

# Technologietransferkatalog 2017



- MODELING (MATHEMATISCHE)
- SOFTWARE

### Herr Dr.- Ing. Plamen Simeonov

#### Forschungsthemen

- Integral Biomathics
- Deductive (hypotheses-driven) Modelling for Life Sciences and Medicine
- Digital Medicine Platform
- Information Theory and Formal Methods
- Self-organizing Dynamic Information Systems in Life Sciences
- Biocomputation & Synthetic/Artificial Life

#### Auftragsforschung

- Deductive (hypotheses-driven) Modelling for Life Sciences and Medicine
- Digital Medicine Platform

#### Forschungs- kooperationen

- To bring down higher mathematics such as category theory for practical use by non-mathematicians; this will not only create a powerful momentum for the development of mathematically grounded methodology in medical diagnostics, but also induce dramatic reduction of animal experiments in everyday clinical practice;
- To demonstrate an elegant biomathematical solution to a worthwhile problem in complex systems biology and medicine that cannot be solved today, but lies at high confidence within the scope of my research: e.g. the generation and validation of an overarching and easily comprehensible and more realistic relational cancerogenesis or a cardiovascular whole-system (heart, kidney, lungs, liver) disease development model targeting a more reliable diagnosis and personalised therapy.