



Preterm Children: Detection of Impairments and Possible Interventions

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Message from the Guest Editors

Dear Colleagues,

As the timespan of gestation decreases, the risk of complications caused by preterm birth significantly increases. It has been predicted that 4.2% of all surviving preterm babies will have a severe disability at 18 years, and that a further 18.5% will have a milder disability. Early detection of impairments is an important strategy to improve the well-being of children and their families, allowing for developmental monitoring and medical evaluation of the specific type of disorder that affects a child and optimize therapeutic options. This Special Issue is devoted to bioengineering solutions for (early) detection of impairments and/or interventions connected with preterm birth. This includes the following areas:

- Machine learning for preterm neonatal care applications;
- Big data analytics;
- Medical image processing and signal processing;
- Clinical decision support systems (CDSSs);
- Precision medicine;
- Biology and bioinformatics;
- Neuroscience and computational neuroscience;
- IoT for Healthcare;
- Computational modeling in biological systems and medicine.



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