

Biennial Meeting of the German Biophysical Society

September 16–19, 2018

Düsseldorf, Germany



DGfB Deutsche
Gesellschaft für
Biophysik e.V.

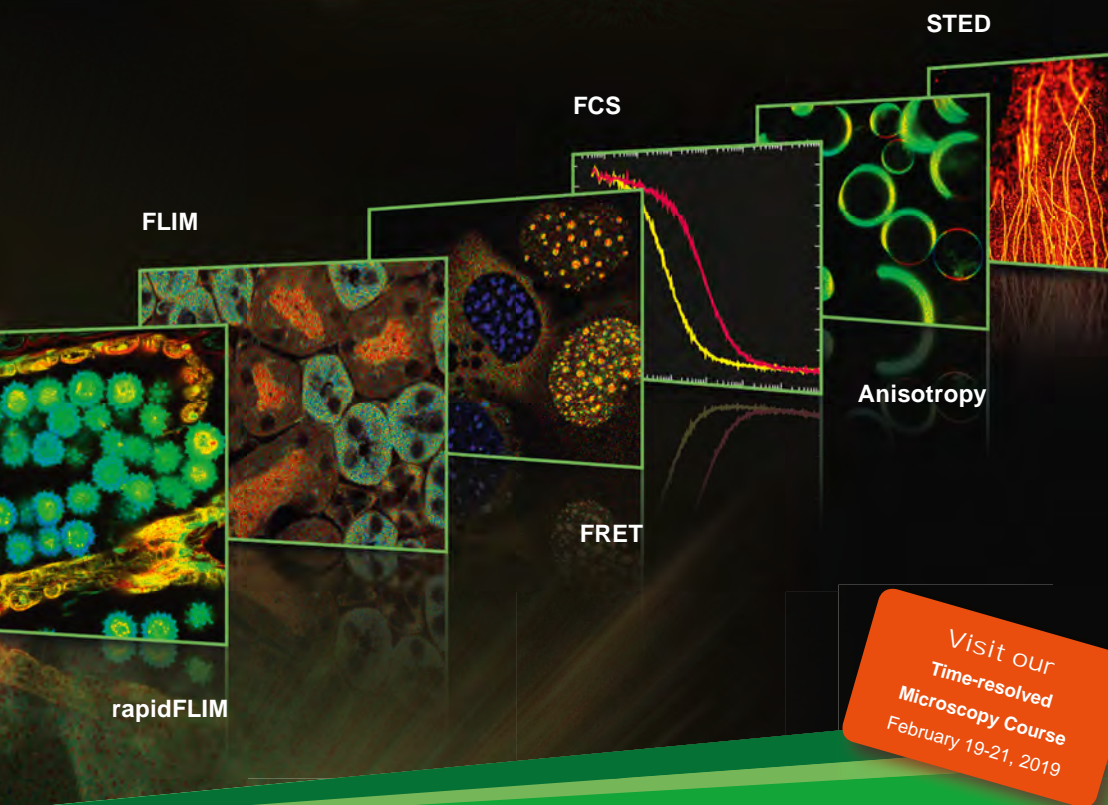
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Main Program



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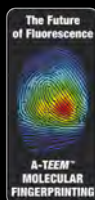


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Welcome Message

Dear Colleagues and Friends

With great pleasure, and on behalf of the German Biophysical Society, we cordially welcome you to Heinrich Heine University Düsseldorf for the Biennial Meeting of the DGfB.

Mission

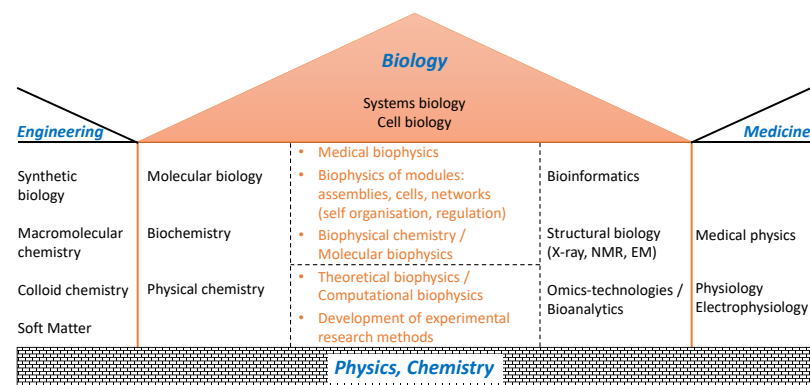
This meeting is intended to promote lively discussions at the overlap areas of Physics, Chemistry, Biology and Medicine. It is YOU – the speakers, those who contribute posters, and all who advance our knowledge in biophysics by active participation and discussions – who will shape the congress and make it a success.

The House of Biophysics

The DGfB has three subgroups: Molecular Biophysics; Membranes, Cells and Networks; Medical Biophysics that aim at bringing together scientists with a wide range of interests within the broad biophysical community. Moreover, the Biennial Meeting has also joint sessions co-organized with the Society for Biochemistry and Molecular biology (GBM, study group Biophysical Chemistry), German Bunsen Society for Physical Chemistry (DBG) and the German Physical Society (DPG, Fachverband Biological Physics) to extend the coverage even further:

- Biomolecules and their assemblies: from structure and dynamics to function
- Biophysics of membranes and membrane proteins
- Energy transduction involving light harvesting, electron transfer and proton transfer
- Computational biophysics
- Imaging molecules of life
- Cell biophysics meets systems and synthetic biology
- Physics of disease and cancer

Actually, following the ideas of the former chair of the DGfB, Klaus Peter Hofmann, biophysical research can be described as a house with many rooms in the densely built city of science, where altitude correlates with the complexity of the systems being treated.



Welcome Message

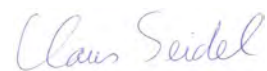
Let us explore and enjoy the science in the House of Biophysics and showcase the newest science such as Young Investigator Awards to be presented an extra plenary session. To stimulate personal discussions, we will have two poster sessions and an exhibition. Please do not forget to consider visiting the satellite workshop "Advanced Fluorescence Spectroscopy and Imaging", September 19, 14:00 – September 20, 15:00.

Acknowledgements

Many thanks go in advance to all participants who present their work and contribute to lively discussions. We also thank the scientific committee for supervising the program and in particular event lab. GmbH (Mrs. Sara Rosenblatt, Mrs. Clarissa Strietzel and André Störmer), who coordinated everything at and around the conference and kept track of all the requirements for both the annual meeting and the satellite workshop.

Additionally, we gratefully acknowledge the support of the German Research Foundation (DFG), the Fonds der chemischen Industrie (FCI), CRC-1208 (Identity and Dynamics of Membrane Systems - from Molecules to Cellular Functions) and the International Helmholtz Research School of Biophysics and Soft Matter (BioSoft) as well as all the companies sponsoring our meeting. Lastly, our sincere thanks go to HHU for their lecture hall building and to the HHU employees for their great administrative support.

Looking forward to an exciting meeting and fruitful discussions!



Claus Seidel

Chair for molecular physical chemistry
HHU Düsseldorf

Supporters and Scientific Partners

Societies



Research Centers



SFB 1208



Supporters



General Information

Conference Office

event lab. GmbH
Richard-Lehmann-Straße 12
04275 Leipzig
Germany
☎ +49 (0) 34 1 98 99 013 4

Conference Venue

Heinrich Heine Universität
Building 23.01, lecture halls 3C and 3D
Universitätsstraße
40225 Düsseldorf
Germany



Wi-Fi

HHU offers eduroam. Please see the registration desk for information on Wi-Fi.
User Name: dgfb Password: ihqd\$185

Registration Desk

The registration desk will be located on the ground floor of Building 23.01.

Opening Hours:

Sunday September 16, 2018	17:00–20:00
Monday September 17, 2018	08:00–20:00
Tuesday September 18, 2018	08:00–17:45
Wednesday September 19, 2018	08:00–13:30

Name Tags

Official conference name tags will be required for admission to all conference functions and lectures and to the exhibition area.

Poster Exhibition

The poster exhibition will be opened from Monday to Wednesday on the conference days in the foyer.

Posters can be mount on poster boards from Monday at 07:30. Posters must be removed until Wednesday, 13:00. Left posters will be discarded.

The poster sessions at which each presenter must be available for discussion are scheduled as follows:

General Information

Monday | September 17, 2018
Poster session 1 18:45–20:45

Tuesday | September 18, 2018
Poster session 2 13:15–15:15

Authors with an EVEN Poster ID must be present during the first hour. Authors with an ODD Poster ID must be present during the second hour.

Speakers Information

Please come to the room you will present as soon as possible and not later than 15 min before your session starts. All presentations shall be based on PowerPoint-Versions and compatible with Windows-Systems. Other computers or converters are not available. All presenters must therefore bring their presentation in the adequate version on flash drive (USB drive). Technical staff will assist you in the lecture hall.

Book of Abstracts

The digital abstract book can be downloaded as a PDF file from the website or scan the QR Code.



Photography & Copyright

Taking pictures and recording of any kind in the lecture halls and poster exhibition without the prior written consent of the presenter are prohibited.

Industrial Exhibition

The industrial exhibition will be located in the foyer of Building 23.01.

Opening Hours:

Monday September 17, 2018	08:00–20:45
Tuesday September 18, 2018	08:00–17:45
Wednesday September 19, 2018	08:00–13:00

Scientific Committee

Chair

Claus Seidel (Düsseldorf, GER)

Local Organizing Committee

Holger Gohlke (Düsseldorf, GER)

Philipp Neudecker (Jülich, GER)

Lutz Schmidt (Düsseldorf, GER)

Claus Seidel (Düsseldorf, GER)

Birgit Strodel (Jülich, GER)

Additional Program Committee Members

Hans-Joachim Galla (Münster, GER)

Markus Gerhards (DBG) (Kaiserslautern, GER)

Helmut Grubmüller (Göttingen, GER)

Thomas Gutsmann (Borstel, GER)

Christian Herrmann (GBM) (Bochum, GER)

Daniel Huster (Leipzig, GER)

Sandro Keller (Kaiserslautern, GER)

Sarah Köster (DPG) (Göttingen, GER)

Claudia Steinem (Göttingen, GER)

Invited Speaker

Simon Alberti (Dresden, GER)

Andreas Bausch (München, GER)

Martin Blackledge (Grenoble, FRA)

Axel Brunger (Stanford, USA)

Rainer Böckmann (Erlangen, GER)

Martina Havenith (Bochum, GER)

Thorsten Hugel (Freiburg, GER)

Tanja Mittag (Memphis, USA)

Gunnar Schröder (Jülich, GER)

Ulrich Schwarz (Heidelberg, GER)

Christine Selhuber-Unkel (Kiel, GER)

Harel Weinstein (New York, USA)

Beili Wu (Shanghai, CHN)

(in alphabetic order)

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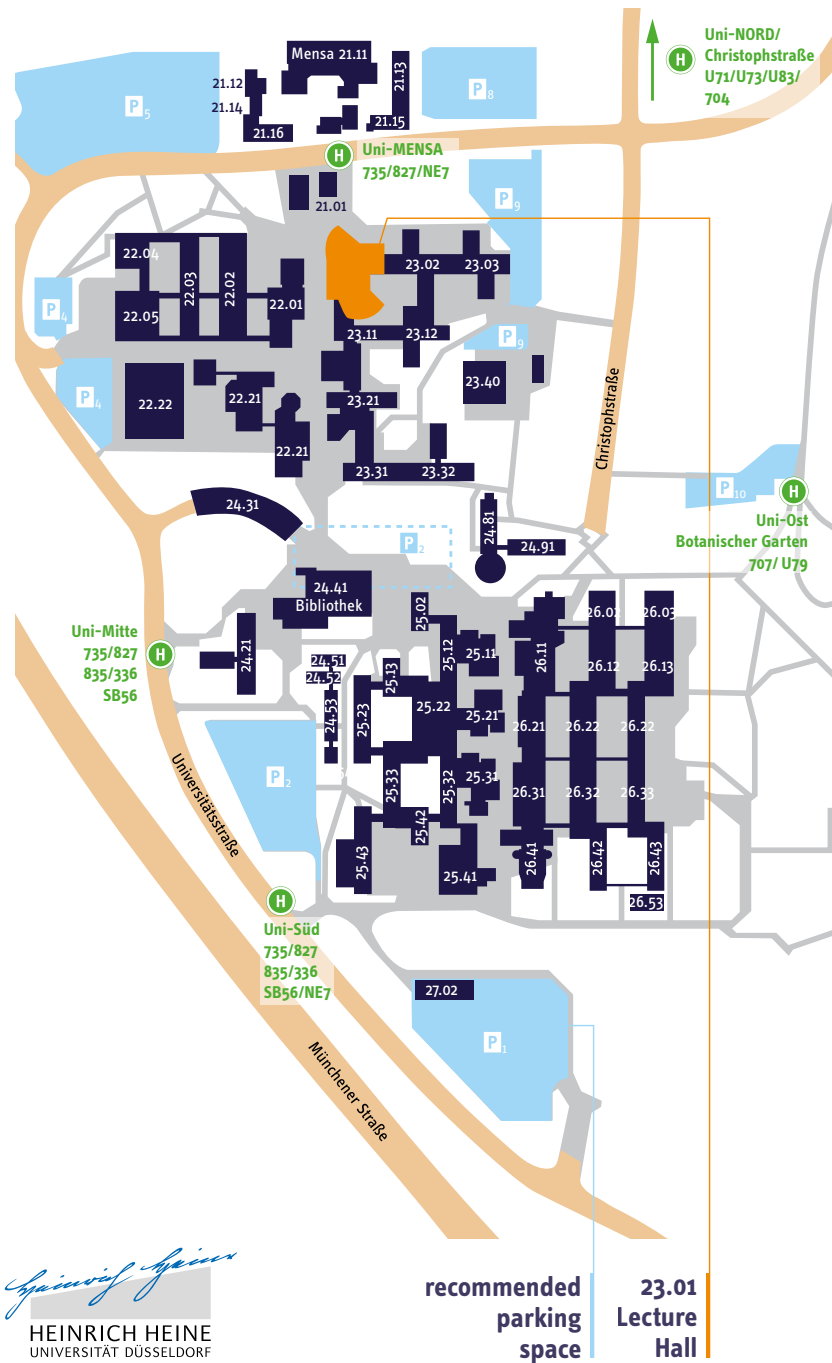


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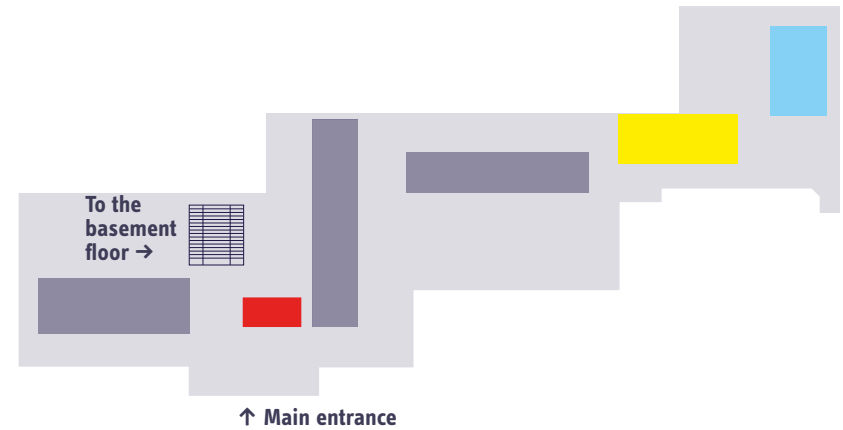
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Campus Map



Floor Plan

Ground Floor



Basement Floor



- Exhibitors and Sponsors
- Poster Exhibition
- Registration
- Wardrobe
- Restrooms
- Catering

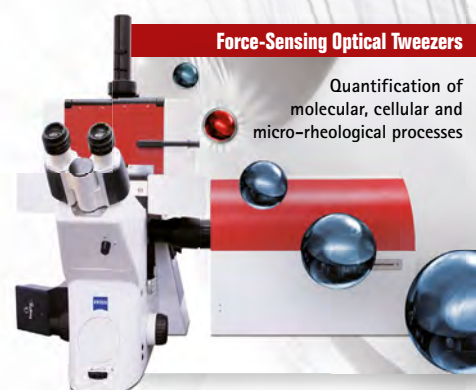
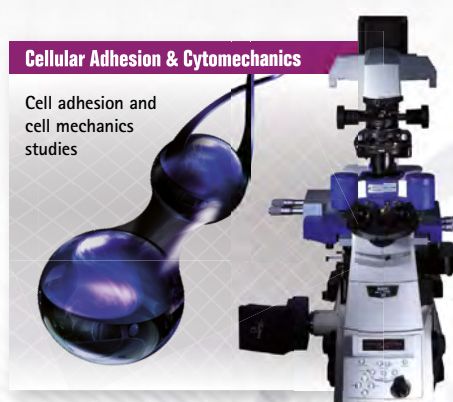
Program Overview

Sunday September 16, 2018			
Time	Room HS 3D	Room HS 3C	Foyer
18:00	Welcome		
18:15	Plenary Session 1		
20:00			Get-together
Monday September 17, 2018			
Time	Room HS 3D	Room HS 3C	Foyer
08:00			Poster Exhibition, Industrial Exhibition
08:30	Plenary Session 2		
10:20	Coffee Break		
11:00	Parallel-Session 1a New Techniques	Parallel-Session 1b Cell Biophysics	
12:25	Lunch		
13:15		Lunchsymposium OLYMPUS DEUTSCHLAND GmbH	
14:00	Plenary Session 3		
15:30	Short Break		
15:35	Parallel-Session 2a Biophysics of Chromophores	Parallel-Session 2b Tools for Cell Biophysics	
16:30	Coffee Break		
17:10	Parallel-Session 3a Integrative Analysis of the Structure & Dynamics of Proteins	Parallel-Session 3b Transporters and Channels	
18:45 – 20:45			Poster Session 1

Program Overview

Tuesday September 18, 2018			
Time	Room HS 3D	Room HS 3C	Foyer
08:30	Plenary Session 4		Poster Exhibition, Industrial Exhibition
10:30	Coffee Break		
11:00	Parallel-Session 4a Biomolecular Dynamics	Parallel-Session 4b Protein Assemblies and Aggregates-1	
12:25	Lunch		
13:15			Poster Session 2
15:15	Parallel-Session 5a Biomolecular Assemblies	Parallel-Session 5b Protein Assemblies and Aggregates-2	Poster Exhibition, Industrial Exhibition
16:45	Short Break		
16:50	Young Investigator Award Session		
17:35	Short Break		
17:45	DGfB Section Meetings		
18:15	DGfB General Assembly		
19:30	Conference Dinner at Klosterhaus		
Wednesday September 19, 2018			
Time	Room HS 3D	Room HS 3C	Foyer
08:30	Plenary Session 6		Poster Exhibition, Industrial Exhibition
10:15	Coffee Break		
10:50	Parallel-Session 6a Structure, Dynamics, Function of Proteins-1	Parallel-Session 6b Membranes-1	
11:50	Parallel-Session 7a Structure, Dynamics, Function of Proteins-2	Parallel-Session 7b Membranes-2	
12:50	Awards and Closing Remarks		

Powerful Instruments for Very Small Forces



Scientific Program

Sunday | September 16, 2018

18:00	Welcome	Room HS 3D
	Claus Seidel (Düsseldorf, GER), Detlev Riesner (Düsseldorf, GER)	
18:15	Plenary Session 1	Room HS 3D
	Chair: Claus Seidel (Düsseldorf, GER)	
18:15	I-01. Rigorous analyses of allostery can focus the lens on dynamics of biomolecular systems	
	Harel Weinstein (New York, USA)	
19:05	I-02. The biophysics of RNP granule formation and disease	
	Simon Alberti (Dresden, GER)	
20:00	Get-together	Foyer

Monday | September 17, 2018

08:30	Welcome	Room HS 3D
	Univ.-Prof. Dr. med. Klaus Pfeffer (Düsseldorf, GER)	
08:35	Plenary Session 2	Room HS 3D
	Chair: Cornelia Monzel (Düsseldorf, GER)	
08:35	I-03. Pattern formation in cytoskeletal systems	
	Andreas Bausch (München, GER)	
09:10	I-04. Cells as actively responsive systems	
	Christine Selhuber-Unkel (Kiel, GER)	
09:45	I-05. More than just fat: Protein-lipid interactions in protein oligomerization and signaling	
	Rainer Böckmann (Erlangen, GER)	
10:20	Coffee Break Visit of the Industrial Exhibition	Foyer
11:00	Parallel-Session 1a - New Techniques	Room HS 3D
	Chair: Tilman Kottke (Bielefeld, GER)	
11:00	T-01. Towards improved biophysical calculations to identify disease-causing mutations	
	Kresten Lindorff-Larsen (Copenhagen, DNK)	
11:25	T-02. An optical zeptobalance for single-protein electrophoresis analysis	
	Mahyar Dahmard (Erlangen, GER)	
11:40	T-03. Near-membrane refractometry and birefringence imaging of contractile HL-1 cells	
	Hossein Hassani (Jülich, GER)	

11:55	T-04. Cancer diagnosis and assessment of targeted breast cancer therapy by Raman microscopy Samir El-Mashtoly (Bochum, GER)	
12:10	T-05. Structural transformation of wireframe DNA Origami via DNA polymerase assisted gap-filling Thorsten Schmidt (Dresden, GER)	
11:00	Parallel-Session 1b - Cell Biophysics	Room HS 3C
	Chair: Thomas Gutsmann (Borstel, GER)	
11:00	T-06. Viscoelasticity of cell membranes – from minimal artificial cortices to living cells Andreas Janshoff (Göttingen, GER)	
11:25	T-07. Reconciling AFM and MD: Unfolding focal adhesion kinase Csaba Daday (Heidelberg, GER)	
11:40	T-08. The desmosome is mechanically loaded in response to externally applied stress Anna-Lena Cost (Martinsried, GER)	
11:55	T-09. Nanodroplets at lipid membranes undergo morphological transitions with spontaneously broken symmetry Vahid Satarifard (Potsdam, GER)	
12:10	T-10. A cell-topography based mechanism for ligand discrimination by the T-cell receptor Kristina A. Ganzinger (Martinsried, GER)	
12:25	Lunch Visit of the Industrial Exhibition	Foyer
13:15	Lunchsymposium OLYMPUS DEUTSCHLAND GmbH	Room HS 3C
	Latest Innovations in Fluorescence Microscopy from Olympus Jens Henning Fischer (Hamburg, GER)	
14:00	Plenary Session 3	Room HS 3D
	Chair: Christian Herrmann (Bochum, GER)	
14:00	I-06. Multi-color single-molecule FRET measurements investigate the real-time kinetics of multi-protein interactions in molecular machines Thorsten Hugel (Freiburg, GER)	
14:45	I-07. Phase separation and mesoscale assembly for functional compartmentalization Tanja Mittag (Memphis, USA)	
15:35	Parallel-Session 2a - Biophysics of Chromophores	Room HS 3D
	Chair: Petra Imhof (Berlin, GER)	
15:35	T-11. Biomimetic light-harvesting funnels for re-directioning of diffuse light Peter Jomo Walla (Braunschweig, GER)	
16:00	T-12. Complete kinetic FRET theory Tobias Eilert (Ulm, GER)	

16:15	T-13. In silico screening for a bright circular permutation of red fluorescent protein Junyi Liang (Baltimore, USA)	
15:35	Parallel-Session 2b - Tools for Cell Biophysics	Room HS 3C
	Chair: Kristina A. Ganzinger (Martinsried, GER)	
15:35	T-14. DNA swelling as driving force of complex cellular functions Sebastian Kruss (Göttingen, GER)	
16:00	T-15. Identifying benchmarks in hematopoietic stem cell adhesion and migration for nanometric variation of chemokine spacing versus synthetic agents Cornelia Monzel (Düsseldorf, GER)	
16:15	T-16. Investigation of the kinetochore assembly by aberration-free and quantitative multi-color single-molecule localization microscopy imaging Ilijana Vojnovic (Marburg, GER)	
16:30	Coffee Break Visit of the Industrial Exhibition	Foyer
17:10	Parallel-Session 3a - Integrative Analysis of the Structure & Dynamics of Proteins	Room HS 3D
	Chair: Don Lamb (München, GER)	
17:10	T-17. An integrative approach maps motions and conformers necessary for oligomerization of the large GTPase hGBP1 Thomas-Otavio Peulen (Düsseldorf, GER)	
17:35	T-18. Molecular mechanisms in GTPase and ATPase proteins elucidated via experimental and theoretical FTIR and NMR spectroscopy, biomolecular simulations and CryoEM Daniel Mann (Sheffield, GBR)	
17:50	T-19. Biomolecular simulations for structural biology: integrating co-evolution, SAXS, FRET at al. Alexander Schug (Jülich, GER)	
18:05	T-20. Proton transfer across the protein fold is coupled to redox changes at the catalytic metal center of hydrogen-producing enzymes Sven Timo Stripp (Berlin, GER)	
18:20	T-21. The amphipathic helix of Opi1 is fine-tuned to sense phosphatidic acid lipids in cellular membranes Roberto Covino (Frankfurt am Main, GER)	
17:10	Parallel-Session 3b - Transporters and Channels	Room HS 3C
	Chair: Birgit Strodel (Jülich, GER)	
17:10	T-22. Maintenance of bacterial outer membrane lipid asymmetry: Insights from molecular simulations Ulrich Kleinekathöfer (Bremen, GER)	
17:35	T-23. Structural basis of membrane protein insertion via SecYEG translocon Alexej Kedrov (Düsseldorf, GER)	

17:50	T-24. Atomistic mechanism of alternating access in a heterodimeric ABC exporter Lars Schäfer (Bochum, GER)
18:05	T-25. Protein-induced spontaneous membrane curvature Christoph Kluge (Erlangen, GER)
18:20	T-26. Site-specific ion occupation in the selectivity filter causes voltage-dependent gating in a viral K⁺ channel Indra Schroeder (Darmstadt, GER)
18:45	Poster Session 1 Foyer

Tuesday | September 18, 2018

08:30	Plenary Session 4 Room HS 3D
	Chair: Markus Gerhards (Kaiserslautern, GER)
08:30	I-08. Active cell mechanics Ulrich Schwarz (Heidelberg, GER)
09:00	I-09. Complex dynamics and dynamic complexes: NMR studies of large scale dynamics and their role in protein function Martin Blackledge (Grenoble, FRA)
09:30	I-10. Water in biology Martina Havenith (Bochum, GER)
10:00	I-11. The molecular basis of Alzheimer's plaques: a near-atomic resolution structure of amyloid Aβ(1-42) fibrils Gunnar Schröder (Jülich, GER)
10:30	Coffee Break Visit of the Industrial Exhibition Foyer

11:00	Parallel-Session 4a - Biomolecular Dynamics Room HS 3D
	Chair: Dina Grohmann (Regensburg, GER)
11:00	T-50. New insights into molecular membrane dynamics from super-resolution microscopy Christian Eggeling (Jena, GER)
11:25	T-28. Mapping vibrational energy transfer in peptides and proteins with non-canonical amino acids and ultrafast infrared spectroscopy Erhan Deniz (Frankfurt am Main, GER)
11:40	T-29. The mRNA 5'-untranslated region determines the helicase activity of the eukaryotic translation initiation factor eIF4A by modulating its conformational cycle Dagmar Klostermeier (Münster, GER)
11:55	T-30. High bandwidth sensing of single proteins with nanopores Sonja Schmid (Delft, GER)
12:10	T-31. Automated correlation-based structure refinement for high-resolution cryo-EM maps of large biomolecular complexes Maxim Igav (Göttingen, GER)

11:00	Parallel-Session 4b - Protein Assemblies and Aggregates-1 Room HS 3C
	Chair: Peter Hildebrand (Leipzig, GER)
11:00	T-32. Relation between metastable oligomers and amyloid fibrils revealed by simultaneous analysis of their assembly kinetics Wolfgang Hoyer (Düsseldorf, GER)
11:25	T-33. The auto-catalytic secondary nucleation of amyloid fibrils Alexander Buell (Düsseldorf, GER)
11:40	T-34. Are gluten-related disorders a new protein aggregation disease? A biophysical approach to reveal the early stages of disease Veronica I Doderer (Bielefeld, GER)
11:55	T-35. Multi-angle static and dynamic light scattering as a new in situ tool to investigate the self-assembly of proteins Klaus Huber (Paderborn, GER)
12:10	T-36. From protein phase behavior to protein-protein interactions quantified by the second virial coefficient Florian Platten (Düsseldorf, GER)
12:25	Lunch Visit of the Industrial Exhibition Foyer
13:15	Poster Session 2 Foyer
15:15	Parallel-Session 5a - Biomolecular Assemblies Room HS 3D
	Chair: Philipp Neudecker (Jülich, GER)
15:15	T-37. Studying the solution structure and function of the Yersinia type-III-effector YopO using an integrative structural biology approach Gregor Hagelueken (Germany, GER)
15:40	T-38. Molecular strain links to Mg²⁺ dependent kinetic heterogeneity in a group II intron tertiary contact Richard Börner (Zürich, CHE)
15:55	T-39. RNA processing and activation of type IIIA CRISPR-Cas systems Brighton Samatanga (Leipzig, GER)
16:10	T-40. RNA as a complex polymer with coupled dynamics of ions and water in the outer solvation sphere. Heiko Lammert (Houston, TX, USA)
16:25	T-41. Temperature-dependent atomic models of detergent micelles refined against small-angle x-ray scattering data Miloš Ivanovic (Saarbrücken, GER)

15:15	Parallel-Session 5b - Protein Assemblies and Aggregates-2	Room HS 3C
	Chair: Klaus Gerwert (Bochum, GER)	
15:15	T-42. Immuno-IR-Sensor identifies preclinical Alzheimer's in blood Klaus Gerwert (Bochum, GER)	
15:40	T-43. Single amyloid fibrils studied in a thermophoretic trap Tobias Thalheim (Leipzig, GER)	
15:55	T-44. Fluid biomolecular condensates, their interaction with membranes and how they influence formation of autophagosomes Roland L. Knorr (Potsdam, GER)	
16:10	T-45. Transition networks for describing the disease related protein aggregation Bogdan Barz (Düsseldorf, GER)	
16:25	T-46. Predicting the structure of the γ-secretase - C99 complex Manuel Hitznerberger (Garching bei München, GER)	
16:45	Short Break	Foyer
16:50	Young Investigator Award	Room HS 3D
	Chair: Hajo Galla (Münster, GER)	
16:55	I-12. Gaining traction: Towards understanding the micromechanics of bacterial life Benedikt Sabass (Jülich, GER)	
17:15	I-13. In-situ investigation of outer membrane proteins in E. coli and native membranes using dipolar EPR spectroscopy Benesh Josef (Frankfurt am Main, GER)	
17:35	Short Break	Foyer
17:45	DGfB Meetings of the Sections: (I)-Molecular Biophysics, (II)-Membranes, Cell and Networks, (III)-Medical Biophysics	Room HS 3D
18:15	DGfB General Assembly of the German Biophysics Society	Room HS 3D
19:30	Departure Conference Dinner	
20:00	Conference Dinner	Klosterhaus

Wednesday | September 19, 2018

08:30	Plenary Session 6	Room HS 3D
	Chair: Helmut Grubmüller (Göttingen, GER)	
08:30	I-14. Shedding light on the molecular mechanisms of neuronal exocytosis: the primed SNARE-complexin-synaptotagmin complex Axel Brunger (Stanford, USA)	
09:20	I-15. Structural basis for ligand recognition and signal transduction of GPCRs Beili Wu (Shanghai, CHN)	
10:15	Coffee Break Visit of the Industrial Exhibition	Foyer
10:50	Parallel-Session 6a - Structure, Dynamics, Function of Proteins-1	Room HS 3D
	Chair: Bern König (Jülich, GER)	
10:50	T-47. The structure and dynamics of mutated amyloid β Fibrils Daniel Huster (Leipzig, GER)	
11:15	T-48. Cell free protein synthesis systems and single molecule fluorescence studies: A perfect marriage Jörg Fitter (Aachen, GER)	
11:30	T-49. Light response of receptors within intact cells resolved by infrared spectroscopy Tilman Kottke (Bielefeld, GER)	
10:50	Parallel-Session 6b - Membranes-1	Room HS 3C
	Chair: Gregor Hagelueken (Bonn, GER)	
10:50	T-27. Dissecting nanosecond dynamics in membrane proteins with dipolar relaxation upon tryptophan photoexcitation Sandro Keller (Kaiserslautern, GER)	
11:15	T-51. A receptor tyrosine kinase study at the single-molecule level Marina S. Dietz (Frankfurt am Main, GER)	
11:30	T-52. Studying membrane proteins and drug responses in individual breast cancer cells using liquid-phase electron microscopy Niels de Jonge (Saarbrücken, GER)	

11:50	Parallel-Session 7a - Structure, Dynamics, Function of Proteins-2	Room HS 3D
	Chair: Dagmar Klostermeier (Münster, GER)	
11:50	T-53. A new paradigm for biomolecular interactions: ultrahigh-affinity complex of two intrinsically disordered proteins involved in chromatin remodeling Alessandro Borgia (Zürich, CHE)	
12:15	T-54. Dissecting two differential binding mechanisms of FG-nucleoporins and nuclear transport receptors Piau Siong Tan (Heidelberg, GER)	
12:30	T-55. Dynamic and structural properties of polyglutamine Michael Schlegel (Halle (Saale), GER)	
11:50	Parallel-Session 7b - Membranes-2	Room HS 3C
	Chair: Karin Hauser (Konstanz, GER)	
11:50	T-56. The membrane activity of the fungal peptide toxin Candidalysin allows insights into the pathogenicity mechanism of the clinically relevant Candida albicans Christian Nehls (Borstel, GER)	
12:15	T-57. Influenza A matrix protein (M1) multimerization is the main driving force for membrane bending and tubulation. Ismail Dahmani (Potsdam, GER)	
12:30	T-58. DNA-encircled lipid bilayer: a novel nano-scaled membrane-mimetic system Karim Fahmy (Dresden, GER)	
12:50	Awards and Closing Remarks	Room HS 3D
	Chair: Claudia Steinem (Göttingen, GER)	

Satellite Workshop on Advanced Fluorescence Spectroscopy and Imaging

The workshop program is based on a bottom-up approach considering the wishes of the attendees. We want to promote the dissemination of theory, joint procedures and tools for quantitative fluorescence measurements and planning of community-driven experimental challenges. Guests are welcome (T. Craggs, T. Hugel, D. Lamb, J. Michaelis, C. Seidel)

14:00–16:00	Plenary Session 1: Quantitative FRET studies in life sciences			Room HS 3D
	Welcome			
	FRET Theory (J. Hendrix)			
	Intensity-based FRET studies (T. Craggs)			
	Lifetime-based FRET studies from single-molecules to live cells (C. Seidel)			
16:00–16:30 Transfer to building 26.41. Coffee break in 26.41				
16:30–17:30	Quant. FRET studies (TIRF) Room HS 6H		Quant. FRET studies (Confocal) Room HS 6G	
	Detailed case study with principal workflow (team TIRF)		Detailed case study with principal workflow (team Confocal)	
17:30–19:00	Beginners in FI (BiFI)-1 Room HS 6H	Advanced in FI (AiFI)-1 R.26.42.02 (23,26,28)+	Experts in FI (EiFI)-1 R. 26.32.02.25	
	Combining imaging and spectroscopy (Budde, Jelzow, Koberling, Weber)	Software presentation and forum: TIRF and Confocal (team TIRF, team Confocal)	Principles of FRET-restrained structural modeling (team S+M)	
19:00	Departure to the Restaurant "Schalander" in Düsseldorf-Wersten, Kölner Landstraße 247			
19:45–23:00	Workshop dinner and further discussions			

09:00–09:50	Dynamic FRET Measurements (TIRF) Room HS 5E	Dynamic FRET Measurements (Confocal) Room HS 6G	
	Detailed case study with principal workflow (HMM and more) (team TIRF)	Detailed case study with workflow (Dynamic shift in MFD, seTCSPC, PDA, BVA, FCS) (team Confocal)	
9:50–10:15 Coffee break in 26.41			
10:15–11:00	Beginners in FI (BiFI)–2 Room HS 6H	Advanced in FI (AiFI)–2 Room 26.42.02 (23,26,28)+	Experts in FI (EiFI)–2 Room 26.32.02.25
	Selecting dyes and labeling of biomolecules for fluorescence spectroscopy (P. Didier)	Software presentation and forum: TIRF and Confocal (team TIRF, team Confocal)	Principles of FRET-restrained structural modeling (team S+M)
11:00–12:00	Advanced FCS techniques		
	(F. Koberling, S. Felekyan)		
12:00–13:00 Lunch in Mensa			
14:00–16:00	Plenary Session 2: Additional dimensions of fluorescence		Room HS 6G
13:00–13:45	Polarization resolved fluorescence spectroscopy to determine shape, order parameters and local motions (R. Kühnemuth, J. Kubiak)		
13:45–14:20	Beyond single-pair FRET studies (D. Lamb)		
14:20–15:00	Summarizing Reports of workgroups and forums: (a) Determination of absolute FRET efficiencies, (b) Analysis of dynamic exchange with FRET studies, (c) Software forums, (d) Integrative structural modelling. Conclusions and outlook		
+ additional rooms will be available 26.42.03 (10, 11), 26.43.02.24,...			

Sometimes diversity makes the difference.

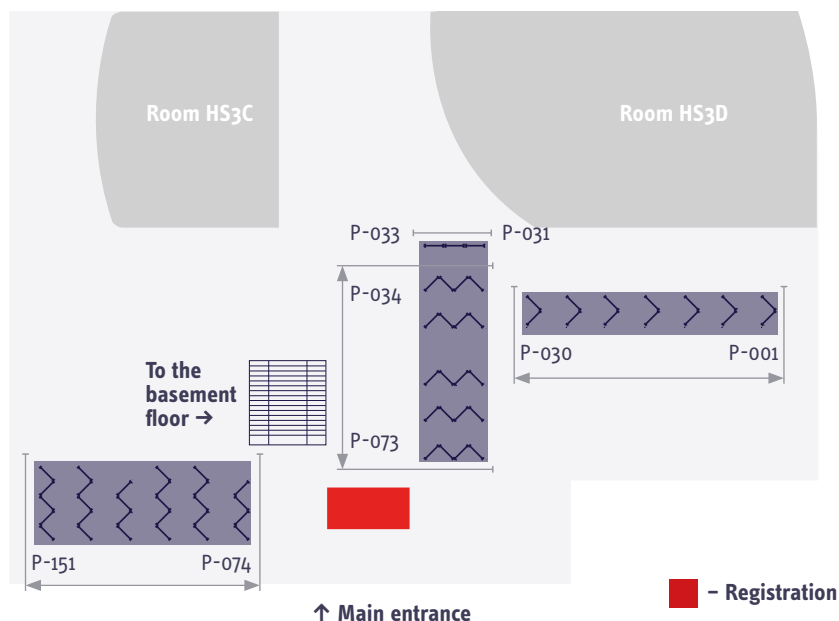


Because details matter.

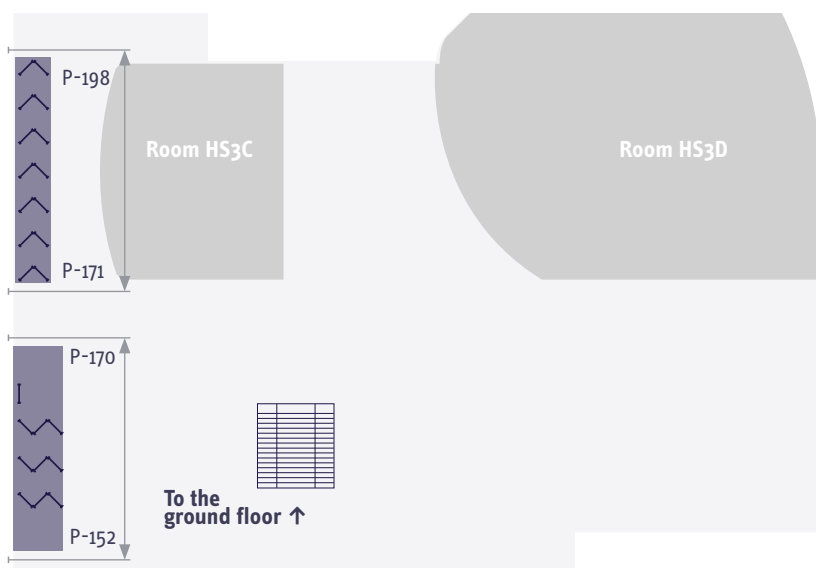


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Ground Floor



Basement Floor



Poster Session

The poster sessions at which each presenter must be available for discussion are scheduled as follows:

Monday | September 17, 2018

Poster session 1 18:45–20:45

Tuesday | September 18, 2018

Poster session 2 13:15–15:15

Authors with an EVEN Poster ID must be present during the first hour. Authors with an ODD Poster ID must be present during the second hour.

Biomolecules and their assemblies: From structure and dynamics to function

- | | |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P-001 | Nuclear inelastic scattering for identification of iron ligand modes in dinitrosyl iron complexes and nitrogenase single crystals
Hendrik Auerbach (Kaiserslautern, GER) |
| P-002 | Role of local membrane protein hydration for the stability of the PIB-type ATPase CopA from <i>Legionella pneumophila</i>
Lisa Nucke (Dresden, GER) |
| P-003 | How long-ranged are collective motions between biomolecules?
Christopher Päslock (Bochum, GER) |
| P-004 | Antigen processing at the atomic level: MD simulations of MHC-I and its peptide-loading complex
Olivier Fiset (Bochum, GER) |
| P-005 | Structural biology of functional amyloids forming biofilms
Umit Akbey (Jülich, GER) |
| P-006 | A novel setup for time-resolved IR spectroscopy on Cytochrome c Oxidase
Pit Langner (Berlin, GER) |
| P-007 | Pore-spanning membranes: a tool to study single vesicle content release in SNARE-mediated membrane fusion
Peter Mühlenbrock (Göttingen, GER) |
| P-008 | Optimizing crystal size of photosystem II by macroseeding: Toward neutron protein crystallography
Rana Ali (Berlin, GER) |
| P-009 | Investigations on microbial channelrhodopsins studied by time-resolved FT-IR and UV/Vis Spectroscopy
Franziska Pranga-Sellnau (Berlin, GER) |
| P-010 | Investigating proton transfer with SERRS and electrophilic addition of iso-cyanates in the catalytic centre of cytochrome c oxidase
Fabian Kruse (Dresden, GER) |

Biomolecules and their assemblies: From structure and dynamics to function	
P-011	Electrostatic pKa calculations of the tetrapyrrole chromophore in phytochromes Ronald Gonzalez (Berlin, GER)
P-012	Salt-induced assembly of fibrinogen into nanofibrous scaffolds Dorothea Brüggemann (Bremen, GER)
P-014	Insights into the secondary nucleation of Alpha-Synuclein Alessia Peduzzo (Düsseldorf, GER)
P-015	Conformational and protonation dynamics at the surface of phytochromes Maryam Sadeghi (Berlin, GER)
P-016	Human Argonaute 2 in action: Mechanistic insights into the key player of RNA interference by SLAM-FRET Sarah Willkomm (Regensburg, GER)
P-017	Cell free expression to investigate site-specific dynamics of GPCR Ulrike Krug (Leipzig, GER)
P-018	Force-dependency of Cas9 target recognition investigated with a DNA origami-based nanoscopic force clamp Leonhard Jakob (Regensburg, GER)
P-019	Deciphering the functional composition of fusogenic liposomes Rejhana Kolasinac (Jülich, GER)
P-020	Mechanism of the intrinsic arginine finger in heterotrimeric G proteins Carsten Kötting (Bochum, GER)
P-022	Influence of the splicing variants ΔExon3 and ΔExon5 on α-synuclein aggregation Christian Scheibe (Konstanz, GER)
P-023	Towards the structure of TRAP transporters with an integrative approach of crystallography and PELDOR Martin Peter (Bonn, GER)
P-024	Characterization of quinoxalinedione antagonist binding to the glutamate receptor LBD using a fluorescence quenching assay Adela Dudic (Bochum, GER)
P-025	Investigation on the dynamics of single domain transmembrane helices via various methods of solid state NMR Hannes Heinel (Leipzig, GER)
P-026	The SAM domain of the murine protein SLY1 dimerizes through a novel SAM domain dimer interface Laura Katharina Kukuk (Jülich, GER)

P-027	Allosteric activation of GDP-bound ras isoforms by bisphenol derivative plasticisers Raphael Stoll (Bochum, GER)
P-028	Probing conformational changes in the GluK2 ligand-binding domain using fluorescence spectroscopy Felix Borowski (Bochum, GER)
P-029	Single-shot submicrosecond infrared spectroscopy on proteins with quantum cascade lasers Jessica Laura Klocke (Bielefeld, GER)
P-030	Analyzing molecular interactions of the tumor suppressor protein p53 with the biopolymer poly(ADP-ribose) by ATR-FTIR spectroscopy Annika Krüger (Konstanz, GER)
P-031	Late-endosomal SNAREs – Towards the characterization and establishment of a novel SNARE-family Stefan Krüger (Göttingen, GER)
P-032	Towards understanding the mechanism of decatenation by topoisomerase IV Jana Hirsch (Münster, GER)
P-033	Structural identification of a novel interprotomer binding pocket in the capsid of enteroviruses preventing conformational change James Alexander Geraets (Helsinki, FIN)
P-034	Structural basis of inward rectification in K⁺ channels Gerhard Thiel; Julian Stahl (Darmstadt, GER)
P-035	ATR-IR-spectroscopy for conformational activity screening in drug discovery – a study on HSP90 Jörn Güldenhaupt (Bochum, GER)
P-036	Exploring the reductive phase of Cytochrome c Oxidase: assignment of heme's redox states and relative structure changes through potential-resolved FTIR Federico Baserga (Berlin, GER)
P-037	Structure of the bifunctional secretin PilQ from T. thermophilus Edoardo D'Imprima (Frankfurt am Main, GER)
P-038	A unifying photo-cycle model for Channelrhodopsin-2 Max Dreier (Bochum, GER)
P-039	The number of SNARE complexes changing conformation during vesicle fusion Ying Zhao (Göttingen, GER)
P-040	SNARE mediated fusion pore – mechanism and nature. Satyan Sharma (Göttingen, GER)
P-041	FRET-Assisted structure prediction of carbohydrate-binding module (CBM56) Alexander Larbig; Bianca Reschke (Düsseldorf, GER)

Biomolecules and their assemblies: From structure and dynamics to function	
P-042	Accurate determination of the RNA three-way junctions via single-molecule high-precision FRET measurements Olga Doroshenko (Düsseldorf, GER)
P-043	β-Wrapin AS69 achieves substoichiometric inhibition of α-synuclein amyloid formation by interference with nucleation processes Laetitia Heid (Düsseldorf, GER)
P-044	Using a combination of different labeling techniques to investigate the ras dimer interface via electron spin resonance spectroscopy and FRET-experiments Christian Teuber (Bochum, GER)
P-045	Multiple co-existing structures of an RNA four-way junction resolved by FRET, SAXS, and integrative modeling Christian A. Hanke (Düsseldorf, GER)
P-046	Conformational study of NpSR11/NpHtr11 in different lipid nanoparticles using DEER and Rotamer Analysis Alexandr Colbasevici (Osnabrück, GER)
P-047	Integrative single-molecule FRET analysis of multistate conformational dynamics Oleg Opanasyuk (Düsseldorf, GER)
P-048	Disulfide bond formation between two amyloidogenic regions of islet-amyloid polypeptide inhibits amyloid fibril formation Tatsiana Kupreichyk (Jülich, GER)
P-049	Accuracy in FRET measurements concerning technical and methodical aspects Julian Folz (Düsseldorf, GER)
P-050	Mobility-based quantification of virus-lipid interactions Stephan Block (Berlin, GER)
P-051	Anisotropic metal growth on phospholipid nanodiscs via lipid bilayer expansion Jana Oertel (Dresden, GER)
P-052	Microviscosity of bacterial biofilm matrix characterized by fluorescence correlation spectroscopy and single particle tracking Valentin Dunsing (Potsdam, GER)
P-053	Conformational changes of channelrhodopsin-2 investigated by time-resolved EPR spectroscopy Magdalena Schumacher (Osnabrück, GER)
P-054	Influence of aggregation partners on the secondary structure of peptides Kirsten Schwing (Kaiserslautern, GER)
P-055	Microfluidic diffusional sizing enables characterisation of Protein-Protein interactions under native conditions Maren Butz; Maya Wright (Cambridge, GBR)

P-056	The Deutsche Forschungsgemeinschaft at a glance-research funding opportunities Wolfgang Wachter (Bonn, GER)
P-057	High precision FRET studies reveal reversible transitions in nucleosomes on the microsecond to minute time scale Ralf Kühnemuth (Düsseldorf, GER)
P-058	Thermodynamic analysis of the hydration layers of bio-active molecules and proteins Oktavian Krenczyk (Bochum, GER)
P-059	Time-resolved IR spectroscopic studies of Channelrhodopsin-1 and cysteine variants Raiza Maia (Berlin, GER)
P-060	Kinetic and thermodynamic aspects of fibrils elongation Nicola Vettore (Düsseldorf, GER)
P-061	Impact of co-solutes on the interaction of the intrinsically disordered transcription factor c-Myb and its interaction partner CBP Jan Schnatwinkel (Bochum, GER)
P-062	The impact of macromolecular crowding on translational mobility and conformational properties of proteins Alyazan Albarghash (Aachen, GER)
P-063	An improved two-color coincidence detection for quantifying the interlinkage of macromolecular components at single molecule level Henning Höfig (Aachen, GER)
P-064	Interaction network of apoptotic Bcl-2 proteins addressed by EPR and ODNP techniques Svetlana Kucher (Bochum, GER)
P-065	Picosecond pulses with wavelength freedom from UV to nIR Thorge Holm (Köln, GER)
P-066	hGBP 1 – polymerization and membrane binding is more than just a farnesyl switch Linda Sistemich (Bochum, GER)
P-067	Human guanylate binding protein 1 retains its activity while interacting with nonstructural protein 1 from influenza A virus Ping Zhang (Bochum, GER)
P-068	Single-molecule FRET experiments for investigation of PARP-1 binding mechanism to DNA single-strand breaks Anna Sefer (Ulm, GER)
P-069	Single-molecule FRET analysis of a cellulosome scaffoldin reveals dynamic interactions of type I cohesin modules Anders Barth (München, GER)

Biomolecules and their assemblies: From structure and dynamics to function	
P-070	Azidohomoalanine as site-specific probe for steady state and 2D-IR spectroscopy on an allosteric protein Katharina B. Eberl (Frankfurt am Main, GER)
P-071	Diffusion dynamics, activation, and cross-interaction of receptor tyrosine kinases studied by single-particle tracking Marie-Lena I.E. Harwardt (Frankfurt am Main, GER)
P-072	EPR spectroscopy for the analysis of protein-protein interaction in highly concentrated liquid protein solutions Jacob Blaffert (Halle (Saale), GER)
P-073	Role of force for the self-assembly of myosin II minifilaments Justin Grewe (Heidelberg, GER)
P-074	Electron cryo-microscopy structure of the canonical TRPC4 ion channel reveals the binding site for its regulatory proteins Barathy Vinayagam (Düsseldorf, GER)
P-075	Biomolecular dynamics studied by time-resolved IR-spectroscopy and laser-excited perturbation techniques Karin Hauser (Konstanz, GER)
P-076	Structure-function relationship of RHO kinase I Soheila Rezaei Adariani (Düsseldorf, GER)
P-077	Micro- and nanostructured surface architectures for label-free spectroscopic and microscopic protein sensing Julia Flesch (Osnabrück, GER)
P-078	Integrated NMR, Fluorescence and MD Benchmark Study of Protein Mechanics and Hydrodynamics Jakub Kubiak (Düsseldorf, GER)
P-079	Collective force generation by elastically coupled molecular motors Mehmet Can Ucar (Potsdam, GER)
P-080	Multi-species diffusion studies in membranes utilizing scanning FCS and super-resolution microscopy Maria Loidolt-Krüger (Berlin, GER)
P-082	Comprehensive biophysical assays: From single channel electrophysiology to overall cell behavior Conrad Weichbrodt (München, GER)

Cell biophysics meets systems and synthetic biology	
P-083	Connexin 43 as a model to mimic cell-to-cell communication in minimal cell compartments (MCCs) Yeimar Portillo (Göttingen, GER)
P-084	Structure and mechanics of the membrane-bound intermediate filaments Sarmini Nageswaran (Göttingen, GER)
P-085	Synthetic cells, a reductionists approach: Reconstitution of an ATP synthase in giant unilamellar vesicles by droplet based microfluidics Kristina Kramer (Göttingen, GER)
P-086	Investing the organization of minimal actin cortices and their impact on pore-spanning lipid membrane tension by means of AFM - CLSM correlation Nils Liebe (Göttingen, GER)
P-087	Cytoskeletal and membrane reorganization during NET formation Elsa Neubert (Göttingen, GER)
P-088	Effect of substrate elasticity on neutrophil extracellular trap formation Gökhan Günay (Göttingen, GER)
P-089	Spontaneous shear flow in confined cellular nematics. Carles Blanch-Mercader (Genève, CHE)
P-090	A model system for cellular adhesion based on microstructured substrates Jonathan F. E. Bodenschatz (Göttingen, GER)
Computational biophysics	
P-091	Is ATC hydrolysis the power stroke of ABC transporters? Hendrik Göddeke (Bochum, GER)
P-092	The multiple origins of the hydrophobicity of fluorinated apolar amino acids Joao Robalo (Potsdam, GER)
P-093	Recognition and specificity in the initial steps of the base excision repair mechanism Petra Imhof (Berlin, GER)
P-094	Analysis of networks in androgen and glucocorticoid receptors in complex with DNA Senta Volkenandt (Berlin, GER)
P-095	Reaction path prediction in proton transfer systems Marco Reidelbach (Berlin, GER)
P-096	Long dynamic simulations of Deinococcus Radiodurans bacterial phytochrome Giovanni Battocchio (Berlin, GER)

Computational biophysics	
P-097	Modulation of TRPV1 heat activation mechanism by the lipid membrane Anna Bochicchio (Erlangen, GER)
P-098	Dynamic hydrogen-bond networks of channelrhodopsin variants Michail Lazaratos (Berlin, GER)
P-099	Computational simulations of zinc binding to the dimeric human voltage-gated proton channel Christophe Jardin (Nürnberg, GER)
P-100	Reliable state identification and state transition detection of fluorescence intensity-based smFRET data Richard Börner (Zürich, CHE)
P-101	Probing fosfomycin permeation across the E. coli outer membrane Vinaya Kumar Golla (Bremen, GER)
P-102	An amphipathic lipid packing sensor motif in Piccolino makes the protein a possible candidate for a synaptic vesicle tether Sonja A. Kirsch (Erlangen, GER)
P-103	Understanding the structure and function of DcaP channel from Acinetobacter baumannii using the MD simulations Jigneshkumar Dahyabhai Prajapati (Bremen, GER)
P-104	The study of proton transfer in photosystem II Krzysztof Buzar (Berlin, GER)
P-105	Precise time super-resolution by event correlation microscopy Qinghua Fang (Göttingen, GER)
P-106	Open boundary simulations of low-resolution membrane protein models Thomas Tarenzi (Nicosia, CYP)
P-107	Automated and optimally FRET-assisted structural modeling Mykola Dimura (Düsseldorf, GER)
P-108	Vibrational energy exchange reveals important protein's function signatures Luca Maggi (Jülich, GER)
P-109	How sugars can taste bitter: Insight from multiscale simulations Mercedes Alfonso-Prieto (Jülich, GER)
P-110	Using DOPE inverted hexagonal phase to compare two force decompositions Otto Schullian (Potsdam, GER)
P-111	Protein-lipid-ion interactions define conduction properties of TMEM16 lipid scramblases Andrei Kostitskii (Jülich, GER)

P-112	Simulation of cellular adhesion Filip Savic (Göttingen, GER)
P-113	Modeling of multiprotein complex formation Stefanie Förste (Potsdam, GER)
P-114	Conformational dynamics and membrane binding of the guanlyate binding protein mGBP2 Jennifer Loschwitz; Xue Wang (Jülich, GER)
P-115	Replica-exchange simulation of T72/S111-phosphorylated Rab8a GTPase indicates stabilization of the active form Danial P. Dehkordi (München, GER)
P-116	Role of physiological environments in the folding mechanism of intrinsically disordered proteins Suman Samantray (Jülich, GER)
P-117	Integrating experiment and simulation: Decoding IR spectra by visualizing molecular details Till Rudack (Bochum, GER)
P-118	Large scale simulations of cell resolved tissue by a cellular Potts model Jakob Rosenbauer (Jülich, GER)
P-119	Precision DEER distance measurements by spin-label ensemble refinement Katrin Reichel (Frankfurt am Main, GER)
Energy transduction	
P-120	Histidine protonation and its influence on the electronic and vibrational properties of a "Rieske-like" iron-sulfur protein Hendrik Auerbach (Kaiserslautern, GER)
P-121	Residues involved in the protonation of the biliverdin chromophore of Agp2 Anastasia Kraskov (Berlin, GER)
P-122	Immobilization of Cytochrome c Oxidase for Spectro-electrochemical investigation Markus Göbel (Dresden, GER)
P-123	Time-resolved single-frequency infrared-spectroscopy on photosystem ii in H2O and D2O: Tracking protonation dynamics Sarah Mäusle (Berlin, GER)
P-124	The influence of water analogues on the oxygen-evolution step in Photosystem II Ricardo Assunção (Berlin, GER)
P-125	Single-Frequency IR spectroscopy with microsecond time resolution for tracking electron and proton transfer in the D1-V185N variant of photosystem II Paul Greife (Berlin, GER)

P-126	Time-resolved IR absorption spectroscopy: tracking photosynthetic water oxidation in Photosystem II Philipp Simon (Berlin, GER)
P-127	Analysis of photoinduced processes of phycoerythrin-loaded cyanophage phycobiliprotein lyase ΦCpeT using femtosecond transient absorption spectroscopy Rolf Diller (Kaiserslautern, GER)
P-128	Conservation and variation of electron transfer in the photolyase-cryptochrome protein family Tomáš Kubar (Karlsruhe, GER)
Imaging molecules of life	
P-129	A theoretical framework for spatiotemporal chemical imaging with nanosensors Daniel Meyer (Göttingen, GER)
P-130	Spectroscopic characterization of graphene quantum dots for in vivo applications Christian Wimmenauer (Düsseldorf, GER)
P-131	Quantitative analysis of structural and affinity properties of molecular assemblies in living cells using MFIS-FRET studies with fluorescent proteins Felekyan Suren; Annemarie Greife (Düsseldorf, GER)
P-132	Studying biomolecular systems beyond the diffraction limit with molecular resolution by STED-MFIS microscopy Jan-Hendrik Budde (Düsseldorf, GER)
P-133	Quantitative Ultra-fast FLIM Maria Loidolt-Krüger (Berlin, GER)
P-134	Fast and efficient fluorescence data acquisition for high throughput, kinetics and imaging applications Alessia Quatela (Bensheim, GER)
P-135	Uptake and release of proteins in microgels studied on single particle level Farzaneh Vaghefikia (Aachen, GER)
P-136	Direct characterization of the evanescent field in total internal reflection fluorescence microscopy Christian Niederauer (Martinsried, GER)
P-137	Fast near infrared imaging of dopamine with fluorescent nanosensors Meshkat Dinarvand (Göttingen, GER)
P-138	Localization-based fluorescence correlation spectroscopy with DNA-PAINT Johannes Stein (Martinsried, GER)
P-139	Single-particle tracking based on DNA-PAINT Johannes Stein (Martinsried, GER)

Multiscale biophysics of membranes and membrane proteins	
P-140	Zinc inhibition in the NpHV1 voltage-gated proton channel Gustavo Chaves (Nürnberg, GER)
P-142	Supramolecular assembly of lipid nanodiscs using genetically Engineered MSP1D1 for Membrane Protein Structural Studies Madhumalar Subramanian (Dresden, GER)
P-143	Structural changes of the oxygen-evolving complex towards the O₂ formation Mohamed Ibrahim (Berlin, GER)
P-144	Detailed Comparison of H₂O₂ Production of Human PMN and HL-60 derived Cell Lines. Annika Droste (Nürnberg, GER)
P-145	Spectroscopic investigation of variants of channelrhodopsin-1 from <i>Chlamydomonas augustae</i> Maria Walter (Berlin, GER)
P-146	Spectroscopic investigations on the light-driven inward H⁺ pump xenorhodopsin Luiz Schubert (Berlin, GER)
P-147	Interaction of synthetic polymers with biological nanopores: effects of polymer architecture and monomer size Monasadat Talarimoghari (Freiburg, GER)
P-148	Membrane-conditioned dimerization of G protein coupled receptors as dynamic regulation of receptor function Stefan Gahbauer (Erlangen, GER)
P-149	Reconstitution of Silicanin-1 into artificial lipid membranes and investigation of its self-aggregation behavior Philipp Schwarz (Göttingen, GER)
P-150	Collisional lipid transfer among DIBMA-bounded nanodiscs Bartholomäus Danielczak (Kaiserslautern, GER)
P-151	Role of Coulombic repulsion in collisional lipid transfer among SMA(2:1) nanodiscs Anne Grethen (Kaiserslautern, GER)
P-152	Curvature dependence of SNARE TMD mediated membrane fusion Matthias Pöhl (Erlangen, GER)
P-153	Intermolecular interactions in the activation of Two Pore Channels Sonja A. Kirsch (Erlangen, GER)
P-154	Phospholipid order, dynamics, and hydration in polymer-bounded nanodiscs Carolyn Vargas (Kaiserslautern, GER)

Multiscale biophysics of membranes and membrane proteins	
P-155	Phase separation of sphingomyelin containing lipid bilayers is controlled by lipid-substrate adhesion as well as chain length and saturation Jeremias Sibold (Göttingen, GER)
P-156	Permeability modes in fluctuating lipid membranes with macromolecular pores Lara H. Moleiro (Bielefeld, GER)
P-157	Modulation of selectivity filter gating and conductivity by the pore helix in a viral K⁺ channel Sebastian Mach (Darmstadt, GER)
P-158	Investigation of biomimetic membrane interactions with the ENTH domain of epsin 1 and substrate surfaces Nelli Teske (Göttingen, GER)
P-159	Asymmetric receptor interaction within signalosomes for the switch of canonical to noncanonical Wnt signaling Changjiang You (Osnabrück, GER)
P-160	Voltage-gated ion channels selective for protons Thomas K. Berger (Bonn, GER)
P-161	Free and chaperone-bound unfolded states of outer-membrane phospholipase A Neharika Chamachi (Dresden, GER)
P-162	Rationalizing the design principles of amphiphilic helical antimicrobial peptides Erik Strandberg (Karlsruhe, GER)
P-163	Biophysical characterization of human γ-secretase subunit presenilin and nicastrin Ge Yang (Hamburg, GER)
P-164	Lipid selectivity in antimicrobial membrane permeabilization Maria Hoernke (Freiburg i. Br., GER)
P-165	Membrane budding and fission induced by adsorbing particles Rikhia Ghosh (Potsdam, GER)
P-166	Probing the pore diameter of viral K⁺ channels with quaternary ammonium ions Tobias Gabriel (Darmstadt, GER)
P-167	Investigation of protein-protein and protein-lipid interactions involved in Influenza A virus assembly Salvatore Chiantia (Potsdam, GER)
P-168	Light-induced budding and fission of giant vesicles Jan Steinkühler (Potsdam, GER)
P-169	Small molecule permeation across membrane channels: Chemical modification to quantify transport across OmpF Jayesh Arun Bafna (Bremen, GER)

P-170	Mechanical properties of vesicle membranes under asymmetric buffer conditions Marzieh Karimi (Potsdam, GER)
P-171	Spin-labeled nanobodies: a new tool towards Electron Paramagnetic Resonance (EPR) studies in cellular environments. Laura Galazzo (Bochum, GER)
P-172	Supramolecular host-guest systems for biomembrane transport of peptides Andreas Hennig (Bremen, GER)
P-173	Green light-sensing in the corn smut fungus Ustilago maydis: biophysical characterization of the fungal rhodopsins UmOps1 and UmOps2 Ulrich Terpitz (Würzburg, GER)
P-174	Do the Signaling Proteins N-Ras and K-Ras4B Colocalize in Model Biomembranes? Lei Li (Dortmund, GER)
P-175	Catch me if you can: microfluidic traps for manipulating and studying active processes in GUVs Kristina A. Ganzinger (Martinsried, GER)
P-176	Influence of the osmolyte TMAO on the thermo- and barotropic phase behavior of lipids Magiliny Manisegaran; Irena Kiesel (Dortmund, GER)
P-177	Single-molecule FRET spectroscopy of membrane-protein folding structural dynamics and thermodynamics Georg Krainer (Kaiserslautern, GER)
P-178	Conformational dynamics of the autophagy-related protein GABARAP on multiple time scales Irina Apanasenko (Düsseldorf, GER)
Physics of disease and cancer	
P-179	QCL-based IR-imaging of colorectal cancer tissue for clinical diagnostics Claus Küpper; Frederik Großerüschkamp (Bochum, GER)
P-180	FTIR-imaging of human bladder tissue for cancer biomarker research Angela Kallenbach-Thieltges; Frederik Großerüschkamp (Bochum, GER)
P-181	QCL based immuno-IR sensor as Alzheimer blood test Jörn Güldenhaupt; Grischa Gerwert (Bochum, GER)
P-182	Investigation of the effect of effector molecules on disease related proteins and their secondary structure via ATR-FTIR-spectroscopy Léon Beyer; Julia Lange; Brian Budde; Marvin Mann (Bochum, GER)

Physics of disease and cancer

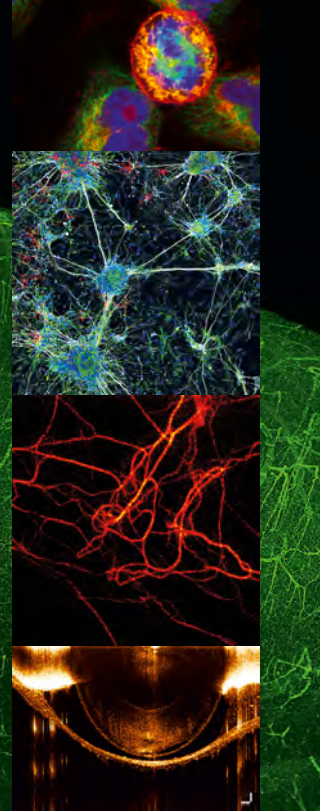
- P-183** **2-Step Alzheimer's Disease Diagnosis: Plasma A β for preselection of Alzheimer's individuals**
Julia Lange (Bochum, GER)
- P-184** **Throughput optimized regenerative immuno-infrared-assay for the diagnosis of alzheimer's- and parkinson's disease**
Brian Budde; Marvin Mann (Bochum, GER)
- P-185** **The small molecule anle138b shows interaction with α -synuclein oligomers in phospholipid membranes**
Leif Antonschmidt (Göttingen, GER)
- P-186** **Opposed effects of dityrosine formation in soluble and aggregated α -synuclein on fibril growth**
Michael Wördehoff (Düsseldorf, GER)
- P-187** **Integrative analysis of an UTX (KDM6A) interaction subset using high precision fluorescence microscopy (MFIS-FRET) guided by biochemical methods**
Julian Koch (Düsseldorf, GER)
- P-188** **Targeting acute myeloid leukemia with a small-molecule protein-protein interaction inhibitor**
Mohanraj Gopalswamy (Düsseldorf, GER)
- P-189** **Magnetic cell labelling: Single cell evaluation and magnetic sorting**
Nils Lukat (Kiel, GER)

Late Poster

- P-190** **Nanobud formation and nanoparticle engulfment by bilayer membranes with compositional asymmetry**
Aparna Sreekumari (Potsdam, GER)
- P-191** **Probing polymer chain conformation and fibril formation of peptide conjugates**
Bruno Voigt (Halle, GER)
- P-192** **Imaging and epidemiology of breast cancer in the region of Chlef in Algeria**
Maamar Boukabcha (Chlef, DZA)
- P-193** **Wide-field single photon counting detector and its applications**
Yury Prokazov (Magdeburg, GER)
- P-194** **Energetic study for the induced uptake of particles into synthetic membrane systems**
Aguilar Ayala Yareni (Freiburg, GER)
- P-195** **Kinetic and Thermodynamic Characterization of Pi-Cation Interactions for Galectin-3 by various biophysical tools**
Thomas Neumann (Illkirch, FRA)

- P-196** **From antibunching to diffusion - SiMFS-Tk: A single molecule fluorescence Simulator Toolkit**
Jan Pavlita (Lübeck, GER)
- P-197** **Does inter-loci complex formation of M.tuberculosis WXG100 proteins expand the bacterium's virulence toolbox**
Christina Kallenberg (Lübeck, GER)
- P-198** **Comparison of smFRET and trFRET with dsDNA as the model system**
Kim Colin Reiter (Lübeck, GER)
- P-199** **Comparison of smFRET and trFRET with dsDNA as the model system**
Kim Colin Reiter (Lübeck, GER)
- P-200** **Comparison of smFRET and trFRET with dsDNA as the model system**
Kim Colin Reiter (Lübeck, GER)
- P-201** **Comparison of smFRET and trFRET with dsDNA as the model system**
Kim Colin Reiter (Lübeck, GER)
- P-202** **Comparison of smFRET and trFRET with dsDNA as the model system**
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Conference Dinner

CONFERENCE DINNER – September 18, 2018 | Tuesday

In the very heart of Düsseldorf, between the Alter Hafen and Carlsplatz at a place of its own: the **Klosterhof – Maxhaus Düsseldorf**.

The glass-covered inner courtyard of the former Franciscan monastery is the central room of the Maxhaus connecting the levels. Thanks to the steel-glass roof construction at a height of 11.5m, it retains its outdoor character with the changing light moods during the day.

For the evening of the Conference Dinner we welcome you in this special location for a delightful and memorable evening in Düsseldorf. The Conference Dinner will give the chance to mingle with colleagues and friends and enjoy a relaxing evening.

The ticket includes entrance and food (buffet). For drinks please pay on site.

Arrival by public transport

From station "Uni Ost/ Botanischer Garten": By Metro number U73 (direction "Gerresheim") to station "Benrather Straße". From there you walk 4 min to Maxhaus – Klosterhaus. You need around 20 minutes.

From station "Uni Nord/ Christophstraße": By METRO number U83 (direction "G'heim, Krankenhaus") to station "Benrather Straße". From there you walk 4 min to Maxhaus – Klosterhaus. You need around 20 minutes.

Parking

There are no parking places around the location (resident parking area).

You can park in the "Carlsplatz"-car park or in the "Rheinufertunnel" car park for fee.

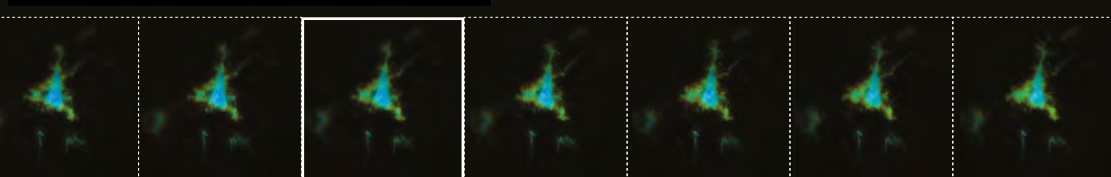
Begin:	20:00
Ticket fees:	50.00 € Participants
	40.00 € Students
Venue:	Maxhaus – Klosterhof
	Schulstraße 11, 40213 Düsseldorf





FLIM movie of MIET with TIRF

It's so pity one cannot play movies on the paper. Thus, here we display just few frames of the living COS7 cells with GFP marked protein kinase showing metal induced energy transfer. We acquired this movie with LINCcam counting photons on the microscope with total internal reflection illumination. The full movie you can find on our website.



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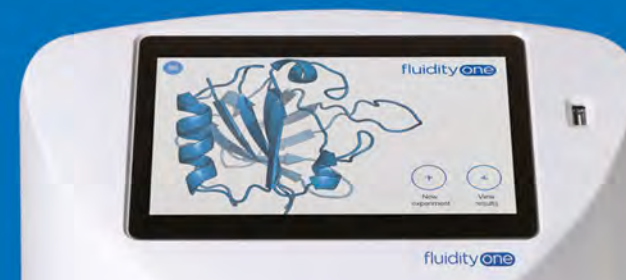
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