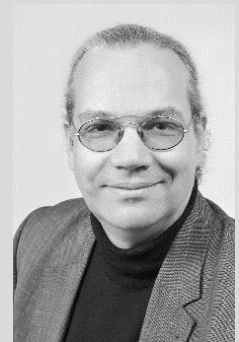


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Curriculum vitae

since 2009	Director, Institute for Medical Physics and Biophysics, Charité
since 2007	Professor (W3), Biophysics, Charité and member, Sciences Faculty I, Humboldt-Universität zu Berlin
2006 - 2007	Associate Professor (W2, tenured), Biophysics, Charité
2002 - 2008	Leader, junior research group, Volkswagen Stiftung 2002 - 2006 Assistant Professor, Charité
1998 - 2002	Research associate (Prof. Joachim Frank), Howard Hughes Medical Institute/Wadsworth Center
1996 - 1998	Postdoctoral scientist with Prof. K.H. Nierhaus, Max Planck Institute for Molecular Genetics
1996	Degree: Dr. rer. nat., Freie Universität Berlin
1992 - 1996	Graduate student (Prof. Knud H. Nierhaus), Max Planck Institute for Molecular Genetics
1991	Diploma in Biochemistry, Freie Universität Berlin 1986 - 1991 Study of Biochemistry, Freie Universität Berlin

Research fields

Our general interest is the structural biology of large macromolecular machines and assemblies:

- Cryo-electron microscopy (cryo-EM) in combination with digital image processing (single particle approach) to determine the structure of large macromolecular assemblies and machines
- Cryo-electron microscopy of macromolecular machines; structure and function of ribosomes

Activities in the scientific community, honors, awards

2014	Elected Member of EMBO
2012	Chair, 3D EM Gordon Research Conference 2011 Vice Chair, 3D EM Gordon Research Conference
since 2011	Spokesperson Collaborative Research Center (SFB) 740
2009	Organizer, International Symposium on "Membranes and Modules (together with V. Haucke)
2007	Professor (W3), Cluster of Excellence, „Cellular Networks“ at the Ruprecht-Karls-Universität Heidelberg (declined)
2007	Professor (W3), Cluster of Excellence „Macromolecular Complexes“ at the Johann Wolfgang Goethe-Universität Frankfurt am Main (declined)
2007 - 2010	Deputy spokesperson, Collaborative Research Center (SFB) 740 2006 Chairman, CSHL Translational Control Meeting
2004 - 2007	Young Investigator, European Molecular Biology Organization (EMBO)

Selected publications

Muhs M, Hilal T, Mielke T, Skabkin MA, Sanbonmatsu KY, Pestova TV, Spahn CM. Cryo-EM of ribosomal 80S complexes with termination factors reveals the translocated cricket paralysis virus IRES. *Mol Cell*. 2015;57(3):422-32.

Behrmann E, Loerke J, Budkevich TV, Yamamoto K, Schmidt A, Penczek PA, Vos MR, Burger J, Mielke T, Scheerer P, Spahn CM. Structural snapshots of actively translating human ribosomes. *Cell*. 2015;161(4):845-57.

Yamamoto H, Unbehauen A, Loerke J, Behrmann E, Collier M, Burger J, Mielke T, Spahn CM. Structure of the mammalian 80S initiation complex with initiation factor 5B on HCV-IRES RNA. *Nat Struct Mol Biol*. 2014;21(8):721-7.

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Fritsch J, Scheerer P, Frielingsdorf S, Kroschinsky S, Friedrich B, Lenz O, Spahn CM. The crystal structure of an oxygen-tolerant hydrogenase uncovers a novel iron-sulphur centre. *Nature*. 2011;479(7372):249-52.

Budkevich T, Giesebrecht J, Altman RB, Munro JB, Mielke T, Nierhaus KH, Blanchard SC, Spahn CM. Structure and dynamics of the mammalian ribosomal pretranslocation complex. *Mol Cell*. 2011;44(2):214-24.

Ratje AH, Loerke J, Mikolajka A, Brunner M, Hildebrand PW, Starosta AL, Donhofer A, Connell SR, Fucini P, Mielke T, Whitford PC, Onuchic JN, Yu Y, Sanbonmatsu KY, Hartmann RK, Penczek PA, Wilson DN, Spahn CM. Head swivel on the ribosome facilitates translocation by means of intra-subunit tRNA hybrid sites. *Nature*. 2010;468(7324):713-6.

Schuetz JC, Murphy FVt, Kelley AC, Weir JR, Giesebrecht J, Connell SR, Loerke J, Mielke T, Zhang W, Penczek PA, Ramakrishnan V, Spahn CM. GTPase activation of elongation factor EF-Tu by the ribosome during decoding. *Embo J*. 2009;28(6):755-65.

Connell SR, Takemoto C, Wilson DN, Wang H, Murayama K, Terada T, Shirouzu M, Rost M, Schuler M, Giesebrecht J, Dabrowski M, Mielke T, Fucini P, Yokoyama S, Spahn CM. Structural basis for interaction of the ribosome with the switch regions of GTP-bound elongation factors. *Mol Cell*. 2007;25(5):751-64.