Randi Holmestad - Curriculum vitae with track record

PERSONAL INFORMATION

Family name, First name: Holmestad, Randi

Date of birth: *19.10.1967*

Sex: Female

Nationality: Norwegian

Researcher unique identifier(s): http://orcid.org/0000-0002-4274-5794

URL for personal web site:http://www.ntnu.edu/employees/randi.holmestad

EDUCATION

1994 PhD: **Disputation date:** *05.12.1994.* Doktor ingeniør (Dr.ing), Department of Physics, Norwegian Institute of Technology (NTH), Trondheim, Norway

1992 Pedagogical education (PUFS), NTH, Norway

1991 Master, Sivilingeniør (MSc), Department of Physics, NTH, Norway

CURRENT AND PREVIOUS POSITIONS

1999 –present Professor, Department of Physics, Faculty of Natural Sciences, Norwegian University of Science and Technology (NTNU), Trondheim, Norway

2001 – 2014 Scientific advisor, SINTEF Materials and Chemistry, Trondheim, Norway

1996 – 1999 Postdoc, NTNU, with extended visits to US and Germany

1995 – 1996 Researcher, SINTEF Materials Technology, Applied Physics, Norway

FELLOWSHIPS AND AWARDS

2003 Supervisor for PhD Anders Frøseth who got the Esso prize

1996 NIFs prize for young scientist

1995 ESSO prize from NTH for best PhD degree in fundamental research

1995-1997 Personal Postdoc fellowship, The Research Council of Norway

1991-1994 Personal PhD scholarship, The Research Council of Norway

MOBILITY

2012 University of Illinois- Urbana-Champaign (UIUC), USA (6 months)

2005/2006 University of Illinois- Urbana-Champaign (UIUC), USA (7 months)

1997 Arizona State University (ASU), USA (6 months)

1996/1995 Max Planck Institute (MPI) in Stuttgart, Germany (2 months)

1993 Arizona State University (ASU), USA (6 months)

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

Present Supervising **3** MSc students, **4** (2) PhD students and **1** postdoc

1999 – 2016 Supervised **52** MSc students **12** PhDs and **8** postdocs, co-supervised **7** PhD students.

TEACHING ACTIVITIES (selected, all at NTNU)

2011-present Solid State Physics (MSc level)

2014 Physics for teachers - electromagnetism (BSc level)

2007-2008 Functional Materials – Applied solid state physics (MSc level)

2007-2010 Experts in Teamwork - interdisciplinary project work on teamwork (MSc level)

2002-2016 Electron diffraction and advanced TEM (every second year) (PhD level)

2001-2006 Physics for students in energy and environment program (BSc level)

ORGANISATION OF SCIENTIFIC MEETINGS

2016 Chair of SCANDEM 2016 Trondheim, https://www.ntnu.edu/physics/scandem2016

2016 Chair in a session at EMC, Lyon, France, http://emc2016.fr/en/
2013 Chair of ICPMAT 2012 Trondheim, https://www.ntnu.edu/physics/icpmat2012

INSTITUTIONAL RESPONSIBILITIES

2015 Physics Study program evaluation committee, Dept. of Physics, NTNU
2013 -present Section head, Condensed matters section, Dept. of Physics, NTNU
2009 - 2011 Faculty board, Faculty of Natural Sciences and Technology, NTNU
2009 - 2011 Deputy head, Dept. of Physics, NTNU
2006-present Leader TEM Gemini Centre, NTNU/SINTEF in Trondheim
2006 - 2009 Advisory board for Dept. of Physics, NTNU

COMMISSIONS OF TRUST

2012-present Board member European Microscopy Society (EMS)
2007-present Project evaluations Christian Doppler, ERC, FWO (Austria, EU, Netherlands)
2004 - 2008 Board member UNINETT Sigma, high performance computing
2003-present Board member Nordic Microscopy Society (SCANDEM)
2002-present 14 times in Scientific advisory boards for academic positions, including professors, associate professors, adjunct professors, senior researchers, promotions and postdocs in Norway, Sweden, Denmark, Austria and Netherlands.
2001-present 15 times in PhD evaluation committees, mostly at NTNU as administrator, but also as opponent in Oslo and Gothenburg

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2009-present Royal Norwegian Society of Sciences and Letters
2006-present The Norwegian Academy of Technical Sciences
1990-present Norwegian Physical Society
1993-present Electron Microscopy Society of America
1998-present European Microscopy Society
1992-present Scandinavian Society for Electron Microscopy

MAJOR COLLABORATIONS (selected)

SINTEF Materials and Chemistry, Trondheim, Norway, Material physics group (Calin Marioara, Sigmund Andersen, John Walmsley, Per Erik Vullum, Jesper Friis and Ruben Bjørge)
NTNU, Trondheim, Norway (Department of Physics: Ton van Helvoort and Turid W. Reenaas, Department of Materials Science and Engineering: Knut Marthinsen, Yanjun Li and Marisa Di Sabatino Lundberg, Department of Mechanical Engineering: Magnus Langseth and Odd Sture Hopperstad, Department of electronics: Thomas Tybell and Bjørn Ove Fimland)
Hydro Aluminium, Sunndalsøra, Norway and Bonn, Germany (Jostein Røyseth, Oddvin Reiso, Ole Runar Myhr, Takeshi Saito, Olaf Engler)
Norwegian Aluminium industry, Norway (Steertech, Benteler, Neumann..)
University of Toyama, Toyama, Japan (Kenji Matsuda)
Tokyo Institute of Technology, Tokyo, Japan (Equo Kobayashi)
University of Illinois, Urbana-Champaign, IL, USA (Jian Min Zuo)
University of Rouen, Rouen, France (Williams Lefebvre)
Monash University, Melbourne, Australia (Joanne Etheridge)

CAREER BREAKS

1998-1999 Gave birth to premature twin boys, born 15.05.1998, one died. Maternity leave.
2000-2001 Gave birth to a girl, born 29.12.2000. Maternity leave.

TRACK RECORD

Publication and citation data (21/5-2016)

Web of Science:	171 publications, 1696 citations, **h-index = 22**
Google Scholar:	232 publications, 2269 citations, **h-index = 26**, i10-index = 72

Research leadership

2016-2019	Project leader INTPART project with Japan (Tokyo Inst of Technology and Toyama University), Norsk Hydro and SINTEF
2015–2023	Principal investigator, program head, SFI- CASA, NTNU https://www.ntnu.edu/casa
2015-2020	WP leader in BIA competence projects with Norwegian aluminium industry, FICAL and AMPERE (budget ~24 MNOK each)
2013 - 2017	Project leader, FRINATEK Fundamental investigations of precipitation in solid state with focus on Al alloys (total budget 9.8 MNOK)
2010 - 2014	Leader of Nordic network within TEM in Nordforsk (NorTEMnet).
2010 - 2013	Project leader NORTEM, Norwegian Centre of transmission electron microscopy, nationally coordinated large-scale infrastructure in TEM, SINTEF, UiO, NTNU (total 115 MNOK)
2009 - 2014	Project leader, BILAT KMB, Japanese-Norwegian Al-Mg-Si prec. project (9.6 MNOK)
2007 - 2011	Project leader, FRINAT Fundamental investigations.. (11.7 MNOK)
2007 - 2012	Project leader NTNU, IPN (Hydro) Nucleation control (58 MNOK)
2001 - 2006	Project leader SUP Micro and nano-structural materials development (12.1 MNOK)
2000-2003	Project leader, Quantitative CBED (1.4 MNOK)

Most significant principal publications in materials physics, nanoscience and light metals) (citations status Febr. 2016, not including self-citations)

1. Wang GZ, Sæterli R, Rorvik PM, van Helvoort ATJ, Holmestad R, Grande T, Einarsrud MA Self-assembled growth of $PbTiO_3$ nanoparticles into microspheres and bur-like structures, Chemistry of materials, 19, 2213, 2007. (58 citations)
2. Marioara CD, Andersen SJ, Stene TN, Hasting H, Walmsley J, van Helvoort ATJ, Holmestad R, The effect of Cu on precipitation in Al-Mg-Si alloys Philosophical Magazine, 87 3385, 2007. (42 citations)
3. Hasting HS, Frøseth A, Andersen SJ, Vissers R, Walmsley JC, Marioara CD, Danoix F, Lefebvre W, Holmestad R, Composition of β" precipitates in Al-Mg-Si alloys by APT and first principles calculations, Journal of Applied Physics, 106, 123527, 2009. (40 citations)
4. Torsæter M, Hasting HS, Lefebvre W, Marioara CD, Walmsley JC, Andersen SJ and Holmestad R, The influence of composition and natural aging on clustering during preaging in Al-Mg-Si alloys, Journal of Applied Physics, 108, 073527, 2010. (26 citations)
5. Sæterli R, Selbach SM, Ravindran P, Grande T, Holmestad R, Electronic structure of multiferroic $BiFeO_3$ and related compounds: Electron energy loss spectroscopy and density functional study, Physics Review B, 82, 064102, 2010. (18 citations)
6. Torsæter M, Lefebvre W, Marioara CD, Andersen SJ, Walmsley JC and Holmestad R, Study of intergrown L and Q' precipitates in Al-Mg-Si-Cu alloys, Scripta Materiala, 64, 817, 2011. (20 citations)
7. Bjørge R, Dwyer C, Weyland M, Nakashima P, Marioara CD, Andersen SJ, Etheridge J, Holmestad R, Aberration-corrected scanning transmission electron microscopy study of β'-like precipitates in an Al-Mg-Ge alloy, Acta Materialia, 60, 3239-3246, 2012. (9 citations)
8. Martinsen FA, Ehlers FJH, Torsæter M, Holmestad R, Reversal of the negative natural aging effect in Al-Mg-Si alloys, Acta Materialia, 60, 6091-6101, 2012. (9 citations)

9. Muggerud AMF, Mørtsell EA, Li Y, Holmestad R, Dispersoid strengthening in AA3xxx alloys with varying Mn and Si content during annealing at low temperatures, Materials Science and Engineering A, 567, 21-28, 2013. (8 citations)
10. Wenner S, Marioara CD, Ramasse Q, Kepaptsoglou DM, Hage FS, Holmestad R, Atomic-resolution electron energy loss studies of precipitates in an Al–Mg–Si–Cu–Ag alloy, Scripta Materialia 74, 92-95, 2014. (4 citations)
11. Ehlers FJH, Dumoulin S and Holmestad R, 3D modelling of β″ in Al-Mg-Si: Towards an atomistic level ab initio based examination of a full precipitate enclosed in a host lattice, Computational Materials Science, 91, 200-210, 2014. (1 citation)
12. Marioara CD, Andersen SJ, Røyset J, Reiso O, Gulbrandsen-Dahl S, Nicolaisen TE, Opheim IE, Helgaker JF and Holmestad R, Improving Thermal Stability in Cu-Containing Al-Mg-Si Alloys by Precipitate Optimization, Metallurgy and Materials Transaction A, 45, 2938, 2014. (6 citations)
13. Ninive PH, Strandlie A, Gulbrandsen-Dahl S, Lefebvre W, Marioara CD, Andersen SJ, Friis J, Holmestad R and Løvvik OM, Detailed atomistic insight into the β″ phase in Al-Mg-Si alloys, Acta Materialia, 69, 126-134, 2014. (15 citations)

Granted/pending patents

1. CD Marioara, SJ Andersen, S Gulbrandsen-Dahl, J Holmestad, R Holmestad, TE Nicolaisen, IE Opheim, O Reiso and J Røyset: High temperature stable aluminium alloy, International publication number WO 2011/122958 A1 (2011)

Invited lectures

1. R Holmestad: Precipitates in Al alloys across and between industrially common compositions Invited to THERMEC'2016, Graz, Austria, June 2016
2. R Holmestad: Precipitates in aluminium alloys – studied by HAADF-STEM. Workshop on Advanced Electron Microscopy and Characterisation, Inauguration of EM Centre at Chongqing University, Chongqing, China, Oct. 2015
3. R Holmestad: Materials development aided by atomic-resolution electron microscopy. Microscopy and Microanalysis (M&M), Portland OR, US, Aug. 2015
4. R Holmestad: HAADF-STEM studies of Ag-, Cu- and Zn-containing precipitates in Al-Mg-Si alloys, 18th International Microscopy Congress (IMC), Praha, Czech Republic, Sept. 2014
5. R Holmestad: Precipitates in 6xxx Al alloys studied at the atomic scale, 14th International Conference on Aluminium Alloys (ICAA), Trondheim, Norway, June 2014
6. R Holmestad: Nanoscale precipitates in 6xxx aluminium alloys, THERMEC'2013, Las Vegas, NV, US, Dec. 2013
7. R Holmestad: Characterization and structure determination of precipitates in 6xxx Aluminium Alloys, Electron Microscopy and Analysis Group Conference 2011 (EMAG 2011), Birmingham, UK, Sept. 2011
8. R Holmestad: Precipitation in 6xxx Aluminum Alloys, 12th International Conference on Aluminium Alloys (ICAA), Yokohama, Japan, Sept. 2010

Major contributions to the early careers of excellent researchers

Educated 12 PhDs to Norwegian industry (Hydro, DNV, Roxar, Statoil, Quartz coorp), foreign universities (McMaster, Glasgow) and SINTEF (Materials and Chemistry, Energy, Petroleum).

Examples of leadership in industrial innovation or design

2015 – 2023	Principal investigator, Centre for Research-based Innovation CASA, NTNU
2005 – present	Initiated and leaded several projects (KPNs/IPNs) with Hydro Aluminium.