



Pascal BERRUET

Full Professor
Automation and industrial engineering

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*Innovation requires a global
approach at the interfaces between
fields of research*

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BIO

Pascal Berruet joined University Bretagne Sud in 1999 after his PhD on production systems reconfiguration obtained in 1998 at Ecole Centrale Lille. While his research has remained essentially the same (modeling, discrete-event systems), he's bringing it towards application areas around the issues and limits of personal assistance (disability, home automation, etc.). More generally, in a multidisciplinary approach, he integrates the problems of managing complex socio-technical systems. By combining human factors and automation, he's invested in man-machine cooperation going beyond breakdowns and attacks' robustness guarantee. He also proposes to make the industrial world aware to cyber-attacks and to the contribution of reconfigurable systems.

25% of the researcher's activity devoted to cybersecurity

Focus :
Research
Application field

Core data

PhD students: 18

Post-doctoral fellows: 2

Publications: 16 – JIM, H&T, SIMULATION, Computers in Industry, Applied Ergonomics, STH, etc.

Conferences: 90 - MOSIM, IEEE SMC, IFAC, IMACS, HMS, MSR, etc.

Book(s): 5 - "Advanced Manufacturing", Springer 2019 ; "Techniques de l'ingénieur", 2007, 2010 ; Productique Traité IC2, 2002

Award(s): FRATH 2013 best thesis award

Patent(s) : 1 - Software repository: Consumer app (2016)

Area(s) of research

Management of complex socio-technical systems.
Design of safe and reconfigurable socio-technical systems.
Optimization of human-machine cooperation.

Fields of expertise

Reconfigurable discrete-event systems.
System supervision and control monitoring.
Generation of the control command.
Modeling / Simulation.

Applicative examples

Sensor/actuator level safety in industrial systems.

Responsibilities

- Head of Department IUT QLIO (2018-2020).
- Vice-President Socio-Economic and Industrial Relations. University Bretagne Sud (2012-2016).
- Responsible for the work-study master's degree production management (1999-2008).
- Pilot and coordinator of the SOLENN project -12 partners 900 experimenters around energy control and security (2014-2018).
- ASIM (e-health project) assistant for health and management of domotised habitats (2012-2014).
- Various CIFRE collaborations around design of control and supervision interfaces based on business models.

Domain

Complex systems safety

Keywords

Detection and reaction to attacks
Joint simulation
Socio-technical systems

Contact

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