



## Review article

# Systems & Control for the future of humanity, research agenda: Current and future roles, impact and grand challenges



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## ABSTRACT

Following in the footsteps of the renowned report “Control in an Information Rich World,” Report of the Panel on “Future Directions in Control, Dynamics, and Systems” chaired by Richard Murray (2002), this paper aims to demonstrate that **Systems & Control is at the heart of the Information and Communication Technologies to most application domains**. As such, Systems & Control should be acknowledged as a priority by funding agencies and supported at the levels necessary to enable technologies addressing critical societal challenges. A second intention of this paper is to present to the industrials and the young research generation, a global picture of the societal and research challenges where the discipline of Systems & Control will play a key role. Throughout, this paper demonstrates the extremely rich, current and future, cross-fertilization between five critical societal challenges and seven key research and innovation Systems & Control scientific challenges. This paper is authored by members of the IFAC Task Road Map Committee, established following the 19th IFAC World Congress in Cape Town. Other experts who authored specific parts are listed below.

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## Contents

Contributions . . . . .	2
1. Introduction . . . . .	3
1.1. Systems & Control: a rich history . . . . .	3
1.2. A glimpse into future and changing paradigms . . . . .	4
1.3. Organization of this paper . . . . .	4
2. Advances in Systems & Control in the past fifteen years . . . . .	5
3. The essential role of Systems & Control in meeting critical societal challenges . . . . .	6
3.1. Transportation . . . . .	6
3.2. Energy . . . . .	8
3.3. Water . . . . .	10
3.4. Healthcare . . . . .	11

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3.5. Manufacturing	13
4. Key research and innovation challenges	15
4.1. Distributed networked control systems	15
4.2. Data-driven modelling, machine learning and control	16
4.3. Complexity and control	18
4.4. Critical infrastructure systems	19
4.5. Cyber-physical system of systems	20
4.6. Autonomy, cognition and control	22
4.7. Cyber-physical and human systems	24
5. Examples of high-impact Systems & Control applications in the coming decades	25
5.1. Road and air traffic management	25
5.2. Automotive control	28
5.3. Control on railways	30
5.4. Spacecraft control	32
5.5. The future of marine automation	33
5.6. Renewable energy and smart grid	34
5.7. Energy and resource efficiency in production systems	37
5.8. Controlling water distribution networks	38
5.9. Dynamics in neuroscience	38
5.10. Assistive devices for people with disabilities	41
5.11. Health care: from open medication to closed loop control	42
5.12. Cellular and bio-molecular research	43
5.13. Factory of the future and logistics systems	44
5.14. Control in the high-tech industry	46
5.15. Mechatronics and control co-design and automation	49
5.16. New dimensions of robotics	49
5.17. Control for smart cities	55
5.18. Advanced building control	56
5.19. Nanoscience and quantum engineering	57
5.20. Social and techno-social networks	58
5.21. Control and model-free stock trading in financial markets	59
5.22. The role of control for IoT <sup>1</sup>	61
6. Operational recommendations	62
7. Appreciation of Systems & Control by industrials	63
References	63

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