

Curriculum Vitae, Johannes K. Nielsen - DMI

Personal Information

Name: Johannes K. Nielsen
Current work address: Space Science and Engineering Center, 1225 W. Dayton St.,
Madison, WI 53706.
Home address: 2150 West Lawn Ave., Madison, WI 53711.
Cellphone: +1 608 695 6519
Email: jkn@dm.dk
Homepage: <http://research.dmi.dk/staff/all-staff/jkn/>
Born: July 11, 1966,
Married to Stine Korreman (Aarhus University) - 4 children.
h-index = 11 From Thomson Reuters, Web Of Knowledge.

Interests

GNSS Radio Occultation, Inverse Methods, Atmospheric Science, Deep Convection, Climate, Stratospheric Water, Processing and Utilization of Satellite Products, Cirrus Cloud Microphysics, Charged Aerosols, Supercooled Liquids.

Education

M.Sc. in Physics and Mathematics, Roskilde University, 1995 (Some merits were achieved at Aarhus University).
Ph.D. in Physics, Roskilde University, 1999.
Visiting Ph.D. Student at Boston University, Physics Department (7 months, 1997).
Topic: Computer simulations of liquid water

Professional Appointments

2015-2016 Visiting Scientist at CIMSS, University of Wisconsin USA (part time DMI, Denmark). Topic: Gravity waves and deep convection in long term climate records.
2010-2015 Full time employed in the Radio Occultation for Meteorology Satellite Application Facility (ROM SAF).
2009-2010 Visiting Scientist at CIMSS, University of Wisconsin USA (1 year). Topic: Application of satellite radiance measurement in climate research. Supervisor: Andrew Heidinger
2008- Senior Scientist at Danish Climate Centre, Danish Meteorological Institute.
2004 Visiting scientist at NASA Ames Research Center, California USA. Topic: Cirrus cloud inhomogeneities in a cloud resolving model. Supervisors: Eric Jensen and Katja Drdla.
2005- Research Scientist at the Danish Climate Centre, Danish Meteorological Institute. Topic: Tropical deep convection and stratospheric composition
2002-2004 Post Doc at the Danish Meteorological Institute. Topic: Airplane contrails and their impact on climate. Supervisor Niels Larsen.
2001 Post Doc at the Danish Polymercentre, at DTU in Lyngby. Topic: Gas absorption and diffusion in polymers. Supervisor: Ole Hasager.
1999-2000 Post Doc at IMM at DTU, Denmark. Topic: Machine Learning and Bayesian statistics.

Supervisor: Lars Kai Hansen
1998-1999 Employed at UNI-C, Denmark. Topic: Parallel computing.

Projects

2010- ROM SAF (Radio Occultations for Meteorology Satellite Application Facility) project.
2004-2013 Four tropical balloon field campaigns.
2002-2009 EC projects HIBISCUS, SCOUT-O3 and QUANTIFY.
2000-2009 Danish funded projects under FNU, Ministry of Transport and OFR.

Publications

Recent global warming hiatus dominated by low-latitude temperature trends in surface and troposphere data, [Gleisner, Hans](#), [Thejll, Peter](#), [Christiansen, Bo](#), [Nielsen, Johannes K.](#), *Geophysical Research Letters*, 42 (2015), ([link](#))

Measurements of the upper troposphere and lower stratosphere during tropical cyclones using the GPS radio occultation technique, Biondi, Riccardo, Neubert, Torsten, [Syndergaard, Stig](#), [Nielsen, Johannes](#), *Advances in Space Research*, 47 (2011), ([link](#))

Tropospheric ozone production related to West African city emissions during the 2006 wet season AMMA campaign, Ancellet, G., Orlandi, E., Real, E., Law, K. S., Schlager, H., Fierli, F., [Nielsen, J. K.](#), Thouret, V., Mari, C., *Atmospheric Chemistry and Physics*, 11 (2011), ([link](#))

Tropical stratospheric cloud climatology from the PATMOS-x dataset: An assessment of convective contributions to stratospheric water, [Nielsen, J. K.](#), Foster, M., Heidinger, A., *Geophysical Research Letters*, 38 (2011), ([link](#))

Overshooting of clean tropospheric air in the tropical lower stratosphere as seen by the CALIPSO lidar, Vernier, J. -P., Pommereau, J. -P., Thomason, L. W., Pelon, J., Garnier, A., Deshler, T., Jumelet, J., [Nielsen, J. K.](#), *Atmospheric Chemistry and Physics*, 11 (2011), ([link](#))

Radio occultation bending angle anomalies during tropical cyclones, Biondi, R., Neubert, T., [Syndergaard, S.](#), [Nielsen, J. K.](#), *Atmospheric Measurement Techniques*, 4 (2011), ([link](#))

Charge induced stability of water droplets in subsaturated environment, [Nielsen, J. K.](#), Maus, C., Rzesanke, D., Leisner, T., *Atmospheric Chemistry and Physics*, 11 (2011), ([link](#))

An overview of the HIBISCUS campaign, Pommereau, J. -P., Garnier, A., Held, G., Gomes, A. M., Goutail, F., Durr, G., Borch, F., Hauchecorne, A., Montoux, N., Cocquerez, P., Letrenne, G., Vial, F., Hertzog, A., Legras, B., Pissot, I., Pyle, J. A., Harris, N. R. P., Jones, R. L., Robinson, A. D., Hansford, G., Eden, L., Gardiner, T., Swann, N., Knudsen, B., [Larsen, N.](#), [Nielsen, J. K.](#), [Christensen, T.](#), Cairo, F., Fierli, F., Pirre, M., Marecal, V., Huret, N., Riviere, E. D., Coe, H., Grosvenor, D., Edvarsen, K., Di Donfrancesco, G., Ricaud, P., Berthelot, J. -J., Godefroy, M., Seran, E., Longo, K., Freitas, S., *Atmospheric Chemistry and Physics*, 11 (2011), ([link](#))

Chemical and aerosol characterisation of the troposphere over West Africa during the monsoon period as part of AMMA, Reeves, C. E., Formenti, P., Afif, C., Ancellet, G., Attie, J. -L., Bechara, J., Borbon, A., Cairo, F., Coe, H., Crumeyrolle, S., Fierli, F., Flamant, C., Gomes,

L., Hamburger, T., Jambert, C., Law, K. S., Mari, C., Jones, R. L., Matsuki, A., Mead, M. I., Methven, J., Mills, G. P., Minikin, A., Murphy, J. G., [Nielsen, J. K.](#), Oram, D. E., Parker, D. J., Richter, A., Schlager, H., Schwarzenboeck, A., Thouret, V., *Atmospheric Chemistry and Physics*, **10** (2010), ([link](#))

Tropical stratospheric aerosol layer from CALIPSO lidar observations, Vernier, J. P., Pommereau, J. P., Garnier, A., Pelon, J., [Larsen, N.](#), [Nielsen, J.](#), [Christensen, T.](#), Cairo, F., Thomason, L. W., Leblanc, T., McDermid, I. S., *Journal of Geophysical Research-Atmospheres*, **114** (2009), ([link](#))

Hydration of the lower stratosphere by ice crystal geysers over land convective systems, Khaykin, S., Pommereau, J.-P., Korshunov, L., Yushkov, V., [Nielsen, J.](#), [Larsen, N.](#), [Christensen, T.](#), Garnier, A., Lukyanov, A., Williams, E., *Atmospheric Chemistry and Physics Discussions*, **8** (2008), ([link](#))

Solid particles in the tropical lowest stratosphere, [Nielsen, J. K.](#), [Larsen, N.](#), Cairo, F., Di Donfrancesco, G., Rosen, J. M., Durry, G., Held, G., Pommereau, J. P., *Atmospheric Chemistry and Physics*, **7** (2007)

Direct measurement of gas solubilities in polymers with a high-pressure microbalance, von Solms, N, [Nielsen, JK](#), Hassager, O, Rubin, A, Dandekar, AY, Andersen, SI, Stenby, EH, *Journal of Applied Polymer Science*, **91** (2004), ([link](#))

Hydrogen-bond dynamics for the extended simple point-charge model of water, Starr, FW, [Nielsen, JK](#), Stanley, HE, *Physical Review E*, **62** (2000), ([link](#))

Fast and slow dynamics of hydrogen bonds in liquid water, Starr, FW, [Nielsen, JK](#), Stanley, HE, *Physical Review Letters*, **82** (1999), ([link](#))

Linear response theory for thermodynamic properties, [Nielsen, JK](#), *Physical Review E*, **60** (1999), ([link](#))

Frequency dependent thermodynamic response functions from computer simulations, [Nielsen, JK](#), *Journal of Non-Crystalline Solids*, **235** (1998), ([link](#))

Fluctuation-dissipation theorem for frequency-dependent specific heat, [Nielsen, JK](#), Dyre, JC, *Physical Review B*, **54** (1996), ([link](#))