INSTITUTE OF VISUAL COMPUTING

TU Graz
SCIENCE PASSION TECHNOLOGY

Figure 1: me, searching for the best students out there.

Advisor: **Peter Waldert**

Area: *Simulations, Numerical Analysis, Visual Analytics*

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Hidden Markov Model Channel Design Editor

- Development of an interactive (graph-) editor for the design of an electrophysiological ion channel model.
- An individual channel has multiple states with ion-concentration dependent transition probabilities, i.e. it is represented as a Hidden Markov Model (HMM).
- The user supplies lab measurements (voltage and current) and can then edit different state configurations to test around with, solving the inverse problem numerically, simulating and evaluating their performance match.
- Goal: A useful tool for electrophysiological research.

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