

## **IDENTIFIED - Interdisciplinary Delineation of Early Neurodevelopment. Tracing Identifiers for Improving Early Detection**

Initiative: Kurswechsel – Forschungsneuland zwischen den Lebenswissenschaften und Natur- oder

Technikwissenschaften

Ausschreibung: Qualifizierungskonzepte

Bewilligung: 16.03.2020

Laufzeit: 4 Jahre

Infants and young children undergo specific developmental stages which, amongst others, are reflected in their (in-)voluntary motor behavior. Thus, the analysis of motor phenomena is of central importance for the understanding of human development and for the early detection of developmental disorders, which are still recognized often rather late in development (e.g., autism spectrum disorder, fragile X syndrome, Rett syndrome). This project will transfer methods from robotic motion-analysis and motion-generation to developmental science, especially related to the assessment of the spontaneous motor repertoire of the newborn. The team will this way set the foundation for developing a novel interdisciplinary approach to detect and define early neuro-functional parameters of typical as well as atypical development. The goal is to enable a reliable earlier detection of various neuro-developmental and psychiatric disorders to facilitate an earlier start of the diagnostic cascade and treatment.

### **Projektbeteiligte**

#### **Univ.-Prof. Dr. Dr. Peter Marschik**

Universitätsmedizin Göttingen  
Georg August Universität  
Klinik für Kinder- und Jugendpsychiatrie  
Arbeitsgruppe Systemische Ethologie und  
Entwicklungsforschung  
Göttingen

#### **Prof. Dr. Luise Poustka**

Universitätsmedizin Göttingen  
Georg August Universität  
Dept. Child and Adolescent Psychiatry  
Göttingen

**Prof. Dr. Florentin Wörgötter**

Universität Göttingen

Fakultät für Physik

III. Physikalisches Institut - Biophysik

Arbeitsgruppe Computational Neuroscience

Göttingen