paper	UNITN	/	Applied Soft Computing	18.8.2023
Eduard Ferré, Marc Azlor, Manel Gasulla	Systematic Experimental Evaluation of Submilliwatt PV	Light energy harvesting (WP5, Task 5.1)	UPC	Eduard Ferré and Marc Alzor (UPC)	Eurosensors 2023	13.9.2023

and Ferran Reverter	Cells for Indoor Applications					
Marc Azlor, Eduard Ferré, Manel Gasulla and Ferran Reverter	FOCV-MPPT Power Management Unit for Submilliwatt Indoor PV Cells	Design of highly efficient MPPTs (WP5, Task 5.4)	UPC	Eduard Ferré and Marc Alzor (UPC)	Eurosensors 2023	13.09.2023
Lingyun Yao, Martin Trapp, Karthekeyan Periasamy, Jelin Leslin, Gaurav Singh, Martin Andraud	Power Gain from Energy Harvesting Sources at High MPPT Sampling Rates	First results related to PC computation (WP2) - full paper	Aalto	Martin Trapp, Aalto	ICLR	15.10.2023
Karthekeyan Periasamy, Martin Trapp, Jelin Leslin, Lingyun Yao, Marko Kosunen, Martin Andraud	Approximate Computing for Hardware-efficient Inference in Probabilistic Circuits	First results related to PC computation (WP2)	Aalto	Martin Trapp, Aalto	IEEE transactions on emerging topics in computing	30.10.2023
Mir Hassan, Leonardo Lucio Custode, Kasim Sinan Yildirim, Giovanni Iacca	FedEdge: Federated Learning with Docker and Kubernetes for Scalable and Efficient Edge Computing	Concept for federated learning platform based on docker and kubernetes (WP3) - workshop paper	UNITN	/	International Workshop on Machine Learning for Autonomic System Operation in the Device-Edge-Cloud Continuum (MLSysOps 2023) part of EWSN	accepted (publication date TBD)
Andrea Ferigo, Leonardo Lucio Custode, Giovanni Iacca	Quality-Diversity Optimization of Decision Trees for Interpretable Reinforcement Learning	Investigation of quality diversity optimization for interpretable reinforcemeny learning (WP3) - journal paper	UNITN	Andrea Ferigo, Trento, Italy	Neural Computing with Applications	under review (publication date TBD)
Leonardo Lucio Custode, Giovanni Iacca	Social Interpretable Reinforcement Learning	Concept for social interpretable models for reinforcement learning tasks (WP3) - conference paper	UNITN	/	AAAI conference 2023	under review (publication date TBD)
Pietro Farina, Subrata Biswas, Eren Yildiz, Khakim Akhunov, Saad Ahmed, Bashima Islam, Kasim Sinan Yildirim	FreeML: Zero Energy TinyML Using Pre-Trained Networks	Energy-efficient execution of black-box models on energy, memory and CPU-constrained devices (WP3) - workshop paper	UNITN	Pietro Farina (University of Trento, Italy), Subrata Biswas (Worcester Polytechnic Institute, US), Eren Yildiz (Ege University, Turkiye), Khakim Akhunov (University of Trento, Italy), Saad Ahmed (Georgia Institute of Technology, US), Bashima Islam (Worcester Polytechnic Institute, US)	The ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN 2024)	to be submitted to the conference on 31.10.2023
Khakim Akhunov, Eren Yildiz, Kasim Sinan Yildirim	"PEARL: Power- and Energy-Aware Multicore	Energy-efficient execution of black-box models on energy, memory	UNITN	Khakim Akhunov (University of Trento, Italy), Eren Yildiz (Ege University, Turkiye)	ACM Transactions on Embedded	under review (publication date TBD)

	Intermittent Computing	and CPU-constrained devices (WP3) - journal paper			Computing Systems	
Khakim Akhunov, Eren Yildiz, Kasim Sinan Yildirim	Enabling Efficient Intermittent Computing on Brand New Microcontrollers via Tracking Programmable Voltage Thresholds	Energy-efficient execution of black-box models on energy, memory and CPU-constrained devices (WP3) - workshop paper	UNITN	Khakim Akhunov (University of Trento, Italy), Eren Yildiz (Ege University, Turkiye)	International Workshop on Energy Harvesting & Energy-Neutral Sensing Systems	under review (publication date TBD)

3 Dissemination and Public Events

SUSTAIN participation in dissemination and public events are detailed below. The table also includes information on Summer Schools linking to SUSTAIN.

Event	Theme	Role in event (participant, presenting SUSTAIN etc.)	Date	Website if available	Consortium Partners involved	Persons involved
2023 Joint IEEE SPS-AESS and EURASIP Summer School on Integrated Sensing and Communication	1.Wireless sensing: Theory and Some fundamental issues 2.Wireless sensing: Gesture and human activity recognition	Lectures	23/6/2023-29/6/2023	https://conference.ece.ncsu.edu/isac/	IMT	Prof. Daqing Zhang Prof. Pei Wang,
2023 26th European Conference on Artificial Intelligence (ECAI)	[Workshop]Awareness Inside: Open Meeting of the EIC Pathfinder Challenge	Speaker, presenting SUSTAIN	1/10/2023	https://awarenessinside.eu/awareness-inside-open-meeting-of-the-eic-pathfinder-challenge/	IMT, AALTO	Prof. Xujun Ma, Stephan Sigg
Kickoff meeting of the ELLIS Unit Trento	Awareness Inside	Speaker, presenting SUSTAIN	8/9/2023	https://pressroom.unitn.it/comunicato-stampa/artificial-intelligence-trentino-unit-ellis-started	UNITN	Prof. Giovanni Iacca
2023 Summer school on Communications and Data Science	Sensing and Perception with Data Science	Organizer	21/08/2023 - 01/09/2023	https://www.aalto.fi/en/department-of-electrical-engineering-and-automation/students-learn-about-communications-engineering-and-data-science-at-the-unite-summer-school	AALTO	Stephan Sigg