

Research Field	Leading Scientist	Email	Research Focus	Institute	Link
Materials Science	Stephan Bluegel	s.bluegel@fz-juelich.de	calculate and analyze the complex structural, electronic and magnetic quantities of solids and molecules – for fundamental research and practical applications	Peter Gruenberg Institute, Quantum Theory of Materials (PGI-1) Institute for Advanced Simulation (IAS-1)	http://www.fz-juelich.de/pgi/pgi-1/EN/Home/home_node.html
Energy Research	Lorenz Singheiser	l.singheiser@fz-juelich.de	develop and characterise high-performance materials and composites for central and local energy conversion and storage systems	Institute of Energy and Climate Research, Microstructure and Properties of Materials (IEK-2)	http://www.fz-juelich.de/iek/iek-2/EN/Home/home_node.html
Energy Research	Uwe Rau	u.rau@fz-juelich.de	focus on researching new materials and innovative device architectures for sustainable photovoltaics based on thin films	Institute of Energy and Climate Research, Photovoltaics (IEK-5)	http://www.fz-juelich.de/iek/iek-5/EN/Home/home_node.html
Energy Research	Rüdiger Eichel	r.eichel@fz-juelich.de	Goals of the research and development are cheap batteries, fuel cells and electrolyzers with enhanced energy and power density, long life time and maximum reliability	Institute of Energy and Climate Research, Fundamental Electrochemistry (IEK-9)	http://www.fz-juelich.de/iek/iek-9/EN/Home/home_node.html
Climate Science	Martin Riese	m.riese@fz-juelich.de	conduct research on the chemistry, dynamics and microphysics of the stratosphere and the tropopause region, and on the role these atmospheric layers play in the climate system	Institute of Energy and Climate Research, Troposphere (IEK-7)	http://www.fz-juelich.de/iek/iek-7/EN/Home/home_node.html
Climate Science	Andreas Wahner	a.wahner@fz-juelich.de	perform atmospheric long-term observations, investigate gas-phase and aerosol processes in the atmosphere, and simulate chemistry-climate interactions and air quality by numerical models	Institute of Energy and Climate Research, Stratosphere (IEK-8)	http://www.fz-juelich.de/iek/iek-8/EN/Home/home_node.html
Agrosphere	Harry Vereecken	h.vereecken@fz-juelich.de	improve our understanding of hydrological and biogeochemical processes in terrestrial systems with a specific focus on agricultural and soil-groundwater systems	Institute of Bio- and Geosciences, Agrosphere (IBG-3)	http://www.fz-juelich.de/iek/iek-8/EN/Home/home_node.html
Fluid Dynamics	Gerhard Gompper	g.gompper@fz-juelich.de	explore the structure and dynamics of complex fluids, soft matter, and biological systems, from colloids and (bio)polymers to the motion of cells	Institute for Complex Systems (ICS-2) Institute for Advanced Simulation (IAS-2)	http://www.fz-juelich.de/ics/ics-2/EN/Home/home_node.html
Biochemistry	Birgit Strodel	b.strodel@fz-juelich.de	Protein aggregation in Alzheimer's disease, Amyloid-lipid interactions, protein-protein docking, computational enzyme design, calculation of experimental observables from biomolecular simulations	Institute of Complex Systems, Structural Biochemistry (ICS-6)	http://www.strodel.info/
Biotechnology	Wolfgang Wiechert	w.wiechert@fz-juelich.de	Bioprocesses and bioanalytics, biocatalysis and biosensors, modeling and simulation, microscale bioengineering	Institute of Bio- and Geosciences, Biotechnology (IBG-1)	http://www.fz-juelich.de/ibg/ibg-1/EN/Research/SystemsBiotechnology/_node.html
Biomedicine	Paolo Carloni	p.carloni@fz-juelich.de	Key molecular events in neuron function and dysfunction, cancer: drug development and resistance, HIV, quantum biology	Institute for Neuroscience and Medicine, Computational Biomedicine (INM-9) Institute for Advanced Simulation (IAS-5)	http://www.fz-juelich.de/ias/ias-5/EN/Home/home_node.html
Structural and Functional Organisation of the Brain	Katrin Amunts	k.amunts@fz-juelich.de	develop a 3-D model of the human brain which considers cortical architecture, connectivity, genetics and function	Institute for Neuroscience and Medicine, Structural and functional organisation of the brain (INM-1)	http://www.fz-juelich.de/inm/inm-6/EN/Home/home_node_INM6.html
Neurophysics and Neuroscience	Markus Diesmann	m.diesmann@fz-juelich.de	Computational Neurophysics, Statistical Neuroscience, Functional Neural Circuits, Theory of multi-scale neuronal networks, Theoretical Neuroanatomy	Institute for Neuroscience and Medicine, Computational and Systems Neuroscience (INM-6) Institute for Advanced Simulation (IAS-6)	http://www.fz-juelich.de/inm/inm-1/EN/Home/home_node.html

Theory of the Strong Interaction	Ulf Meissner	u.meissner@fz-juelich.de	Structure and dynamics of hadrons based on effective field theories and lattice simulations. Structure and dynamics of atomic nuclei. Phenomenological studies on hadron structure and dynamics for reactions with hadronic probes.	Institute for Nuclear Physics, Theory (IKP-3) Institute for Advanced Simulation (IAS-4)	http://www.fz-juelich.de/ikp/ikp-3/EN/Home/TheorieDerStarkenWechselwirkung.html
Elementary Particle Physics Lattice QCD	Thomas Lippert	th.lippert@fz-juelich.de	study strongly interacting matter at finite temperatures and densities using simulations of Lattice QCD	Juelich Supercomputing Centre (JSC)	http://www.fz-juelich.de/ias/jsc/EN/AboutUs/Organisation/ComputationalScience/Simlabs/slnpp/_node.html
Quantum Information Processing	Kristel Michielsen	k.michielsen@fz-juelich.de	Quantum computation, event-by-event simulation of (quantum) optics experiments, simulation of quantum systems	Juelich Supercomputing Centre (JSC)	http://www.fz-juelich.de/ias/jsc/EN/Research/ModellingSimulation/QIP/_node.html
Civil Security and Traffic	Armin Seyfried	a.seyfried@fz-juelich.de	Pedestrian dynamics, fire simulation, traffic	Juelich Supercomputing Centre (JSC)	http://www.fz-juelich.de/ias/jsc/EN/Research/ModellingSimulation/CivilSecurityTraffic/_node.html
Plasma Physics	Paul Gibbon	p.gibbon@fz-juelich.de	Laser-produced light sources, laser particle acceleration, high energy density physics, plasma-surface interactions, algorithms for computational plasma physics	Juelich Supercomputing Centre (JSC)	http://www.fz-juelich.de/ias/jsc/EN/Research/ModellingSimulation/PlasmaPhysics/_node.html