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Master's Thesis

Physiological Closed-Loop Control for the Next Generation of Neonatal Mechanical Ventilators

Motivation Newborns, especially when born preterm, are often in need of mechanical ventilation. Supporting this therapy with automation has the potential to improve patient care and relieve medical staff. At the chair Embedded Software, we are developing an automatic control system for mechanical ventilation of neonates.

Several theses are available on the following topics

- Controller design
- Physiological state estimation
- System safety and reliability

Methods range from rule- and model-based approaches to data-driven solutions.

Your profile

- Ongoing master's studies in Automation Engineering, Computer Science, or an engineering discipline
- You bring in your motivation, analytical skills, and reliability
- Interest in cyber-physical systems and intensive care, affinity for mathematics
- A solid background in automatic control is a plus

Our offer

- Gain insights into a highly relevant, interdisciplinary research field at the interface of control engineering, computer science, and medicine
- Weekly meetings with your supervisor are a matter of course
- Positive atmosphere and regular social events at the chair

Contact

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I'm looking forward to your e-mail.
Please include

- short statement on your motivation and topic of interest
- CV
- transcript of records