University
of Basel

Department of
Biomedical Engineering

Seminar Series:
Latest Breakthroughs in Biomedical Engineering Research

Location: DBE Science Lounge, Hegenheimermattweg 167C, 4123 Allschwil
Date & Time: Thursday 05.12.2024 | 15:30 – 16:30
Host: Prof. Andreas A. Müller & Dr. Prasad Nalabothu

Data-Driven 3D Infant Modeling for Medical Treatment and Surgery Planning

Till Schnabel

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Abstract

Recent advances in computer-assisted medical planning and intervention, driven by increased computational power and artificial intelligence, have significantly improved treatment accuracy in adult care. However, infant treatment has not benefited from these developments to the same extent, leaving a critical gap in care. In this talk, I will present the data-driven models and methods we are developing in our lab, specifically tailored to the unique anatomical characteristics of the infant head. These innovations aim to narrow the disparity between adult and infant computer-assisted treatments, paving the way for more precise and effective interventions in pediatric care.

Biosketch

Till Schnabel is a third-year PhD student in the Computer Graphics Laboratory at ETH Zurich. His current focus is to apply and extend visual computing methods to the realm of medicine, specifically in pediatric care. He has already published at the prestigious SIGGRAPH conference in the past, and he has received the Intuitive Bench-to-Bedside Award at IPCAI 2023 as a recognition for his efforts to translate his work on cleft lip and palate treatment to the clinical setting. His latest work has recently been published at MICCAI 2024, one of the most esteemed Computer Science conferences for medical applications, where he has been selected to give an oral talk on his large-scale 3D infant face model.