

# Dr Kathrin Wünsch

*Ph.D., Dipl.-Phys.*

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## Employment

Oct. 11 - Present **Postdoctoral Research Fellow**,  
*Department of Physics, University of Warwick, United Kingdom.*

## Education

Oct. 07 - Sept. 11 **Postgraduate Studies in Theoretical Plasma Physics**,  
*Department of Physics, University of Warwick, United Kingdom,*  
Thesis Title: “*Theory of X-ray Thomson scattering in Warm Dense Matter*”  
(Scholarship by Engineering and Physical Sciences Research Council).

Oct. 02 - Sept. 07 **Undergraduate Studies in Physics**,  
*Institut für Physik, E.-M.-Arndt-Universität Greifswald, Germany,*  
Degree: Diploma with 1.4 (very good) - equivalent to First Class MSci Degree.

## Publication list

- [1] D. Kraus *et al.*, High Energy Density Physics, **8**, 46 (2012).
- [2] D.A. Chapman *et al.*, High Energy Density Physics **8**, 175 (2012).
- [3] K. Wünsch, J. Vorberger, G. Gregori, D.O. Gericke, EPL **94**, 25001 (2011).
- [4] D.O. Gericke *et al.*, Phys. Rev. E **81**, 065401(R) (2010).
- [5] D.O. Gericke *et al.*, J. Phys. (Conf. Series) **220**, 012001 (2010).
- [6] A.L. Kritcher *et al.*, Phys. Rev. L **103**, 245004 (2009).
- [7] B. Barbrel *et al.*, Phys. Rev. L **102**, 165004 (2009).
- [8] D.O. Gericke *et al.*, Nucl. Instrum. Methods Phys. Res. A **606**, 142 (2009).
- [9] K. Wünsch, J. Vorberger, D.O. Gericke, Phys. Rev. E **79**, 010201(R) (2009).
- [10] K. Wünsch *et al.*, J. Phys. A **42**, 214053 (2009).
- [12] E. Garcia Saiz *et al.*, Nature Physics **4**, 940 (2008).
- [12] K. Wünsch *et al.*, Phys. Rev. E **77**, 056404 (2008).
- [13] K. Wünsch *et al.*, J. Phys. (Conf. Series) **112**, 032077 (2008).

## Conference presentations

### Oral presentations

- *Diagnostics of High-Energy-Density Matter by X-ray Thomson Scattering*, Inertial Fusion Sciences and Applications (IFSA), Bordeaux, France (2011)
- *Application of Scattering as Warm Dense Matter Diagnostics*, 31st int. Workshop on Physics of High Energy Density in Matter, Hirschegg, Austria (2011)
- *X-ray Scattering of Multicomponent Warm Dense Matter*, 29th int. Workshop on Physics of High Energy Density in Matter, Hirschegg, Austria (2009)
- *Thomson Scattering in Warm Dense Matter*, Frühjahrstagung der Deutschen Physikalischen Gesellschaft, Darmstadt, Germany (2008)

### Poster presentations (selected)

- *Theory of X-ray Scattering from Warm Dense Mixtures*, International Workshop on Warm Dense Matter, Pacific Grove, USA, (2011)
- *Multicomponent Effects on the X-ray Scattering Signal from Warm Dense Matter*, Workshop on High Energy Density in Matter, Hirschegg, Austria, (2010)
- *X-ray Scattering in Multicomponent Warm Dense Matter*, IOP Plasma Physics Conference, University of Warwick, Coventry, United Kingdom, (2009)
- *Ion Structure in Warm Dense Matter: ab initio Simulations versus HNC*, Strongly Coupled Coulomb Systems (SCCS), Camerino, Italy, (2008)

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### Awards and Grants

- American Study and Student Exchange Committee (ASSEC): travel fund for the International Workshop on Warm Dense Matter, USA, (2011)
- Poster prize at Workshop on High Energy Density in Matter, Austria, (2010)
- Poster prize at IoP Plasma Physics Conference, United Kingdom, (2009)
- Photon Science Research Institute of the Science and Technology Facilities Council (STFC): sponsored Ultrafast X-ray Summer School, USA (2009)
- Photon Science Research Institute of the Science and Technology Facilities Council (STFC): sponsored FLASH User Workshop at DESY, Germany (2008)
- Engineering and Physical Sciences Research Council (EPSRC): grant for the postgraduate study, University of Warwick, United Kingdom (2007-2011)
- Wilhelm Heinrich and Else Heraeus Stiftung: sponsored participation in Int. Summer School “Computational Many Particle Physics”, Germany (2006)

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### Workshops, Work experience and Internships

- Jun. 11 **Research Visit at Lawrence Livermore National Laboratory, USA.**
- Jun. 09 **Ultrafast X-ray Summer School, SLAC National Accelerator Laboratory, Stanford University, USA.**
- Sep. 08 **FLASH User Workshop, DESY, Hamburg, Germany.**
- Aug. - Sept. 05 **Internship at Nuclear Physics Institute, Research center Jülich, Germany.**
- Apr. - Jul. 05 **Undergraduate research assistant in research group “Theory of Dense Plasmas”, E.-M.-Arndt-Universität Greifswald, Germany.**

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### Transferable skills

Language	<b>German</b>	<i>Native language</i>
	<b>English</b>	<i>fluent</i>
	<b>French</b>	<i>basic knowledge</i>
IT skills	<i>Platform:</i> Proficient with Linux/Unix and MS Windows <i>Software:</i> Advanced in Latex & MS/Open Office; Basics in Maple & Matlab <i>Programming:</i> Practical experiences in C/C++ and IDE (Eclipse)	

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### Teaching and Administrative experiences

- Oct. 07 - Apr. 11 **Tutorial for *Mathematics of Scientists*, University of Warwick, UK.**
- Oct. 08 - Sept. 10 **Member of the *Physics Postgraduate Student Staff Liaison Committee (PG-SSLC)*, University of Warwick, UK.**