

Resume of Allard Pieter Mosk

Personal Information

Born 1970 in Amsterdam.
Dutch nationality.

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Languages:
Dutch and English (fluent),
German (good)
French (basic)

Employment history

- 2014-now **Full professor** “Control of Nanophotonic Scattering”, Universiteit Twente, Netherlands
- 2011-2013 **Associate professor**
- 2003-2011 **Assistant professor** at the Complex Photonic Systems group,
 Faculty of Science & technology, and MESA+ Institute for Nanotechnology,
 Universiteit Twente, Netherlands.
- 2002-2003 **Researcher** at the molecular physics group, FOM Institute for plasma physics Rijnhuizen,
 Netherlands
- 2004 **Visiting professor**
2002, 2003 **Visiting scientist** at the Ecole Normale Supérieure, Paris.
- 1999-2002 **Marie-Curie fellow** at the atomic physics group, Max-Planck-Institut für Kernphysik,
 Heidelberg, Germany
- 1994-1999 **Ph.D. fellow**, Dutch Foundation for Research on Matter (FOM), University of Amsterdam,
 Netherlands.
- 1986-1992 **Software developer** in startup IT company

Education

1994-1999 **Ph. D. in experimental physics**, Universiteit van Amsterdam

- Thesis: *Optical study of two-dimensional atomic hydrogen gas*, defended September 1999.
- Supervisors: Prof. dr. J. T. M. Walraven, dr. M. W. Reynolds, and dr. T. W. Hijmans.
- Evaporative cooling and two-photon spectroscopy of trapped atomic hydrogen. [2,3,5]
First optical detection of adsorbed H atoms on liquid Helium.[7,8,11] First photoassociation spectroscopy of atomic H. [9]

1988-1994 **M. Sc. in Theoretical Physics**, Universiteit van Amsterdam.

- *Doctoraal* (M. Sc.) level with special honors (“met lof”)
- *Propaedeuse* level (1989) in Astronomy with special honors (“met lof”)
- Organized a symposium “The Big Bang and the structure of the Universe” (1991).
- Master’s thesis: *Wave propagation in random cavities*, supervisor: dr. Th. M. Nieuwenhuizen.
- Development of a theory for wave propagation in disordered samples of narrow geometry, such as quantum wires, and comparison to numerical simulations. [1]

Special honors

2015 **Fellow of the Optical Society (OSA)**

2012 Physics World top **10 of the year** for our research on imaging through scattering media

2011 **Outstanding Referee**, American Physical Society

2004 **Visiting professorship** at the Ecole Normale Supérieure, Paris

2004 **Scientific Board** of the YAO 2004 conference, Innsbruck, Austria

2002 **Visiting scientist grant** from the Fondation de l’Ecole Normale Supérieure.

1999-2001 **Marie-Curie fellowship**, European Commission,

1989, 1994 **Special honors (“met lof”)** with *propaedeuse* and *doctoraal* levels

1988 **Top grade (10)** for physics on Athenaeum diploma.

Professional societies

OSA The Optical Society, *Lifetime Member*

APS American Physical Society, *Member*

SPIE, the international society for optics and photonics, *Lifetime Member*

NNV Netherlands Physical Society, *Member*

EPS European Physical Society, *Associate Member*

Amsterdam Society for Medicine and Natural Sciences “Genootschap NGH”, *Member*.

Teaching summary

Design and teaching of several courses in physics and optics for the B.Sc. and M.Sc. grades in Physics, as well as physics courses for biomedical engineering.

- Supervised 8 Ph. D. Students and 8 M. Sc. Students
- Member of >20 Ph.D. graduation committees
- Member of > 25 M.Sc. (or equivalent) graduation committees

Publications summary

Total of 72 peer-reviewed publications, h-index of 30.

For a full list see <http://scholar.google.nl/citations?user=3Ju6wZgAAAAJ>

Selected Publications



A selection of recent journal cover pages

- S. A. Goorden, M. Horstmann, A. P. Mosk, B. Skoric, and P. W. H. Pinkse
Quantum-secure authentication of a physical unclonable key, Optica **1**, 421-424 (2014)
- J. Bertolotti, E. G. van Putten, C. Blum, A. Lagendijk, W. L. Vos, and A. P. Mosk
Non-invasive imaging through opaque scattering layers, Nature **491**, 232-234 (2012). *Cover article. Selected for the Physics World Top Ten of 2012.*
- A. P. Mosk, A. Lagendijk, G. Lerosey, and M. Fink
Review: Controlling waves in space and time for imaging and focusing in complex media Nature Photon. **6**, 283-292 (2012).
- M. D. Leistikow, A. P. Mosk, E. Yeganegi, S. R. Huisman, A. Lagendijk, and W. L. Vos
Inhibited spontaneous emission of quantum dots observed in a 3D photonic band gap Phys. Rev. Lett. **107**, 193903: 1-5 (2011). *Journal front page. Selected as "Editor's Suggestion"*
- B. Gjonaj, J. Aulbach, P. M. Johnson, A. P. Mosk, L. Kuipers, and A. Lagendijk
Active spatial control of plasmonic fields, Nature Photon. **5**, 360–363 (2011).
- E. G. van Putten, D. Akbulut, J. Bertolotti, W. L. Vos, A. Lagendijk, and A. P. Mosk
Scattering Lens Resolves sub-100 nm Structures with Visible Light Phys. Rev. Lett. **106**, 193905: 1-4 (2011). *Selected as "Editor's Suggestion"*
- M. D. Birowosuto, S. E. Skipetrov, W. L. Vos, and A. P. Mosk
Observation of Spatial Fluctuations of the Local Density of States in Random Media Phys. Rev. Lett. **105**, 013904 (2010).
- I.M. Vellekoop, A. Lagendijk, and A. P. Mosk
Exploiting Disorder for perfect Focusing, Nature Photon. **4**, 320 - 322 (2010);
- I.M. Vellekoop and A.P. Mosk
Universal optimal transmission of light through disordered materials Phys. Rev. Lett. **101**, 120601: 1-4 (2008).*Selected for a Viewpoint Commentary in APS Physics*
- I. M. Vellekoop and A. P. Mosk
Focusing coherent light through opaque strongly scattering media Opt. Lett. **32**, 2309-2311 (2007).
- K. L. van der Molen, A. P. Mosk, R. W. Tjerkstra, and A. Lagendijk
Spatial extent of random laser modes, Phys. Rev. Lett. **98**, 143901: 1-4 (2007).
- A. P. Mosk, *Atomic gases at negative kinetic temperature* , Phys. Rev. Lett. **95**, 040403: 1-4 (2005).
- J. Léonard, M. Walhout, A. P. Mosk, T. Müller, M. Leduc, and C. Cohen-Tannoudji
Giant Helium Dimers Produced by Photoassociation of Ultracold Metastable Atoms Phys. Rev. Lett. **91**, 073203: 1-4 (2003).
- S. Jochim, M. Bartenstein, G. Hendl, J. Hecker Denschlag, R. Grimm, A.P. Mosk, and M. Weidemüller
Magnetic field control of elastic scattering in a cold gas of fermionic lithium atoms Phys. Rev. Lett. **89**, 0273202: 1-4 (2002).
- A. P. Mosk, M.W. Reynolds, T.W. Hijmans, and J.T.M. Walraven
Photoassociation of spin-polarized hydrogen, Phys. Rev. Lett. **82**, 307-310 (1999).
- P.W.H. Pinkse, A. P. Mosk, M. Weidemüller, M.W. Reynolds, T.W. Hijmans, and J.T.M. Walraven
Adiabatically changing the phase-space density of a trapped Bose gas, Phys. Rev. Lett. **78**, 990-993 (1997).