

## Örjan Hallberg

Född 1942

**RESUMÉ**

Has a broad and deep knowledge within quality- and environmental issues, especially regarding electronic components. During recent years he has done research regarding possible connections between public health and exposure to radio frequent electromagnetic radiation.

He is known to easily cooperate and is able to share his knowledge and in a smooth and flexible way get people moving willingly in a desired direction. Has given numerous presentations at international conferences and published well over 50 papers in scientific journals.

**EDUCATION**

**1966** Master of Science, Electrotechnology, Chalmers  
Tekniska Högskola

**COURSES**

**1966-** Over the years I have participated in various courses related to quality, reliability and mgmt.

**EMPLOYMENTS**

- 2003** Hallberg Independent Research, Owner, CEO
- 2002** Ericsson Telecom AB, Business unit Systems, Environmental Manager
- 1997** Ericsson Telecom AB, fixed networks, Environmental co-ordinator
- 1992** Ericsson Telecom AB, Product Improvement Manager
- 1987** Ericsson Telecom AB, Qualification and Vendor Assessment Manager
- 1981** Rifa AB, Kvalitetschef IC-divisionen
- 1971** ELLEMTEL Utvecklings Aktiebolag, Gruppchef tillförlitlighet, felanalys komponenter
- 1966** Telestyrelsen, Gruppchef elektronikkomponenter

**GENERAL KNOWLEDGE/SKILLS**

Project management  
Statistics  
Excel  
Physical models  
Plays the violin

**LANGUAGES**

Swedish, fluently  
English, fluently  
Tyska, (after a beer)

**PUBLICATIONS**

- 2010** Logan A.C., Hallberg Ö. Skin cancer epidemic in a wireless world. Pathophysiology (2010), doi: 10.1016/j.pathophys.2010.02.002.
- 2009** Hallberg Ö. Bed types and cancer incidence. Letter to the Editor. Pathophysiology, accepted 2009-09-23, E-pubbed 2009-10-17 (in press).
- 2009** Hallberg Ö, Johansson O. Sleep on the right side—Get cancer on the left? Pathophysiology (2009),
- 2009** Hallberg Ö. Is increased mortality from Alzheimer's disease in Sweden a reflection of better diagnostics? Current Alzheimer Research. 2009; 6: 471-475.
- 2009** Hallberg Ö, Johansson O. Why is there a left laterality of melanoma and breast cancer? Presentation given at the 7th World Congress on Melanoma, Vienna, Austria, May 12-15 2009.
- 2009** Hallberg Ö. Too many skin damages - Or too few repairs? Reduced repair rates can explain increasing melanoma incidence. Presentation given at the 7th World Congress on Melanoma, Vienna, Austria, May 12-15 2009.
- 2009** Hallberg Ö, Johansson O. Cancer and Broadcasting Radiation: Facts from Radio Engineering and Cancer Epidemiology. Presentation at World Cancer Congress 2009, Abstract, June 21-25, 2009, Peking.
- 2009** Hallberg Ö. Extracting characteristic functions from growing populations - examples from reliability, epidemiology, climate and traffic safety research. Presentation given at the Danish Society for Applied Statistics, Lyngby, Denmark, Jan 15 2009.
- 2009** Hallberg Ö, Johansson O. Apparent decreases in public health indicators after 1997 -Are they due



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- to improved diagnostics or to environmental factors? *Pathophysiology* 16:43-46 (2009).
- 2008** Hallberg Ö. The Melanoma Epidemic. BIT Life Sciences' 1st Annual World Cancer Congress 2008, Shanghai, China. Proc p 141.
- 2008** Hallberg Ö, Johansson O. Ohälsan tycks öka sedan 1997 - beror det på förbättrad diagnostik eller på en försämrad miljö? *Medicinsk access* Nr 4/5 2008: 57-59.
- 2008** Hallberg Ö. Re: Climate change. *BMJ*, web published 2008-01-31
- 2008** Hallberg Ö. A reduced repair efficiency can explain increasing melanoma rates. *European Journal of Cancer Prevention*. 2008;17:147-152.
- 2007** Hallberg Ö. Radio, TV towers linked to increasing risk of melanoma. An article exclusively written for Foodconsumer.org web-published on Monday 2007-12-10.
- 2007** Hallberg Ö. Increasing incidence of brain tumors in sparsely populated areas. *Pathophysiology*, 2007;14:121-22
- 2007** Hallberg Ö. Letter in reply to manuscript by Robin Lucas et al. *Bulletin of the World Health Organization*, June 2007
- 2007** Balmori A, Hallberg Ö. The urban decline of the house sparrow (*Passer domesticus*): a possible link with electromagnetic radiation. *EBM* 26(2), 2007
- 2007** Hallberg Ö. Adverse health indicators correlating with sparsely populated areas in Sweden. *Eur J Cancer Prev* 2007, 16:71-76.
- 2006** Hallberg Ö. The etiology of melanoma. 4th International Workshop on Biological Effects of Electromagnetic Fields in Crete, Greece on Oct 16-20, 2006. pp 766-767.
- 2006** Hallberg Ö, Oberfeld G. Will we all become electrosensitive? Letter to the Editor. *Electromag Biol and Medicine*. 25: 189-191, 2006
- 2006** Hallberg Ö. A theory and model to explain the skin melanoma epidemic. *Melanoma Research*, 2006; 16; 115-118.
- 2005** Hallberg Ö, Johansson O. 1997 - A curious year in Sweden Annual ECP symposium & Michael J. Hill Memorial Lecture. Cell phones & cancer. November 4 & 5, 2005 Floreal Club, Blankenberge, Belgium.
- 2005** Hallberg Ö, Johansson O. Alzheimer mortality - why does it increase so fast in sparsely populated areas? *European Biology and Bioelectromagnetics*. 2005; 1: 225-246.
- 2005** Hallberg Ö. Increasing incidence of malignant melanoma of the skin can be modeled as a response to suddenly imposed environmental stress. *Med Sci Monit*, 2005; 11(10): CR457-461.
- 2005** Hallberg Ö. Hearing problems and acoustic neuroma cancer in Sweden. *Pathophysiology* (2005); 12(2): 143-144.
- 2005** Hallberg Ö, Johansson O. FM broadcasting exposure time and malignant melanoma incidence. *Electromagnetic Biology and Medicine* (2005); 24: 1-8.
- 2004** Hallberg Ö, Johansson O. Say to countryside goodbye, when even healthy people die. Report nr. 6/ issue 1/ISSN 1400-6111/2004-06-30. (This booklet is in Swedish)
- 2004** Hallberg Ö, Johansson O. 1997 - A curious year in Sweden. *Eur J Cancer Prev* 2004; 13: 535-538
- 2004** Hallberg Ö, Johansson O. Mobile handset power and health. *Electromagnetic Biology and Medicine* (2004); 23:229-239.
- 2004** Hallberg Ö, Johansson O, "Long-term sickness and mobile phone use", *J Aust Coll Nutr & Env Med*, 2004; 23: 11-12
- 2004** Hallberg Ö, Johansson O. Does GSM 1800 MHz affect the public health in Sweden? In: *Proceedings of the 3rd International Workshop "Biological Effects of EMFs"*, Kos, Greece, October 4-8, 2004, pp 361-364.
- 2004** Hallberg Ö. and Johansson O. Malignant Melanoma of Skin - Not a Sunshine Story!, *Med Sci Monit*, (2004); 10(7): CR336-340
- 2002** Hallberg Ö, Johansson O. Cancer trends during the 20th century. *ACNEM Journal* (2002); 21(1): 3-8.
- 2002** Hallberg Ö, Johansson O. Melanoma incidence and frequency modulation (FM) broadcasting. *Arch Environ Health* (2002); 57: 32-40
- 2002** Hallberg Ö, Johansson O, "Har tusentals personer offrats i onödan sedan 1955?" ("Have thousands of persons unnecessarily been sacrificed since 1955?"; in Swedish), *Nord Tidsskr Biol Med* 2002; 2: 26-27
- 2002** Hallberg Ö, Johansson O, "Cancerdödlighet och långtidssjukskrivning" ("Cancer mortality and long-term sick leave"; in Swedish), *Tidskriften Medikament* 2002; 7: 40-41
- 2000** Hallberg Ö, Larsson J. Product Performance Optimized Test Flow, IEEE AST Workshop, Oct 2-4, 2000 Denver, Colorado. *Proceedings pp* 381-389.



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- 1999** Zhang Y, Das D, Katz K, Hallberg Ö (Co-author only). Trends in Semiconductor Component Reliability, Semiconductor International, pp. 101-106, Sept 1999.
- 1999** Hallberg Ö. A time dependent field return model for telecommunication hardware (Invited paper), IEEE/AST workshop, Boston, 1999.
- 1999** Hallberg Ö, Löfberg J. A time dependent field return mode for telecommunication hardware, EEP-Vol. 26-2, Advances in Electronic Packaging, Vol 2 ASME, Mauri, 1999, pp 1769-1774.
- 1998** Hallberg Ö. Failure free electronic - a reliability challenge, Proc Reliability Challenge symposium, Dublin 1998.
- 1997** Oscarsson P, Hallberg Ö. EriView 2000 - A tool for the analysis of field statistics, Proc ESREL, pp 1083-1090, Lisboa, 1997 ISBN 0-08-042835-5
- 1997** Nilsson M, Hallberg Ö. A new reliability prediction model for telecommunication hardware, ESREF 1997, Bordeaux, Microelectron. Reliab. Vol 37, No 10/11 pp 1429-1432.
- 1996** Grimvall G, Ljunggren O. Långtidsuppförandet hos tekniska system. Studentlitteratur, Kapitel 4: Örjan Hallberg, Uppskattning av elektronikkomponenters livslängd och möjliga kvalitetsvisnster, p47 ff (In Swedish)
- 1996** Hallberg Ö. Qualification of Components and Equipment in a new Era, Proc Reliability Challenge symposium, London, 1996, Finn Jensen Reliability consultancy aps, Holte, Denmark.
- 1995** Hallberg Ö. Facts amd Fiction about the Reliability of Electronics, (invited paper), ESREF 1995, Bordeaux, pp 39-46
- 1994** Hallberg Ö et al. Hardware reliability assurance and field experience in a telecom environment, Quality and Reliability Engineering International, Vol. 10, 195-200 (1994)
- 1992** Hallberg Ö. Humidity Accelerations for Testing Standards (invited paper), European Symposium Reliability of Electron Devices, Failure Physics and Analysis (ESREF), 1992
- 1991** Hallberg Ö, Peck DS, Recent humidity accelerations, a base for testing standards, Quality and Reliability Engineering International, Vol. 7, 169-180 (1991)
- 1987** Hallberg Ö. Humidity Accelerations for Testing Hallberg Ö, Analysis of field failure data from growing populations. Proc SINTOM seminar April 27-29 1987, Visby, Sweden
- 1986** Hultén, Hallberg Ö. Evaluation of a parasitic charge-spreading transistor as a moisture sensor, RADC/NBS International Workshop Moisture Measurement and Control for Microelectronics (IV), Nov. 12-14, 1986, Washington DC, NBSIR 87-3588 pp189-195
- 1981** Hallberg Ö. NMOS voltage breakdown characteristics compared with accelerated life tests and field use data, International Reliability Physics Symposium, IEEE Proc 1981, pp28-32
- 1979** Hallberg Ö. Acceleration factors for temperature-humidity testing of Al-metallized semiconductors. Proc SINTOM seminar, Sept 4-6, 1979, Elektronikcentralen, Copenhagen, Denmark.
- 1977** Hallberg Ö. Failure-rate as a function of time due to log-normal life distribution(s) of weak parts. Pergamon Press, Microelectronics and Reliability. 1977;16(2):55-158.
- 1974** Hallberg Ö. Termisk utmattning av Al-bondtrådar genom strömpulsning. SINTOM, Köpenhamn, 16-18 april 1975



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### EXPERIENCE

#### **2003- Hallberg Independent Research (HIR), CEO**

Experience and knowledge from quality surveillance of electronic products in field use are being reused for epidemiologic studies. Alone or in cooperation with the Karolinska Institute and foreign universities and other international scientists in so far total 36 papers on various aspects of public health and environmental factors have been published. A completely new way of analyzing medical data has made it possible to model e.g. cancer incidence to explain trends over time and space in different countries and for different age groups.  
*Development tools: PC, own software for the analysis of epidemiologic data and for model development.*

#### **2002-2003 Ericsson Telecom AB, Business Unit Systems (fixed and mobile networks)**

Environmental Manager.  
Member of the central steering group for environmental management within Ericsson. Developed and introduced an environmental management system for the new combined Business Area. Also this management system was reviewed and certified by BSI according to ISO 14000.

*Development tools: PC, databases*

#### **1997-2001 Ericsson Telecom AB, Business Unit Multi-Service Networks**

Environmental Manager.  
Developed and introduced the environmental management system for the Business Area. Managed to get the system certified by BSI according to ISO 14000.

#### **1992-1997 Ericsson Telecom AB, Access**

As Product Improvement Manager I managed a project called Total Quality Feedback (TQF) in cooperation with reps from different factories in Sweden and internationally. The project developed improved routines for feedback and analysis of field quality data, thus improving our ability to notice and react on products (printed circuit assemblies) starting to show worrying trends in failure rates. But we also highlighted products that were almost failure free to learn more about e.g. robust design. Member of the Steering Committee of the international conference REL-CON.  
*Development tools: PC. Special applications were developed to better monitor failure trends and to improve prognostics.*

#### **1987-1992 Ericsson Telecom AB, Elektronik components management**

ISO 9001 och 9002 were now the base for Ericsson's general requirements on the quality systems of our vendors. I was hired as responsible for Qualification and Vendor Assessments and carried out quality system revisions among our suppliers around the world. The increasingly complex microcircuits had to go through long stress tests to be accepted and qualified.  
*Development tools: Computers were used routinely.*

#### **1981-1987 Rifa AB, IC divisionen, avd Z**

Quality manager for the IC-division. The department had sections for income inspection, qualification, process control and final acceptance tests. The division became certified according to ISO 9001 under my management. I was also responsible for on-site quality surveillance of our sub-contractors in the Far East.  
*Development tools: The first PC:s became available. I used a small Mac myself.*

#### **1971-1981 Ellementel Utvecklings AB, K**

Developed and managed a group of component experts responsible for qualification tests of new electronic components, TTL and other microelectronics. Also set up one of the best labs in the country for failure analysis where the causes to field failures or test failures could be investigated in detail. Quality specifications for electronic components were defined to form a base for purchasing both at ELLEMENTEL and Ericsson AB.  
*Development tools: Predecessors to PC as HP-computers that were programmed in HPL or in HP-basic.*

#### **1966-1970 Administration of Telecommunication**

Evaluate, specify, test and approve new electronic components for the new electronic switch, A210. Managed a group of component specialists.

