Short Curriculum vitae for Søren Holm

Degrees:

Master of science (physics and mathematics), Copenhagen University 1980.Thesis on experimental microdosimetry.

Lic.scient (ph.d.) in med. physics 1987, Copenhagen University. Thesis on dynamic SPECT of the brain.

Supplementary education, selected courses:

Health Physics, DTH (now DTU) 1978.

Isotope course, Finsen Institute 1979 (off. Danish requirement to hold a rad. source license).

Summerschool on Advances in Radiation Protection and Dosimetry in Medicine, Erice, Italien 1979.

Professional postgraduate teacher training (math and physics) 1981

MR for physicists, MR-department, University of Lund, 1996

ESI International week on radiation detectors and imaging in life sciences, Archamps, France 1998

Internal Dosimetry, Radiophysics department, University of Lund, 1999

Dosimetry – Internal radiation course 2006. DSMF, SIS Herlev, 2006.

NACP-course: CT dosimetry and image optimization for medical physicists, Århus, 2010

MR-course, RH, autumn 2011

PET/MR Workshop, Tübingen, March 2012

Course on Radiological Quality Development, Rigshospitalet April 2015

Additional courses for medical doctors specializing in Neurology or Nuclear Medicine, contributing by teaching in SPECT/PET, kinetics, and radiation protection. Participation in international meetings, workshops, symposia, congresses (>100)

Positions:

Instructor/teaching assistant in physics for students at Copenhagen University in medicine, biology, and chemistry 1976-1980, and for master students in physics (course in health physics) 1982-1983.

Professional postgraduate teacher training in math and physics, Metropolitanskolen, Copenhagen 1981

Research grant from the Danish Technical Research Council at department of Neurology, Rigshospitalet, 1982-85 (Dynamic SPECT).

Consultant (scientific advisor) for Novo Diagnostic Systems and Scan Detectronics 1985-1987, stationed at Dept. of Clinical Physiology, Finsen Institute 1986

Scientific assistant to professor Niels A Lassen at Dept. of Clinical Physiology, Bispebjerg Hospital (grants from the Lundbeck Foundation and the Medical Research Council) 1987-90

Scientific assistant to professor Olaf Paulson, Dept. of Neurology, Rigshospitalet. 1990-91

Medical Physicist at the PET centre, Rigshospitalet (grants from The John and Birthe Meyer Foundation 1992-1998)

Medical Physicist at dept. of Clinical Physiology, Nuclear Medicine and PET, Rigshospitalet 1998-2000.

Chief Physicist at Dept. of Clinical Physiology, Nuclear Medicine and PET, Rigshospitalet 2001-16

Senior Physicist at Dept. of Clinical Physiology, Nuclear Medicine and PET, Rigshospitalet 2016-

Associate Professor (“Ekstern Lektor”) at Copenhagen University 2007-

Other scientific tasks (selected)

Reviewer for Phys Med Biol, NeuroImage, J Nucl Med, J Cereb Blood Flow Metab, Eur J Nucl Med Mol Imaging, Acta Oncologica, Physica Medica, Z f Med Phys, EJNMMI Physics, Ugeskrift for Læger
Organizer (scientific secretary) Human Brain Mapping 1997, Copenhagen
Board member of DSKFNM, the Danish Society for Clin. Physiology and Nuclear Medicine 2003-2007
Danish delegate to EFOMP 2003-
Member of the "Specialty advisory committee for NM in the capitol region" 2006-
Member of the education council of the Danish Society for Medical Physics, DSMF 2006-2010
President of the Danish Society for Medical Physics, DSMF 2007-2013
Member of IAEA working groups addressing artifacts in PET/CT 2008-12, staffing in Medical Physics, 2015-16 and artifacts in SPECT/CT 2014-17.
Danish participant in NKS-sponsored project (Nordic nuclear safety research) about calibration of whole-body counters 2010-11.
Board member of NSFS (Nordic Society for Radiation Protection 2011-
Organizer of symposium celebrating the 100-anniversary of Niels Bohr's atomic model: Bohrs atommodel og nuklearmedicinen. Rigshospitalet, November 2013
Member of the EANM Physics Committee, 2014-
Member of the scientific committee for 1. European Congress of Med. Physics, Athens, September 2016
Member of the EANM Radiation Protection Committee, 2016-

Award: Prize of honour from DSKFNM 2008.

Supervision:

Supervisor for bachelor- and master students in Physics, and in "Medicine and Technology" 2008-
Supervisor for Medical Physicists according to Danish legislation, "Bek. 1252 af 11. November 2010"
Reviewer of ph.d. theses

Publications:

(Co)author of 120 peer reviewed papers (H-index, 2017-02-01: 40)
Several (text)book chapters on SPECT and PET and popular communications (in Danish)

Selected recent publications:

Lagerburg V, de Nijs R, **Holm S**, Svarer C. A comparison of different energy window subtraction methods to correct for scatter and downscatter in I-123 SPECT imaging. Nucl Med Commun 2012:33(7):708-18

Pfeifer A, Knigge U, Mortensen J, Oturai P, Berthelsen AK, Loft A, Binderup T, Rasmussen P, Elema D, Klausen TL, **Holm S**, von Benzon E, Højgaard L, Kjaer A. Clinical PET of neuroendocrine tumors using 64Cu-DOTATATE: first-in-humans study. J. Nucl Med 2012;53:1207-15 [Epub 2012 Jul 10]

Keller SH, **Holm S**, Hansen AE, Sattler B, Andersen F, Klausen TL, Højgaard L, Kjær A, Beyer T. Image artifacts from MR-based attenuation correction in clinical, whole-body PET/MRI. Magn Reson Mater Phy 2013;26:173-81. [Epub 2012 Sep 21]

Andersen FL, Klausen TL, Loft A, Beyer T, **Holm S**. Clinical evaluation of PET image reconstruction using a spatial resolution model. Eur J Radiol 2013;82:862-9. [Epub 2012 Dec 17]

Kjær A, Loft A, Law I, Berthelsen AK, Borgwardt L, Löfgren J, Johnbeck CB, Hansen AE, Keller S, **Holm S**, Højgaard L. PET/MRI in cancer patients: first experiences and vision from Copenhagen. Magn Reson Mater Phy 2013;26:37-47. [Epub 2012 Dec 25]

Ettrup A, **Holm S**, Hansen M, Wasim M, Santini MA, Palner M, Madsen J, Svarer C, Kristensen JL, Knudsen GM. Preclinical Safety Assessment of the 5-HT(2A) Receptor Agonist PET Radioligand [(11)C]Cimbi-36. Mol Imaging Biol. 2013;15:376-383 [Epub ahead of print Jan 10]

Andersen FL, Ladefoged CN, Beyer T, Keller SH, Hansen AE, Højgaard L, Kjær A, Law I, **Holm S.** Combined PET/MR imaging in neurology: MR-based attenuation correction implies a strong spatial bias when ignoring bone. Neuroimage 2014;84:206-216. [Epub ahead of print Aug 29 2013]

Christensen AN, Reichkendler MH, Larsen R, Auerbach P, Højgaard L, Nielsen HB, Ploug T, Stallknecht B, **Holm** S. Calibrated Image derived input functions for the determination of the metabolic uptake rate of glucose with [^{18}F]-FDG PET. Nucl Med Comm 2014;35:353-61. [Epub ahead of print Jan 7]

de Nijs R, Lagerburg V, Klausen TL, **Holm S**. Improving quantitative dosimetry in ^{177}Lu-DOTATATE SPECT by energy window-based scatter corrections. Nucl Med Commun. 2014;35:522-33. [Epub ahead of print Feb 12]

Klausen TL, Mortensen J, de Nijs R, Andersen FL, Højgaard L, Beyer T, **Holm S**. Intravenous contrast-enhanced CT can be used for CT-based attenuation correction in clinical ^{111}In-octreotide SPECT/CT. EJNMMI Physics 2015, Dec;2(1):3

Ladefoged CN, Benoit D, Law I, **Holm S**, Kjær A, Højgaard L, Hansen AE, Andersen FL. Region specific optimization of continuous linear attenuation coefficients based on UTE (RESOLUTE): application to PET/MR brain imaging. Phys Med Biol 2015 Oct 21;60(20):8047-65

Christensen AN, Rydhög JS, Søndergaard RV, Andresen TL, **Holm S**, Munck Af Rosenschöld P, Conradsen K, Jølck RI. Injectable silver nanosensors: in vivo dosimetry for external beam radiotherapy using positron emission tomography. Nanoscale. 2016 Jun 7;8(21):11002-11. Epub 2016 May 13.

Haddock B, **Holm S**, Poulsen J, Enevoldsen LH, Larsson HBW, Kjær A, Suetta C. Assessment of muscle function in vivo with PET/MR. EJNMMI 2016 Sep 8 [E-pub ahead of print]

Skovgaard D, Persson M, Brandt-Larsen M, Christensen C, Madsen J, Klausen TL, **Holm S**, Andersen FL, Loft A, Berthelsen AK, Pappot H, Brasso K, Kroman N, Hoejgaard L, Kjaer A. Safety, dosimetry and tumor detection ability of 68Ga-NOTA-AE105 - a novel radioligand for uPAR PET imaging: first-in-humans study. J Nucl Med. 2016 Sep 8. pii: jnumed.116.178970. [Epub ahead of print]

Benoit D, Ladefoged CN, Rezaei A, Keller SH, Andersen FL, Højgaard L, Hansen AE, **Holm S**, Nuyts J. Optimized MLAA for quantitative non-TOF PET/MR of the brain. Physics in Medicine and Biology. 2016 Dec;61(24):8854-74.

Holm S, Mawlawi O, Beyer T. PET/CT. In: Dahlbom M (ed). Physics of PET and SPECT imaging. CRC press, 2017. ISBN 9781466560130.