

demonstrating specific technologies, but make it very difficult to translate the lessons learned into reality.

- Situational awareness for SCs: Situational awareness is currently typically associated with governments and related agencies, though many large companies also use similar technologies. The aim is to continuously monitor all entities in a system, regardless of whether they are technical assets or resources. However, classical security approaches are not suitable for SCs, as the focus is currently put mainly on relatively static computer networks, which means that the strong dynamics in complex adaptive systems such as SCs cannot be considered accordingly.

Within the SSCCS project [L2], methods for solving these challenges will be researched, with the general aim of defining problems as close to real life as possible, i.e. the problems to be solved are defined from real use cases. For this purpose, the project consortium can draw on a great deal of comprehensive know-how from many areas of supply chain management and logistics, especially in the field of multimodal logistics. From an academic point of view, the targeted research results are not only interesting from the point of view of SCM and logistics, as well as IT security, but also relevant to the topic of resilience, a theme that has moved into the focus of research, and also of relevant societal and governmental actors.

Links:

[L1] <https://kwz.me/h6Q>

[L2] <https://projekte.ffg.at/projekt/3984614>

References:

- [1] S. Nasralla, A. Croft, Adrian: "Austria's FACC, hit by cyber fraud, fires CEO", 2016. Reuters.
URL:<https://www.reuters.com/article/us-facc-ceo-idUSKCN0YG0ZF>
- [2] V. Hassija, et al.: "A survey on supply chain security: Application areas, security threats, and solution architectures", IEEE Internet of Things Journal, 8 (8), 6222-6246, 2021
- [3] C. Colicchia, A. Creazza, D. A. Menachof: "Managing cyber and information risks in supply chains: insights from an exploratory analysis", Supply Chain Management: An International Journal, 24(2), 215-240, 2019.

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CHARITY: Cloud for Holography and Cross Reality

by Patrizio Dazzi and Massimiliano Corsini (ISTI-CNR)

ISTI-CNR is involved in the H2020 CHARITY project (Cloud for Holography and Cross Reality), which started in January 2021. The project aims to leverage the benefits of intelligent, autonomous orchestration of a heterogeneous set of cloud, edge, and network resources, to create a symbiotic relationship between low and high latency infrastructures that will facilitate the needs of emerging applications.

This goal is accompanied by the extra challenge of easing the transition from traditional hosting environments to the novel environment proposed by CHARITY. To address this issue, the project will equip application providers with adaptive, end-to-end lifecycle management tools and continuous integration and delivery techniques. At the same time, automation at the network level will be facilitated by zero-touch network slice life-cycle management. The project will further enable and foster the development of a Virtual Network Function (VNF) repository to assist applications to benefit from the compute and network continuum management environment.

The key value proposition is CHARITY's work on infusing intelligence at the resource management strategies level that does not rely solely on utility functions, as has been done so far. Instead, it relies on cognitive decision-making, based on an overall understanding of the resource, application and context characteristics. To this end it will be of paramount importance to provide solutions and approaches enabling the efficient and seamless management of heterogeneous computing and network resources.

CHARITY has the potential to tackle any kind of highly interactive class of services and applications and it will be validated against a wide class of highly anticipated applications characterised by extreme levels of interaction and data exchange between the end users and application components, i.e., AR, VR and Holography applications.

In summary, the main outcome of CHARITY will be a community-driven, open-source framework consisting of:

- A system for the autonomous orchestration, life-cycle management and efficient exploitation of a wide range of

compute and network resources and infrastructures that is not dependent on a single large vendor yet remains compatible with all.

- A collection of tools, mechanisms and algorithms enabling the efficient, contextualised and network-aware exploitation of edge resources and application reconfiguration.
- A set of VNFs along with a VNF repository that will support highly interactive application leveraging tools, technologies and platforms stemming from fields such as big data.
- Tools for the application providers to simplify the deployment and management of application components, mainly targeting the needs of SMEs (DevOps automations, specifications, APIs and best practices).

CHARITY runs from 1 January 2021 to 31 December 2023. It is coordinated by Uwe Herzog (EURESCOM) while Tarik Taleb (ICTFICIAL) is serving as technical manager for the project. ISTI-CNR is leading WP3 energy, data and computationally efficient mechanisms supporting dynamically adaptive and network-aware services.

Link:

<https://cordis.europa.eu/project/id/101016509>

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Academic Positions at the Department of Computer Science – University of Cyprus



The University of Cyprus was founded in 1989 and admitted its first students in 1992. Today, it is ranked as the 84th young university (under 50 years) and #501-600 worldwide by the Times Higher Education

Rankings.

These distinctions are the result of dedication to continuous development. The pursuit of research excellence constitutes a key strategic objective of the University of Cyprus. Moreover, the University continually extends and upgrades its programs of undergraduate and graduate studies.

To best serve its research and educational aims, the University recruits high-caliber academic staff who can make significant contributions to the development of internationally competitive research projects and to the design and delivery of new curricula. The University of Cyprus invites applications for two tenure-track academic positions at the rank of Lecturer or Assistant Professor in the Department of Computer Science, as follows:

- **one position in the field of “Software Engineering”**
- **one position in the fields of “Networks or Cybersecurity”**

For all academic ranks, an earned Doctorate from a recognised university is required.

Requirements for appointment depend on academic rank and include: prior academic experience, research record and notable scientific contributions, involvement in the development and teaching of high quality undergraduate and graduate curricula. The minimum requirements for each academic rank are listed at:

<https://www.ucy.ac.cy/acad.staff.procedures>.

Candidates need not be citizens of the Republic of Cyprus.

The official languages of instruction are Greek and Turkish. For the above positions, fluency in the Greek language is necessary.

In case the selected candidate does not have sufficient knowledge of the Greek language, it is the candidate’s and the Department’s responsibility to ensure that the candidate acquires sufficient knowledge of the Greek language within three years from appointment. Each Department sets its own criteria for the required level of fluency in the Greek language.

The annual gross salary for full time employment, according to the current legislation, is:

- Assistant Professor: €58,428.91-€78,798.61
- Lecturer: €44,410.28-€72,265.43

Candidates are invited to submit their application at the following link:

<https://applications.ucy.ac.cy/recruitment>.

Application deadline

The deadline for applications is Monday 27 September 2021.

For more information, candidates may contact the Human Resources Service:

+357 22 89 4146/4155, applications@ucy.ac.cy

or the Department of Computer Science:

+357 22 892669).