

Nina Lundberg, Ph.D. in Informatics

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Hälso- och sjukvårdsnämndens förvaltning (HSN-förvaltningen)
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Department for Clinical Science, Intervention
and Technology (CLINTEC)
Karolinska Institutet
Karolinska University Hospital
141 86 Stockholm, Sweden

Education

Ph.D Informatics 2000 University of Göteborg

Ph.D. dissertation: "IT in Healthcare – Artifacts, Infrastructures and Work Practices"

Supervisor: Prof. Bo Dahlbom, Informatics, University of Göteborg

Prof. Ole Hanseth, Informatics, Oslo University

Professional Golfers Association (PGA) Trainer/instructor, PGA and the Swedish Golf Association, 1991

Informatics, University of Göteborg, Bachelor's Degree, 1987

Folkhögskolan, Mölnlycke, 1982-1983

Florida International University, Golf Scholarship, Golfscholarship, 1981-1982

Göteborgs Högre Samskola, Studentexamen, 1981

High school, Bakersfield High School, Bakersfield, USA, 1978 -- 1979

Fox Chapel Junior High school, Pittsburgh, USA, 1974 -- 1975

Academic/teaching Experience

Karolinska Institute (2009 --)	<i>Senior lecturer, Department of Radiography</i>
Karolinska Institute (2006 -2009)	<i>Lecturer, Department of Radiography</i>
Karolinska Institute (2004 -- 2007)	<i>Senior lecturer, Department of Radiography</i>
IT-University of Göteborg (2002 -- 2003)	<i>Lecturer, supervising master students</i>
IT-University of Göteborg (2001 -- 2003)	<i>Co-founder master program, "IT and Healthcare" program</i>
University of Göteborg (1996 -- 2004)	<i>Lecturer, Department of Informatics</i>
University of Göteborg (1996 -- 2000)	<i>Ph.D. student, Department of Informatics</i>
University of Lund LTH/Helsingborg (1994 -- 1998)	<i>Co-founder 3-year multimedia programme, first in Sweden</i>
University of Lund LTH/Helsingborg (1994 -- 1998)	<i>Assistant Professor (Univ. Adjunkt)</i>
St:Arilds Golf Club: (1990 -- 1993)	<i>Assistant Golf Pro</i>

Professional Experience

HSN-förvaltningen, SLL (2008 November --)	<i>IT Strategist</i>
Mawell Ltd (2008 January --2009 July)	<i>Director Business Development, Chief Science officer</i>
Mawell Ltd (2007 March -- 2008 January)	<i>Director Business Intelligence, Chief Science officer</i>
SLL (2006 September -- 2007 March)	<i>Consultant</i>
eCare AB (2006 -- 2007 February)	<i>R&D Manager, eCare AB</i>
eCare AB (2005 -- 2006)	<i>Deputy CEO, eCare AB</i>
eCare AB (2000 -- 2005)	<i>CEO eCare AB</i>

eCare AB (Feb 2000)	<i>Founder eCare AB</i>
Norsk Data: (1989 January -- May)	<i>Consultant</i>
Norsk Data: (1986 -- 1989)	<i>Sales support</i>

Maternal Leave

1993 – 1994	<i>Maternal leave June 1993 to August 1994</i>
1990 – 1991	<i>Maternal leave October 1990 to April 1991</i>
1989 -- 1990	<i>Maternal leave May 1989 to April 1990</i>
1987 -- 1988	<i>Maternal leave April 1987 to Januari 1988</i>

Awards

Winner of "Dagens medicins pris för bästa IT-stöd i vården", 2001

Motivation for the award was that the "System Feedback is a new and innovative way of using existing technology that enhances the delivery of care" and that no comparable health management system could be found worldwide.

Winner of Nuteks "Bästa nystartat näringslivskoncept", Stockholm 2001

Board Memberships

Chairman of the Board of Canton Research & Consulting AB (2006 --)

Chairman of the Board of PGA Sverige AB (2006 -- 2008)

Member of the Board PGA of Sweden (2004 -- 2008)

Member of the Board of the Foundation "Barbro Montgomerys stiftelse för främjande av ledarskap inom svensk golf" (2005--)

Member of the Board PGA Event (2004 -- 2005)

Member of the Board of eCare (2000 -- 2007)

Member of the Board at the Department of Informatics, 1998 – 2000

Member of the Board of the Foundation "Barbro Montgomerys stiftelse för främjande av ledarskap inom svensk golf (since 2005)

Member of the Board PGA Event, co. No. (2004-2005)

Chairman of the Board of PGA Sverige AB, co. No. 556648-2773 (since 2006)

Member of the Internet Project (Year 1996-2000). Project leader: Bo Dahlbom. Researchers: About 15, represented by Sweden, Norway and Denmark

Member of the GVD advisory group, (2006 -). Project leader Peter Rönnerfalk, SLL. Representatives: About 8.

Member of the Board of eCare, co. No. 556582-5634, (2000 - 2006)

Member of the Board PGA of Sweden, co. No. 813600-2014, (2004)

Research Funding

As the healthcare industry partly has sponsored research work that I have been involved with lately there has not been a need for other funding. Below is a presentation of research funding, related to early research work, that I applied and received funding for, or been part of projects that have been funded:

Nordplus programme [financed by the Nordic Council of Ministers]

- A one year research project (June 2009 – October 2010). The focus of the project is "eHealth: Estonia, Finland and Sweden networking for shared knowledge and curricula". Institute of Clinical Medicine of Tallinn University of Technology applied for it in partnership with Karolinska Institutet and the Helsinki University of Technology. Approximately 1,5 MSKR

RALF [Rådet för arbetslivsforskning]:

- A three year research project on "The Use of Internet in Healthcare – what are the effects on professional roles and work practice" (2000 -- 2002). Research leader: Ole Hanseth. Other members: Nina Lundberg and Agneta Nilsson. Approximately 2,0 MSKR

KFB [The Swedish Transport and Communications Research Board]:

- The Internet Project (Year 1996-2000). Project leader: Bo Dahlbom. Researchers: About 15, represented by Sweden, Norway and Denmark. Approximately 5 MSKR

Krapperupsstiftelsen:

- Funding Ph.D. research work "IT in Healthcare", 1997. Approximately 0.02 MSKR

Trygghetsfonden:

- A one year research project "*Learning project – Teaching an entire radiology department information technology over a one year period*" (1994 -- 1995). Project Leader: Stefan Sallerfors. Other Members: Nina Lundberg. Approximately 0,5 MSKR

Entrepreneurial Achievements

- Co-founder of "Barbro Montgomerys stiftelse för främjande av ledarskap inom Svensk golf, 2005
- One of the initiators in the establishment of research work at Cfss, CLINTEC, Karolinska Institute, 2003
- Co-founder of Sweden's first master's programme related to IT and Healthcare, 2002
- Co-founder eCare AB, 2000
- Co-founder Brunnby School, an elementary school in Nyhamnsläge, Sweden, 1999

Development Highlights

- Initiator and co-designer of SLL:s *certification program of IT systems* applied in the production of healthcare. The program assures vendor independent access of structured information of high quality for all Stockholm county financed healthcare (also including private care).
- *Head supervisor of the fourth and fifth licentiate examination* within the radiography subject. Aim is to be head supervisor of the second and third doctoral examination within radiography in Sweden.
- Designer of the *Infobroker system*. Infobroker is an enterprise integration system. The system has won all of the first large scale integration tenders in Nordics, e.g. VGR-project, Sweden, Helse-Vest project, Norway and Region South project, Denmark.
- Designer of the *Feedback system*. Feedback is a quality and patient safety system that automatic follows up diagnostic errors between different units having various local systems. System feedback is implemented in almost 50 % of all Sweden's radiology departments.
- Designer of *International Hospital Federation's (IHF's) Benchmarking system*. IHF's Benchmarking system contains a single set of quantitative and qualitative key measures. It allows users to compare themselves with alike globally as well as take part of *Global Best Practices*.

Ongoing Projects and Doctorate Student Supervision

THE WIND OF CHANGE – INDIVIDUALS CHANGE WHEN TECHNOLOGIES CHANGE. A study describing the changeover from an analogous to a digital environment. Focusing on how the professional role of radiologists and radiographers, work practices and use of the technology are influenced by the introduction and use of PACS within the Region of Skåne.

Funding: Cfss, CLINTEC, Karolinska Institute

Research team: Professor Peter Aspelin, Nina Lundberg and Kent Fridell, Radiographer, CLINTEC, Karolinska Institute, Sweden, (Since November 2004), *finalized licentiate thesis in December 2007, planned doctoral thesis in spring 2010*

Responsibility: Head supervisor

DIGITAL IMAGING – INFLUENCE OF DIGITALIZATION ON RADIOGRAPHERS KNOWLEDGE DEMANDS AND WORK PRACTICE. An additional study describing the changeover from an analogous to a digital environment. The focus of the study is to identify and analyze radiographers' changes in work practice as well as changes in the demands for knowledge in the translation from an analogue to a digital department.

Funding: CLINTEC, Karolinska Institute

Research team: Professor Peter Aspelin, Nina Lundberg and Wiveca Larsson, Radiographer, CLINTEC, Karolinska Institute, Sweden, (Since November 2004), *finalized licentiate thesis in March 2009.*

Responsibility: Head supervisor

PREPARE TO SHARE – IT IS ALL ABOUT CARE. The study is analyzing what is needed to achieve virtual patient informatics, e.g. access to information where and there it is needed and to implement an enterprise integration system in practice. To do this, we consider information models, interoperability between healthcare information systems, standards and security.

Funding: CLINTEC, Karolinska Institute

Research team: Professor Peter Aspelin, Nina Lundberg and Lars Lindsköld, Radiographer/medical informatics, CLINTEC, Karolinska Institute, Sweden, (Since November 2004), *finalized halftime march 2009, planned finalized doctoral thesis in Spring 2010.*

Responsibility: Head supervisor

THE REVOLUTION THAT GOT STUCK This project investigates, analyses and presents radiological productivity and worked load classified by the total number and by certain types of examination, total working hours and classified to the categories radiologist, radiographer, assistant nurse and secretaries performed before and after digitalization at five Swedish radiological departments.

Funding: Örebro University

Research team: Professor Torbjörn Andersson, Nina Lundberg and Marianne Selim, Radiographer, Örebro University Hospital (Since November 2005), *planned finalized licentiate thesis in autumn 2009.*

Responsibility: Supervisor

THE CORE OF RADIOGRAPHY WORK - CATCHING THE NECESSARY PROPERTIES TO REACH DIAGNOSTIC QUALITY OF IMAGES – An additional study describing the changeover from an analogous to a digital environment. The focus of this project is to map how digitalisation has affected the collaboration and feedback between the radiographer and radiologist? Is feedback necessary? And if so, within which areas is it necessary? Is it possible to use the digital technique and give feedback automatically?

Funding: CLINTEC, Karolinska Institute

Research team: Professor Peter Aspelin, Nina Lundberg and Kerstin Hillergård, Radiographer, CLINTEC, Karolinska Institute, Sweden, (Since November 2004), *planned finalized doctoral thesis in Autumn 2009*

Responsibility: Head supervisor

IF YOU DO NOT LEARN FROM YOUR MISTAKES YOU ARE DOOMED TO REPEAT THEM. As medicine lags behind safety cultures in other walks of life, e.g. aviation, this project focus on applying a systems approach to error within radiological diagnostic work. In practice, a web-based feedback system is implemented that independently of local RIS- and PACS vendors, provide feedback within and between individuals and sites.

Funding: CLINTEC, Karolinska Institute

Research team: Professor Peter Aspelin, Professor Olof Flodmark, Nina Lundberg and Erik Jensen, Radiographer, CLINTEC, Karolinska Institute, Sweden, (Since November 2007), *planned finalized doctoral thesis in Spring 2011*

Responsibility: Head supervisor

Teaching Experience

2009 - **Karolinska Institute, Stockholm**

I am the main teacher on the Theory and Methods Course at the radiographer's undergraduate programme. Work includes course layout and content (i.e. design of the course material), administration as well as continuous development of the course. In all the course compromise 7,5 ECTS.

2007 - **Karolinska Institute, Stockholm**

I was the main teacher on the Theory and Methods Course at the radiographer's undergraduate programme. Work included course layout and content (i.e. design of the course material) as well as administration. In all the course compromise 7,5 ECTS.

2003 - **Karolinska Institute, Stockholm**

Main teacher on a Theory and Methods Research Course, at CFSS, CLINTEC, including course administration and development as well as designing course material, the course compromise 10 ECTS. Main responsible for a MSc thesis and examiner (2006) at the department of CFSS, CLINTEC, total amount of lectures, seminars, student supervision. The course compromised about 400 hours. Guest lecturer at the radiographer's undergraduate programme.

2001 -- 2003 IT-University of Göteborg, Chalmers, Göteborg University

Co-main responsible and examiner for a for a MSc thesis programme “IT in Healthcare” at the University. Main teacher on both a Qualitative Research Course, 5 ECTS, a Design Theory Course, **5 ECTS** and a Healthcare Management Course, 10 ECTS including course development and course material for parts of courses. Total amount of lecturing, seminars etc: 75 hours.

1996 -- 2000 Handelshögskolan, Göteborg University

Lecturing on “IT design and implementation in Healthcare” for Informatics students taking the courses: Informatics as a scientific field, Computer Supported Cooperative Work, Qualitative Research Methods. Supervisor for about 15 BSc and MSc thesis’s at the department of Informatics.

1994 -- 1998 LTH/Helsingborg, Lund University

Main teacher on two Multimedia courses comprising 13 ECTS and 8 ECTS, including course development, administration and development of course material for parts of the courses. Co-responsible for the development of Sweden’s first three year multimedia programme at the department. Lecturing on “Information Technique and Technology” for several different alignments of the Msc in Engineering programme at LTH/Helsingborg and LTH Lund University.

2000 -- 2008 eCare AB and Mawell Ltd.

Also regularly teaching the use of system Feedback at the Radiology Departments in Sweden, approximately 50 occasions spread over about 20 departments over five years. Including development of about 15 crib sheets and 10 versions of manuals related to system Feedback and 5 crib sheets and 1 manual for system Infobroker

Invited Lectures and Seminars

Feedback – A Quality Assurance System, European Congress of Radiology (ECR), Vienna, Austria, April, 2010

My Healthcare Contacts: Healthcare Access, Services and Treatments Online – Best Practice from Sweden and Finland, The third Baltic Conference on E-Health, Hamburg, Germany, September 2009

- Radiography research at CLINTEC – Karolinska Institute, **Röntgenveckan 2009 in Jönköping***, September 2009
- Strategy for Radiography Research. CLINTEC's (Karolinska Institutets) **spring research meeting***, May 2009
- "Feedback" - et datasystem som gir automatisk tilbakemelding ved endring av diagnose, **Norsk årlig radiologikonferens***, Lillström, Norge, May, 2008
- Infrastrukturer och Benchmarking i hälso- och sjukvården, **IT Seminar, Dagens Medicin, Sheraton Hotel***, Stockholm, Sweden, April, 2008
- Radiological Informatics – A New Research Field, **European Congress of Radiology (ECR)***, Vienna, Austria, April, 2008
- International Hospital Federation's Benchmarking Service, **The Methodists Hospital Group***, Houston, USA, February, 2008
- International Hospital Federation's Benchmarking Service, **IHF's International Management Conference***, Seoul, South Korea, November, 2007
- Diagnostic Quality Assurance System Feedback – Decreasing Discrepancies in Work, **Royal College of Radiologists (RCR), Annual Scientific Meeting***, London, UK, September, 2007
- Medical Informatics – A Growing Research Field, **Nordic Scientific Meeting***, Malmö, Sweden, May, 2007
- Building an Information Infrastructure, **IT Seminar, Carelink and Västra Götalands Regionen (VG-Region)***, Göteborg, Sweden, February, 2007
- Diagnostic Quality Assurance System Feedback – Feedback for Increasing Patient safety, **Standards Sub-Committee, NHS & The Royal College of Radiologists***, London, UK, December, 2006
- Distributed Radiology – How to Achieve Seamless Interoperability Between Systems from Different Vendors, **Swedish State e-health delegation***, Sidney Australia, November, 2006
- Distributed Radiology – How to Achieve Seamless Interoperability Between Systems from Different Vendors, **Swedish State e-health delegation***, Bangkok, Thailand, November, 2006

- Distributed Radiology – Opening up Health Information for Cooperative Work*, **Swedish State e-health delegation**, Sidney, Australia, November, 2006
- Applied Electronic Standards in Infobroker*, **IHE National Meeting**, Oslo, Norway, October, 2006
- Feedback for Secretaries*, **Röntgenveckan, Svensk Förening för Radiologi**, Örebro, Sweden, September, 2006
- Radiology Informatics*, **Röntgenveckan, Svensk Förening för Radiologi**, Örebro, Sweden, September, 2006
- From Theory to Practice*, **LSE (London School of Economics)**, London, UK, February, 2006
- Feedback Patient Safety System*, **Royal Australian and New Zealand College of Radiologists**, Sidney, Australia November, 2006
- Infobroker*, **IT Seminar, Västra Götalands Regionen (VG-Region)**, Göteborg, Sweden, March, 2006
- Feedback and Infobroker for Healthcare, Regional meeting*, **Capio Diagnostics**, Stockholm, Sweden 2004, 2005 and 2006
- Feedback and Infobroker for Healthcare, Regional meeting*, **Västerbottens Läns Landsting**, Umeå, Sweden, 2003, 2005 and 2006
- From Theory to Practice*, **LSE (London School of Economics)**, London, UK, February, 2005
- Infobroker for Healthcare, Regional meeting*, **Östgöta Region**, Jönköping, Sweden, April, 2005
- Feedback for Healthcare*, **Skåne County**, Lund, Sweden, August, 2005
- Distributed Radiology – Opening up Health Information for Cooperative*, **Kodak Healthcare Solution Services**, Helsinki, Finland, September, 2005
- Distributed Radiology – Creating Interoperability in the Medical Jungle*, **Hospital District of Helsinki and Uusimaa Hospital District of Helsinki**, Helsinki, Finland, January, 2004

- From Academic Research to Commercial Business*, **LSE (London School of Economics)**, London, UK, February February, 2004
- Feedback Patient Safety System*, **Leicester General University Hospital NHS**, Leicester, UK, September, 2004
- Feedback for Healthcare*, **British Telecom**, London, UK, May, 2004
- Distributed Radiology – How to Achieve Seamless Interoperability Between Systems from Different Vendors*, **AGFA Gaevert Group**, Belgium, October, 2004
- Diagnostic Quality Assurance System Feedback*, **The Royal College of Radiologists**, London, UK, March, 2004
- Feedback for Healthcare*, **Karolinska University Hospital**, Stockholm, 2004
- Feedback for Healthcare*, **WM-data's Yearly Customer meeting**, Stockholm, Sweden, August, 2004
- Feedback for Healthcare*, **Agfa's Yearly Customer meeting**, Falun, Sweden, September, 2004
- Integrated Strategies – translating insights into integrated strategic approaches*, Health Information Management – Mcs thesis programme, **Erasmus University in Rotterdam**, Stockholm Sweden, September, 2002
- Feedback for Healthcare*, **Landstinget i Värmland**, Karlstad, Sweden, October, 2003
- Distributed Radiology*, **Yearly training days, Röntgen SÄS**, Halmstad, Sweden, September, 2002
- New Innovative Integration Solutions in Healthcare*, **Winning IT project, Dagens Medicin, Riksstämman**, Göteborg, Sweden, May, 2002
- Feedback for Healthcare*, **Regional meeting, Östergötlands Läns Landsting**, Jönköping, Sweden, 2001 and 2002
- Quality Assurance of Radiology Diagnostics – Fast and Easy*, **Röntgenveckan**, Umeå, Sweden, August, 2001
- Feedback for Healthcare*, **Riksstämman**, Göteborg, Sweden, November, 2001
- New Innovative Services in Healthcare*, **ALMIs Yearly Meeting**, Stockholm, Sweden, March, 2001

- New Practice and Possibilities in the Future Care*, **Carelink AB Yearly Meeting**, Stockholm, Sweden, November, 2001
- Our Digital Society – Vision 2011+*, **IT-Commision**, Rosenbad Stockholm, Sweden, April, 2001
- IT in Healthcare*, **Yearly meeting of “Svensk Förening för Medicinsk Radiologi”**, Stockholm, Sweden, August, 2000
- PACS - a Reality - What happens with the medical staff when the department becomes distributed?* **Norska Radiologsamfundets Management Day**, Oslo, Norway, January, 2000
- Quality Assurance System Feedback*, **Yearly meeting at the Radiology Organisation’s quality assurance group**, Sweden, Stockholm, September, 2000
- Decentralized Information Technology Changes in the Radiology Department at Helsingborg Lasarett*, **Trygghetsfonden**, Stockholm, January, 1996

Publications

- Lundberg N., Wintell M. and Lindsköld L. (Accepted for publication with revision). *The Future Progress of Teleradiology*. European Journal of Radiology
- Lindsköld L., Wintell M. and Lundberg N. (2009). Interoperability in Healthcare – *Major Challenges in the Creation of the Enterprise Environment*. Conference paper SPIE, Orlando, USA
- Fridell K., Edgren L., Lindsköld L. Aspelin P. and Lundberg N. (2009). *PACS Influence the Radiographer's Work*. Radiography, pp 121-133
- Lindsköld L., Aspelin P., Jacobsson, B. and Lundberg N. (2008). *The Use of Simulation in Radiology*. Radiology Management, vol 30(3), pp 55-62
- Lindsköld L., Aspelin P., Jacobsson, B. and Lundberg N. (2008). *Prepare to Share – It is all about e-Care*. Hospital IT Europe (HITE), vol 1 no 2, pp 30-42
- Larsson W., Hillergård K. and Lundberg N. (2008 accepted for publication). *Use Your Good Judgment – Radiographer’s Knowledge in Image Production Work*. Radiography
- Lundberg N., Flodmark O., Aspelin P., Jensen E., and Jacobsson B. (2007). *Supporting Patient Safety with System Feedback and Teambuilding*. CARS/EuroPACS meeting 2007, Berlin, Germany, pp 187-190
- Fridell K., Edgren L., Lindskiöld L. Aspelin P. and Lundberg N. (2007). *The Impact of PACS on Radiologists’ Work Practice*. Journal of Digital Imaging, vol 20(4), pp 411-421
- Larsson W., Aspelin P., Jacobsson B., Bergquist M. Lindskiöld L. and Lundberg N. (2007). *The Effects of PACS on Radiographer’s Work Practice*. Radiography vol. 13 Issue 3, pp 235-240

- Lundberg N., Flodmark, O., Jacobsson, B. and Jensen, E. (2007) “*Double Blind*” *Reading to Support Patient Safety*. European Congress of Radiology (ECR), Vienna, Austria, pp 248
- Rosbach Jensen E., Aspelin P., Flodmark O. and Lundberg N. (2007). *Manual Versus Automatic Feedback of Radiology Diagnostic Work*. Nordic Congress, Malmö, Sweden, pp. 84
- Lundberg, N., Jacobsson, B., Bergquist, M. and Storgsen, S. (2006). *Making Distributed Radiology-Work Work: Integrating RIS/PACS and Internet Technologies*. Proceedings of the 12th International EuroPACS Meeting, Trondheim, Norway, pp 214
- Lundberg, N., Flodmark, O., Aspelin, P., Jensen, E. and Jacobsson, B. (2006 accepted). *System Feedback: If You Do Not Learn From Your Mistakes, You Are Doomed to Repeat Them (Santana Yana, 1863-1952)*. RSNA, Chicago, USA, pp 416
- Lundberg, N. & Hanseth, O. Standardization in Practice – Examples from Healthcare (2001). “*Strategies of Healthcare Information Systems*” (book chapter), editor Ton AM Spil and Robert A Stegwe, in relation to HICCS-34, Maui, Hawaii, pp 44-64
- Hanseth, O. & Lundberg, N. (2001). *Information Infrastructure in Use – An empirical study at a radiology department*. Computer Supported Cooperative Work (CSCW). The Journal of Collaborative Computing. Vol. 10 Nos. 3-4, pp 347-372
- Lundberg, N. & Stintzing, L. (2001) *Information Systems in Healthcare – Challenges when implementing these* (book chapter, in Swedish), Elektronisk förvaltning, elektronisk demokrati – visioner, verklighet, vidareutveckling, pp 209-218
- Lundberg, N. & Bergquist, M. (2000). *Capturing Work Practice*. Proceedings of the 23th IRIS, Uddevalla, Sweden, pp 1401-1416
- Lundberg, N. & Sandahl, T. (2000). *An ANT Perspective on Design*. COOP2000, proceedings of the COOP, Cannes, France, pp 237-249
- Lundberg, N. (2000). *IT in Healthcare – Artifacts, Infrastructure and Work Practice*. Ph.D Thesis, University of Göteborg
- Lundberg, N. (1999). *Impacts of PACS Technology on Medical Work*. GROUP99, proceedings of the International ACM SIGGROUP Conference on Supporting Group Work GROUP99, Phoenix USA, pp 169-178
- Lundberg, N. and Tellioglu, H. (1999). Understanding Complex Coordination Processes in Healthcare. *Scandinavian Journal of Information Systems*, edited by J. Heikkilä, pp 157-181
- Hanseth, O. & Lundberg, N. (1999). *Radiological Information Infrastructures*. Informatics in the Next Millennium, Studentlitteratur, pp 255-281
- Lundberg, N. & Hanseth, O. (1999). *Standardization in Practice - Examples from Healthcare*. CSCWD99, proceedings of the fifth CSCWD conference, Compiègne, France, pp 407-414
- Lundberg, N. & Sandahl, T. (1999). *What do Artifacts Mean to us in Work?* Proceedings of the 22th IRIS, Jyväskylä, Finland, pp 363-372
- Hanseth, O. & Lundberg, N. (1999). *Information Infrastructure in Use - An empirical study at a radiology department*. IRIS 22, Jyväskylä, Finland, pp 407 – 424

- Lundberg, N. (1998). *Integrating Various Learning Contexts in a One Year Medical Informatics Program*. International Journal of Medical Informatics, pp 117-124
- Lundberg, N. & Sandahl, T. (1998). *Artifacts in Work Practice*. Proceedings of the 21th IRIS, Copenhagen, Denmark, pp 545-561
- Lundberg, N. (1997). *Intermediaries in a Social Network*. Proceedings of the 20th IRIS, Oslo, Norway, pp 149-171
- Lundberg, N. & Tellioglu, H. (1997). *Impacts of the Re-Engineering Process on Radiological Work. A comparative study between traditional/non PACS based and networked/PACS based radiology departments in Austria, Sweden, and Denmark*. Proceedings of the 5th International EuroPACS Meeting, Pisa, Italy, pp. 251-255
- Lundberg, N. (1996). *How Network Technology Changes the Work Process at a Radiology Department*. IRIS19, proceedings of the 19th IRIS, Lökeberg, Sweden, pp 175-195
- Lundberg, N. (1993). *Computerization of Radiology Departments*. Proceedings of the 16th IRIS, Copenhagen, Denmark, pp 252-260

Reports

- Lundberg, N. et al. (August 2006). *GVD – Specification Report of the GUI in the GVD for Educational and Research Work*. Stockholms Läns Landsting
- Lundberg, N. et al. (2001) *Right Information in Right Time and Context (In Swedish), "Our Digital Society – Vision 2011"*, Report from the IT-Commission
- Lundberg, N. (1997). *How we Learned IT– A Project at the Radiology Department at Helsingborg Hospital*. Trygghetsfonden, Report nr 4/97

Patent

Via eCare AB is all seven technical patents applied for, based on the technical integration concepts that I described in my PhD. The patent is presently pending on an European level.

Authorities (“tredje uppgiften”)

- Member of the NI project, led by Socialstyrelsen, 2009 --. The objective of the group is to take forward the national guidelines for medical processes and terminology to be applied. Project leader is Lott Holm Sjögren, Socialstyrelsen.
- Stockholms Läns Landstings (SLLs) contactperson to Socialstyrelsens national terminology project for healthcare (Socialstyrelsens projekt Nationellt fackspråk för vård och omsorg), 2009 --. Project leader is Lotti Barlow, Socialstyrelsen.
- Member of IT Forum, 2009 --. IT Forum is the joint group for county councils and healthcare in the Stockholm region (kommuner och landsting i Stockholmsregionen). Project leader is Karin Bengtsson, Kommunförbundet Stockholms Län (KSL).
- Member of SLL cooperative group, 2009 --. The objective of the group is to plan, develop, implement and follow up ICT (Information and Communication Technologies) in the Stockholm region.

- Member of SLL Informatics, 2009 --. The objective of the group is to highlight and plan informatics challenges within SLL, i.e. take forward Stockholms Läns Landstings (SLLs) guidelines for use of healthcare terminology. Project leader is Christina Kling Hassler, koncernsamordnare IT, Stockholms Läns Landsting (SLL).
- Member of NKS (Nya Karolinska Solna) ICT project, 2009 --. The objective of the group is to discuss how different parts from SLL jointly can plan and develop and use ICT in an optimal way, considering our joint experience and knowledge within Stockholms Läns Landstings (SLLs) as a whole. Project leader is Björn Ekström, CTO NKS.
- Member of a GVD advisory group, Stockholms Läns Landsting (SLL), 2006 -- 2007. The objective of the group is to take forward the design specifications concerning research and education functionalities within the GVD system. Project leader is Peter Rönnerfalk, SLL, members in the group are approximately 8.
- Member of the HIC advisory group, Karolinska Institute and Stockholms Läns Landsting (SLL), 2006 -- 2007. The objective of the group is to take forward ideas of what HIC should focus its work on. My work within the group has been related to Standards in practice and is asked to take forwarded a project-plan on the topic. Project leader is Professor Göran Elinder
- Member of a Swedish eHealth delegation to Thailand and Australia accompanied by the Royal Family and Principal of KI, 2005.
- Member of a Carelink group specifying the trend within IT in healthcare in Sweden. The trends were summarised in a Carelink report, 2003.
- Member of the group that designed the initial business plan for Carelink, 2001. Carelink is an organisation created by Landstingsförbundet, Svenska Kommunförbundet, Privatvårdens arbetsgivarförbund and Apoteket AB. Carelinks interest is to increase IT cooperation and communication within the healthcare community.
- Member of the Carelink group that was assigned to develop a report that envisioned *Our Digital Healthcare Society 2011+*. The work was presented for the Swedish IT-Commission at Rosenbad Stockholm, 2001, it was also printed and distributed in one of the commission's national reports.

University- , Healthcare- and Industry Work

My Ph.D. thesis has been of interest within hospitals, counties, universities and industry vendors. It has lead to the foundation and development of a company, eCare AB. The mission of eCare was to create "More Time to Care". eCare designed and marketed enterprise integration solutions and patient safety systems for healthcare. In work I have created many global co operation agreements with major players from the healthcare industry such as GE Healthcare, Agfa Gaevert Group, Kodak Healthcare, IBM Healthcare, Siemens Medical, Mawell, I3Archive. Research work in combination with industry and Stockholm county work has given me a rich experience and knowledge of IT and healthcare from many different perspectives.