

Curriculum vitae – Leontine Alkema

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Contact information

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Education

2004 - present University of Washington, Seattle, US
- Ph.D. Studies in Statistics, expected August 2008
Advisors: Prof. A. E. Raftery and Prof. S. J. Clark
- Ph.D. track of Statistics in Social Sciences, 2006
Specialization in Statistical Demography
2003 Delft University of Technology, The Netherlands
M.S., Applied Mathematics
Thesis: "Multivariate time series analysis of oil reservoir pressure"
2002 Delft University of Technology, The Netherlands
B.S., Applied Mathematics

Research interests

Bayesian statistics, Statistical demography, Sub-Saharan Africa

- Bayesian melding, Bayesian hierarchical modeling
- Probabilistic population projections, Uncertainty in demographic indicators
- Fertility trends, Family planning programs
- HIV prevalence estimates and projections
- Poverty measurement, Poverty dynamics

Research experience

Oct 2005 – present University of Washington, Department of Statistics, Seattle, US
Research assistant for Prof. A. E. Raftery and Prof. S. J. Clark
"Uncertainty assessments of demographic estimates and projections"
July – August 2007 University of Cape Town, Cape Town, South Africa
Visiting researcher at the Centre for Actuarial Research
Jan – June 2007 African Population and Health Research Center, Nairobi, Kenya
Internship on poverty measurement in slum settlements
Aug 06 – Mar 07 Joint United Nations programme on HIV/AIDS (UNAIDS)
Consultant for development of the Bayesian melding approach for
assessing uncertainty in the UNAIDS Estimation and Projection
Package
Sep – Nov 2006 United Nations Population Division, New York, US
Internship on assessing uncertainty in fertility projections
Jan - Dec 2003 Shell Rijswijk, The Netherlands
M.S. project on multivariate time series analysis with application on oil
production data
Aug - Oct 2002 WWF Denpasar, Indonesia
Internship on analysis of fisheries data
July - Aug 2001 Technical University of Budapest, Hungary
Internship on developing and implementing the statistical part of a
simulation program for telecommunication

Teaching Experience

University of Washington, Department of Statistics

- Jan - June 2005 Teaching assistant for undergraduate level statistics courses for students in sociology (Stat 321, Stat 322)
- Oct - Dec 2004 Teaching assistant for graduate level statistics course for students in economics (Stat 481)

Delft University of Technology, Applied Mathematics

- Feb - Jun 2002 Teaching assistant for course in probability theory for students in computer science
- Sep 2001 - Jan 2002 Teaching assistant at a computer lab in statistics for students in civil engineering
- Sep 1998 - Dec 2000 Tutor in mathematics

East African Community Services, Seattle

- Oct - Dec 2007 Volunteer instructor for computer literacy program

Publications

L. Alkema, A. E. Raftery, S. J. Clark (2007); "Probabilistic Projections of HIV Prevalence Using Bayesian Melding". *The Annals of Applied Statistics*, Vol. 1, No. 1, 229-248.

T. Brown, J. A. Salomon, L. Alkema, A. E. Raftery, E. Gouws (2008); "Progress and challenges in modelling country-level HIV/AIDS epidemics: the UNAIDS Estimation and Projection Package 2007". *Sexually Transmitted Infections*, Vol 84 (Suppl I), i5 - i11.

L. Alkema, A. E. Raftery, T. Brown (2008); "Bayesian melding for estimating uncertainty in national HIV prevalence estimates". *Sexually Transmitted Infections*, Vol 84 (Suppl I), i11 - i16.

Presentations

"Assessing Uncertainty in Fertility estimates in Western Africa"

- Human Mortality Database Symposium, Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany (June 2008)
- Working Group on Applied, Bayesian and Computational Statistics, Department of Statistics, University of Washington, Seattle (April 2008)

"Probabilistic Projections of Fertility using a Bayesian Hierarchical Model"

- Annual meeting of the Pacific Institute for the Mathematical Sciences collaborative research group on Bayesian modeling and computation for networks, Washington State (May 2008)
- Annual meeting of the Population Association of America, New Orleans (April 2008)
- Center for Demography and Ecology Seminar Series, University of Washington, Seattle (October 2007)
- Centre for Actuarial Research (CARE), University of Cape Town, Cape Town, South Africa (August 2007)
- United Nations Population Division, New York (April 2007)

"Incorporating uncertainty in population projections"

- United Nations Population Division, New York (November 2006)

"Identifying poverty groups in Nairobi's slum settlements: A latent class analysis approach"

- Annual meeting of the Population Association of America, New Orleans (April 2008)
- Center for Statistics and the Social Sciences Student Seminar, University of Washington, Seattle (March 2008)

- Indepth annual conference and scientific meeting, Nairobi, Kenya (September 2007)
- African Population and Health Research Center, Nairobi, Kenya (June 2007)

“Probabilistic projections of HIV prevalence using Bayesian melding”

- Annual meeting of the Actuarial Society South Africa, Cape Town, South Africa (August 2007)
- Medical Council South Africa, Cape Town (July 2007)
- Annual meeting of the Population Association of America, New York (April 2007)
- African Population and Health Research Center, Nairobi, Kenya (January 2007)
- International workshop on data, algorithms and decision making, Trest, Czech Republic (December 2006)
- UNAIDS reference group technical meeting, London (October 2006)
- United Nations Population Division, New York (June 2006)
- Statistical Center for HIV/AIDS Research and Prevention, Fred Hutchinson Cancer Research Center, Seattle (February 2006)
- Model-based clustering working group, Department of Statistics, University of Washington, Seattle (December 2005)

Other activities

- Oct – Nov 2007 Coordinator of UW Center for Statistics in the Social Sciences Student Seminar Series
- Jan – June 2007 Volunteer in children’s center in Nairobi, Kenya
- Mar – Jul 2006 Initiator and main coordinator of UW Center for Statistics in the Social Sciences Student Seminar Series
- Jul 2005 – Jul 2006 Graduate student representative for the UW Statistics department
- April - July 2004 Volunteer in shelter for disabled boys, Cochabamba, Bolivia
- Sep 1999 -Sep 2000 Full-time position on the board of study society “Christiaan Huygens” for the studies Applied Mathematics and Computer Science, Delft University of Technology, The Netherlands

Honors and awards

- 2006 -2008 Shanahan Fellowship;
Center for Studies in Ecology and Demography, University of Washington
- 2007 Travel grant for presenting at Indepth annual conference and scientific meeting, Nairobi, Kenya; University of Washington
- 2007 Travel grants for visit to the Centre of Actuarial Research, University of Cape Town;
- Center for Statistics in the Social Sciences, University of Washington
- Centre of Actuarial Research, University of Cape Town
- 2007 Travel grant for presenting at the annual meeting of the Population Association of America, New York;
Center for Studies in Ecology and Demography, University of Washington
- 2006 Blumstein-Jordan professorship funding for internship at the United Nations Population Division in New York
- 2005 Travel grant for attending workshop in Formal demography at Stanford University;
Center for Statistics in the Social Sciences, University of Washington
- 2004 Hubert M. Blalock Fellowship;
Center for Statistics in the Social Sciences, University of Washington
- 2004 VSB grant for study in US
- 2002 Travel grants for internship in Indonesia
University Fund Delft and Information technology and Systems Fund
- 2001 Travel grant for internship in Hungary; University Fund Delft
- 1997 Delft University of Technology Star grant for study in Applied Mathematics