

## MATERIAL SCIENCE

- Materials with nanoscale functionality
- Oxide electronics
- Carbon electronics
- Molecular electronics
- Spintronics
- Valleytronics
- Phase change materials
- Memristors
- Optoelectronics
- Ionic transport

## ELECTRICAL ENGINEERING, ROBOTICS AND MECHATRONICS

- Materials for mechatronics
- Electrical Engineering
- Robotics

## MATHEMATICS

- Complex networks
- Dynamical systems
- Statistical networks
- Statistical mechanics
- Materials modeling
- Computer algebra
- Network synthesis theory

## ARTIFICIAL INTELLIGENCE

- Machine learning
- Computer vision
- Neuroscience
- Network behaviour
- Neuromorphic computing
- Cognition

## COMPUTER SCIENCE

- Network visualization
- Systems engineering
- Neuromorphic computing
- Image processing/Computer vision
- Pattern recognition/Machine learning

## OVERLAP

- P1. Brain-inspired devices
- P2. Neuromorphic circuit design
- P3. Computational neuroscience

## OVERLAP

- P4. Cognitive multi agent systems
- P5. Autonomous learning
- P6. Innovative computer architectures
- P7. New Computer networks

ZERNIKE INSTITUTE FOR ADVANCED MATERIALS

## MATERIAL SCIENCE

BERNOUILLI INSTITUTE FOR MATHEMATICS, CS & AI

## ARTIFICIAL INTELLIGENCE

## COMPUTER SCIENCE

## MATHEMATICS

ENGINEERING & TECHNOLOGY INSTITUTE (ENTEG)

## ELECTRICAL ENGINEERING, ROBOTICS AND MECHATRONICS

## OVERLAP

- P8. Theory of computation
- P9. (Topological) data analytics

## OVERLAP

- P10. Computational mathematics
- P11. Fundamental mathematics
- P12. Stochastic simulation and inference

