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Vortragsankündigung

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“Wireless Networked Control Systems”

With the emergence of high speed network technologies that allows a cluster of devices to be linked together economically to form a distributed system. Wireless communication is playing an increasingly important role in such distributed systems. Transmitting sensor measurements and control commands over wireless links allows rapid deployment, flexible installation, fully mobile operation and prevents the cable wear and tear problem in industrial automation, healthcare and environmental assessment. A feedback control system wherein the control loop is closed through a wireless network is known as a wireless networked control system (WNCS). Building a networked control system over wireless is a challenging task. The scarce spectrum imposes a fundamental limit on the performance of the wireless channel. Random delays and packet losses are inevitable. Although this is true for any communication network, it is much more pronounced in wireless networks due to limited spectrum and power, time-varying channel gains and interference. This talk will outline some major issues in WNCSs and discuss their potential applications in healthcare.