

International Federation of Automatic Control

lädt am
Donnerstag, den 19. April 2018
16.15 s.t.

in das
Haus der Ingenieure
Eschenbachgasse 9, 1010 Wien
1. Obergeschoß

zum Vortrag

**“Research on Cyber-Physical Systems for
Automation Applications”**

es spricht

Prof. Carlos Eduardo Pereira
IFAC Technical Board Vice-Chair

Um Anmeldung wird gebeten:
IFAC SECRETARIAT
Schlossplatz 12, 2361 Laxenburg
E-mail: secretariat@ifac-control.org

Abstract

“Research on Cyber-Physical Systems for Automation Applications”

by Carlos Eduardo Pereira

Director of Operations EMBRAPAII and Professor at UFRGS

Advances in Information and Communication Technologies (ICT), embedded hardware and software, Artificial Intelligence/ Machine Learning, and sensors/actuators have enabled the development of Cyber-Physical Systems (CPS), which are co-engineered interacting networks of physical and computational components. These systems are the foundation for Industrial Internet-of-Things (IoT) and Industry 4.0, where a new and integrated holistic view for the industrial automation area is proposed, not only regarding the production phase, but also applied to the development of smart products and to a closed loop lifecycle management of products and services.

This talk will give an overview on recent research results at the GCAR/UFRGS in Brazil. Research topics include the development of industrial wireless communication networks, the integration of intelligent maintenance systems with spare-part supply chain logistics by using semantic-based concepts such as ontologies, and model-driven engineering methodologies to the development of CPS systems using concepts such as multi-agent systems and aspect-oriented concepts. The proposed approaches have been validated in case studies from the areas of oil & gas automation and computer-assisted living.

GCAR/UFRGS - Control, Automation, and Robotics Group (GCAR) of the Federal University of Rio Grande do Sul (UFRGS)

Programm:

16.15 s.t.

Einführende Worte

o.Univ.Prof. Kurt Schlacher
Sekretär der IFAC

16.30

Research on Cyber-Physical Systems for Automation Applications Vortragender:

Prof. Carlos Eduardo **Pereira**
IFAC Technical Board Vice-Chair
Director of Operations EMBRAPAII and
Professor at UFRGS

17.30

Diskussion

Moderation
o.Univ.Prof. Kurt Schlacher