Resilient Networked Control Systems

Fact Sheet

Project Information

RESILIENTNETCONTROL

Grant agreement ID: 224877

Project closed

Start date
21 May 2008

End date
20 May 2012

Funded under
Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Total cost
€ 100 000,00

EU contribution
€ 100 000,00

Coordinated by
UNIVERSITY OF CYPRUS
Cyprus

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Objective

The proliferation of networks and digital devices over the last decade has solidified their role as important building blocks of the world's economic and social foundation. Numerous emerging commercial, governmental and medical applications are vitally dependent on such systems, and there is undoubtedly a growing need for ensuring that these critical networked systems remain reliable and trustworthy despite malicious or non-malicious disruptions. To address this deficiency, the proposed project focuses on networked control systems (NCSs) and sets the following two-fold objective: (i) develop theory and techniques for monitoring and diagnosing faults or, more generally, abnormalities in NCSs, possibly under limited and/or corrupted information, and (ii) establish control strategies that provide resilience to (potentially malicious) interference while maintaining acceptable performance and while satisfying any privacy concerns that may arise in a given NCS. The research objectives of this project are very timely, since building NCSs that are resilient and trustworthy presents a significant hurdle to reaching the full potential of NCSs. The project will facilitate to the development of a new body of research knowledge by combining several research areas from Electrical Engineering, Computer Science and Applied Mathematics (such as fault diagnosis, supervisory control, detection and estimation, system-level diagnosis, distributed algorithms, and others). Apart from intellectual merit, the project will also be instrumental for the reintegration of the Prof. Hadjicostis (coordinator) into the European research arena, giving him the opportunity to establish a research group on Resilient Networked Systems at the University of Cyprus (host). This process will facilitate knowledge transfer to the host and ultimately lead to courses and educational material on topics that can help train researchers and engineers in emerging technology areas of pan-European importance.

Fields of science (EuroSciVoc)

engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > **control systems**

natural sciences > **computer and information sciences**

engineering and technology > electrical engineering, electronic engineering, information engineering > **electrical engineering**

natural sciences > **mathematics**

Keywords

Algorithms | Control networks | Systems theory

Programme(s)

FP7-PEOPLE - Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Topic(s)

PEOPLE-2007-4-3.IRG - Marie Curie Action: "International Reintegration Grants"

Call for proposal

FP7-PEOPLE-2007-4-3-IRG
See other projects for this call

Funding Scheme

MC-IRG - International Re-integration Grants (IRG)

Coordinator

UNIVERSITY OF CYPRUS

EU contribution

€ 100 000,00

Total cost

No data

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Region

Κύπρος > Κύπρος > Κύπρος

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Last update: 16 July 2019

Permalink: https://cordis.europa.eu/project/id/224877