Project Ideas from European brokerage events March 6 2023

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Brokerage Facts & Numbers

- 7-8 February in Brussels: more than 450 Attendances, excellent result: we are again back as in the pre-Covid events
  - [ECS Collaboration Tool · Brokerage 2023 Highlights](#)

- IN TOTAL 73 PROPOSALS
  - **29 presented in the plenary session of the brokerage and reported here**
  - Additional 30 inserted on the ECS Collaboration Tool
  - *7 SME pitches for networking, still on the brokerage and reported here*
  - Other 14 proposals presented in the previous EFECS2022 event of November in Amsterdam and reported here
  - Other posters even of the presented ptches
- Italian partners actually should be present in «at least»
  - **9** new PROPOSALS
  - **4/5** resubmission of 2021/2022 calls

Project proposals

Acronym	Title	topic	Coordinator
1_HEMISYS	**H**ealth and **E**nvironmental **M**ulti-sensor **I**ntegrated **SYS**tems	Multi-sensor ECS for real-time Air Quality monitoring and indoor/incabin air cleaning "Made in Europe", at > 50% improved performance and >50% reduced cost and power consumption vs. state-of-the-art	Martin Schrems, i-conel GmbH
2_SENTIENT 🇮🇹	Safety and security for European industries and infrastructure	Key techonological capabilities for European safety and security, in safety Critcal Systems	Eeva Viinikka, Spinverse Oy
3_Multi_organ-on-chip	Multi-Organ-on-Chip - Engineering a Better Future	New drugs and therapies Precision medicine with personalization Setting up different deseases models	Erika Györvary, CSEM
4_LANTERN 🇮🇹	Large-Array Fine-Pitch Wafer Probing	to achieve 25 μm pitch probing, with a stretched goal to 10 μm to demonstrate such testing over large arrays of contacts (>1.000)	Paolo BERNARDI POLITO
5_RIBL	Remote Innovations in Boolean Logic	A collaborative environment for the design and development of chips based on open-source tools	Aad Nales, Almende B.V.,
6_DT² 🇮🇹	Digital Twin tools	• speed up the integration of DTs into various domains • automatic update of structural changes from real twin into the digital • Energy optimization & Edge Intelligence	Javad Ghofrani University of Luebeck
7_NextAI4RISC 🇮🇹	Next Generation Trustworthy RISC-V Based System-on-Chip Architectural Foundations for multimodal supply chain and logistics strengthened with embedded AI	• To decrease the workload of AI/ML and IoT in Connected and/or Autonomous Vehicles (CAV) and their use in multimodal supply chain • To improve the 5G/6G preparedness of CAVs in automotive, supply chain and logistics • To design and implement RISC-V hardware security, trust and AI/ML functionalities to extend the SoC architectural foundations with embedded AI, trusted computing, secure/safe/privacy • UNECE 155/156 regulations and standards and open HW initiatives	Alper Kanak, ERARGE
8_ SpeakCare **Capability**	Health service for automated medical reporting	Speech-to-text conversion Natural Language Processing (NLP) and Artificial Intelligence Virtual assistant	Jan-marc Verlinden, KnowL Solutions BV

Project proposals

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9_OpenAr **Capability**	Open Source Augmented Reality Eyewear and Ecosystem	Open source project to provide Do-It-Yourself AR/XR eyewear for everyone (License: Apache 2.0)	Jani Vallirinne, Oulu Unversty
10_Adesman **Capability**	European ASIC design suite for mature nodes	complete European ASIC design suite, alternative to Cadence/Synopsys	Edmund Humenberger Symbiotic EDA
11_AIDA	Artificial Intelligence Design Assistant	EDA tool integrated AI design assistant	Edmund Humenberger Symbiotic EDA
12_MedPhab	Photonics Pilot Line for Medical Devices	• Fiber modules for spectroscopy • Opto-fluidics • Wearables • IVD readers	Jukka Hast, VTT
13_ Phenomenal	Packaging and Heterogeneous Integration- Manufacturing Technologies Enabling Chips for 6G	• Wafer-scale technologies for heterogeneous integration • Antenna in package • III-V integration • Industrial manufacturing	Anneliese Pönninger EV Group
14_Re-Comp	Resilient Edge Computing	• Distributed systems adapted to future variability of basic resources • Extend life cycle of sensor networks and edge computing systems • High levels of safety and security • AI - adaptation and low energy consumpton	Morten Larsen AnyWi Technologies
15_AGATE	Insights Beyond The VisibleTM, For a Better World!	To create Xpcs of totally new, innovative and impactful products and applications for both consumer and industrial use cases, for maximized impact.	Mikael Wester, Aalto University
16_MultiGasS ensor **Capability**	Platform for customized multi gas sensor modules	Prototypes of customizable gas sensor modules ex works	Matthias May UST Umweltsensortech nik GmbH

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17_AIDOSec	AI-augmented automation for efficient DevOps, a model-based framework for continuous and Secure development of complex systems	**AIDOSec** aims to extend the AIDOaRt framework to consider **security aspects** in the **early stage of continuous system and software development**	Gunnar Widforss, Mälardalen University
18_MATISSE	Model-based engineering of Digital Twins for early verification and validation of Industrial Systems	• **holistic approach** for the DT-based continuous systems engineering. • **core model-based framework** for efficiency and continuity • Define • a **continuous verification and validation strategy** of DTs • DT-based services supporting prediction, testing, and monitoring.	Gunnar Widforss, Mälardalen University
19_H2TRAIN	an **H**olistic **H**ealthy-lifestyle and wellbeing motivational **TR**ainer based on **A**rtificial **I**ntelligence **N**etworks	to accelerate the development of technologies (with a particular focus on Artificial Intelligence) which can support the access to regular exercise to a vast majority of the population, **including weaker and disabled categories** by advancing some Key Digital Technologies in the field of wearables, healthcare, sport equipment	Marco Ottella Xtremion
20_Edge AI for Autonomous Systems **Capability**	Edge AI for Autonomous Systems	• **Interoperable and replicable edge AI hardware and software (HW/SW) solutions** • **Efficient and standard engineering methods and tools** • **Open and integrated platforms and ecosystems**	Anton Koval, Lulea Universty of Technology
21_FABSCHEDULER	RLFAST: Reinforcement Learning for Fab Automation, Scheduling, and Test	A scalable, dynamic, adaptive, robust, fast scheduling system based on the latest advancements in Reinforcement Learning that meets the changing market needs of the semiconductor industry and supports its long-term success	Jasper van Heugten, Minds.ai
22_MADEIN5 **Capability**	Manufacturing of next generation chips and digitization of ECS for low power electronics Industry 5.0	Next generation low power edge and data centers chip development in Industry 5.0 manufacturing environment and e.g., mobility, communication, energy management, health tech applications.	Ilan Englard IE PM&C

Project proposals

Acronym	Title	topic	Coordinator
23_LoCaCRECES	Dynamically Forming, **Lo**w **Ca**rbon, Multiple Value Streams Pursuing Energy Communities through **C**yber **R**esilient, **E**dge **C**omputing **E**lectronic **S**ystems	• **Dynamic grouping** local energy and mobility assets, users and SoSs • Development of **cyber resilient solutions**, with attack detection, incident-response and self-healing, rapid service restoration capabil, • **Optimum flexibility portfolio management** • Low-carbon operation considering **hourly carbon emissions** • Effective implementation of **edge computing** to balance field devices and cloud computing/communication requirements, dependencies	Alparslan Zehir, Innova IT Solutions
24_H2@COMP	hydraulic hydrogen compression	hydraulic hydrogen compression system for refueling stations	Aleksejs Klokovs, VRAC
25_FrienDyno,	Environmentally friendly small power generator with the rotor linear motion	new type of bicycle generator for charging smartphones, power banks and veloelectronics	Aleksejs Klokovs, VRAC
Space@FSRadar	Applications for VIRAC small-baseline interferometer	to use Irbene antenna complex as a part of **European Space Industry with Ground Segment TT&C services** based on adaptation and sharing of infrastructure model providing maximum benefit on European and Global scale for both NEO and deep space missions together with fundamental research in Radio Astronomy.	Aleksejs Klokovs, VRAC
26_E-Community	Energy Communities Leveraging the Adoption of Renewable Energy and Storage	to allow prosumers to participate in advanced **Demand Response** programmes that dynamically match and optimize local generation with local consumption considering their **flexibility**	José Luís Malaquias, Cleanwatts
27_RISS	Risk Intelligence for Systems of Systems	• **life cycle management** of IoT/SoS utilizing **risk-based intelligence** with **feedback loops** and security **information sharing** capabilities • • **Chain of trustworthiness** throughout all stages of life cycle • Aligning secure life cycle and **compliance automation** with **up-to-date standards**, paradigms and solutions • Security **knowledge management** and **automatization** using artificial intelligence, knowledge semantic models, and natural language processing	Łukasz Brandt DAC.DIGITAL

Project proposals

Acronym	Title	topic	Coordinator
28_pmwind	Predictive Maintenance of Windfarms Using Wireless Sensors	• easily retrofittable application , reconfigurable and interoperable wireless sensor systems for predictive maintenance in DRES • adaptable algorithms and Artificial Intelligence on the edge • Application specific development of DT at component, subsystem, turbine and wind farms Levels. • accurate simulation models of the above technical aspects	Eoin Ahern Tyndall National Institute
29_2Restore	Microbiome on Biodegradable R2R (Roll2Roll)	• Anti Inflammatory / Immunity: Microfluidics R2Ron Paper Electronics • Gut Health / Brain: Next Gen Microbiome Anaysis with Machine Learning tools • Fat Burning: Organoid / Organ on a chip cardiovascular / cardio toxicity model • Energy (Harvesting)	Miguel Roncalés AlphaSIP

Partners Presentations

SME		Title	Competencies	POC
A_SUMMA	**FI**	Summa Semiconductor Ltd	Specialized Semiconductor Prototyping for Collaborative Projects	Pasi Salonen
B_EXCILLUM	**SE**	Excillum AB	High End **X-ray sources:** Design, Development, Manufacturing	Simona Laza
C_Actve Technologies	**IT**	ACTIVE TECHNOLOGIES	Arbitrary Waveform Generators (AWGs) Pulse Pattern Generators (PPGs)	Michele Ramponi
D_VerumSoftware Tools	**NL**	Verum Software Tools B.V.	Mathematical Verification and Validation for Cyber-Physical Systems	Bert de Jonge
E_MantSpectra	**NL**	MantiSpectra B.V.	The power of NIR Spectroscopy on a Chip.	Fang Ou
F_Dispelix	**FI**	DISPELIX	• AR glass wave-guide design, prorotype manufacturing, preparation for mass manufacturing (fabless supplier) = Proof-of-concept AR Glass prototypes & small series • HUD display wave-guide design, prorotype manufacturing	Marko Pudas
G_ NeroSuBianco	**IT**	Nero Su Bianco	• Market & Business analysis (Exploitation), • Piloting and engage industrial end users (IT, AT, DE & Easter EU), • Co-develop AI based solutions, • Support upskilling	Andrea Jester

List of additional proposals presented in the EFECS 2022 (Amsterdam November 2022)

Acronym	About	Coordinator
COCO **Capability**	Confidential Computing	J.J. Vegas Olmos NVIDIA (DNK)
MTF	Magnetic Thin Film MMIC	Johannes Frantti Reciprocal Engineering - RE Oy (FIN)
TISSUE	Early Detection of Deep Tissue Injury	Rahul Samant Rehabtronics Inc. (CAN)
AFDMA	End-to-end platform for acoustic wave filter design automation and manufacturing analysis	David Shin Acentury Inc (CAN)
La RAMBLA	Laboratory Risk Aware Model Based Learning Automation	Jaap van der Voet Philips Medical Systems Nederland
REAL-CoMO	Reliable Energy-independent Edge Artificial InteLLigence for Condition Monitoring	patrick courtney Technical university of Zu
NOMAD **Capability**	Delivery Robot as a Service (DRaaS) Ecosystem for Industrial Zones	Didem Guzin .MndRobotics (Turkey)
Auto-Shop **Capability**	Smart-Autonomous Shopping Cart / Digital Solutions for stores…	Didem Guzin .MndRobotics (Turkey)

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Daanaa	Power Management - Custom Built Integrated Circuit	Udi Daon Daanaa Resolution Inc (CAN)
QEDA	New electronic design automation software for solid-state quantum hardware	Félix Beaudoin Nanoacademic Technologies Inc. (CAN)
SmartCampus	to make the campus energy independent with supplies from local RES	Viesturs Veckalns Riga Technical University (LVA)
CONSENSUS **Capability**	European Consumers' safety and security for resilience and flow of everyday life	Eeva Viinikka Spinverse Oy (FIN)
HI-GAIN	Hi-Speed Driver for PE	Deepak Katkoria logicdev eu (AUT)
OCRAvest **Capability**	Measuring and analysing ergonomics for repetitive work	Toralf Kahlert Pumacy Technologies AG (DEU)
TRANSFORM	Trusted European SiC Value Chain for a greener Economy	Metin Koyuncu (BOSCH)

to what to pay attention?

- Novelty of the idea and appropriateness of the in/out expected TRL level

- Adherence to the Focus Topics or to the SRIA23

- Industrial and Academic strenght of the Consortium

- Avoid the ones coordinated by Canadian partners because they are intended for XECS calls, part of the EUREKA program, which Italy is not funding.

- Only for the newcomers:
  - Presence of other Italian partners
  - Knowledge in case of absence of other Italian partners, of all the Italian rules

Thank you and good luck!

For any further info do not hesitate to get in touch with us:

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