

# SAE2005

## *Conference*

**Challenges in Statistics Production for Domains  
and Small Areas**

Scientific Conference Featuring Main Results of, and Issues Raised by,  
the EURAREA Project

# PROGRAM



University of Jyväskylä  
28-31 August 2005, Jyväskylä, Finland

<b>Sunday 28<sup>th</sup> August</b>	
<b>11:00–18:00</b>	<b>Registration</b> Building MaA, 1 <sup>st</sup> floor lobby
<b>12:00–18:00</b>	<b>Short Course on Tools for Small Area Estimation</b> Featuring SAS macro programs developed for small area estimation Organizer <i>Kari Djerf</i> (Statistics Finland)
<b>12:00–15:00</b>	<b>Lecture Session</b> <b>Room MaA102</b> Chair <i>Risto Lehtonen</i>
12:00–12:30	<i>Kari Djerf</i> (Statistics Finland): Introduction to SAE methods
12:30–13:00	<i>Kari Nissinen</i> (University of Jyväskylä): Models implemented in EBLUPGREG macro
13:00–13:30	<i>Ari Veijanen</i> (Statistics Finland): Construction and properties of the EBLUPGREG program
13:30–14:30	<i>Kaja Sõstra</i> (Statistical Office of Estonia) and <i>Kari Djerf</i> (Statistics Finland): Simulation results and examples of the use of the models with real data
14:30–15:00	<i>Marie Cruddas</i> (Office for National Statistics, UK): Example of the area level model - ONS
<b>15:00–15:30</b>	Coffee
<b>15:30–18:00</b>	<b>PC Training Session</b> <b>Computer classes MaD205 and MaD206</b>
<b>18:30–23:30</b>	<b>Sauna Party</b> <b>Ladun Maja Recreation District</b> (bus transportation arranged)

<b>Monday 29<sup>th</sup> August</b>	
<b>8:00–15:30</b>	<b>Registration</b> Building MaA 1 <sup>st</sup> floor lobby
<b>9:00– 9:15</b>	<b>Opening</b> <i>Risto Lehtonen</i> (University of Jyväskylä) <b>Room MaA102</b>
<b>9:15– 10:30</b>	<b>Plenary Session</b> <b>Room MaA102</b> Chair <i>Montserrat Herrador</i> 9:15-9:45 <i>Patrick Heady</i> and <i>Martin Ralphs</i> (Office for National Statistics, UK): EURAREA: an overview of the project and its findings 9:45–10:30 <i>Danny Pfeffermann</i> (The Hebrew University of Jerusalem and University of Southampton): Small area estimation using time series models subject to benchmarking constraints
<b>10:30–11:00</b>	Coffee
<b>11:00–12:30</b>	<b>Session 1</b> Temporal and spatial models and GIS <b>Room MaA102</b> Chair <i>Domingo Morales</i> 11:00-11:30 <i>Marja Tammilehto-Luode</i> (Statistics Finland): Register-based statistics and geographic information 11:30-11:50 <i>Esmail Amiri</i> (Imam Khomeini International University): Bayesian study of small area racial disparities in heart disease mortality in Ghazvin province (Iran) 11:50-12:10 <i>Coro Chasco-Yrigoyen</i> (Autonoma University of Madrid): Ecological inference: a new approach based on spatial econometrics 12:10-12:30 <i>Nicola Torelli</i> and <i>Matilde Trevisani</i> (University of Trieste): Small area estimation by combining spatially misaligned data
<b>11:00–12:30</b>	<b>Session 2</b> Applications <b>Room MaA211</b> Chair <i>Jan Kordos</i> 11:00-11:30 <i>Michele D'Alò</i> , <i>Loredana Di Consiglio</i> , <i>Stefano Falorsi</i> and <i>Fabrizio Solari</i> (ISTAT, Italy): Small area estimation of the Italian poverty rate 11:30-11:50 <i>Enrico Fabrizi</i> (University of Bergamo), <i>Maria Rosaria Ferrante</i> and <i>Silvia Pacei</i> (University of Bologna): Estimation of poverty indicators at the subnational level using univariate and multivariate small area models 11:50-12:10 <i>Danutė Krapavickaitė</i> (Institute of Mathematics and Informatics, Vilnius): Income estimation for small sample size 12:10-12:30 <i>Michal Mladý</i> (Eurostat): Regional labour market statistics at a European level - small number of survey respondents
<b>12:30–13:30</b>	Lunch
<b>13:30–15:00</b>	<b>Plenary Session</b> <b>Room MaA102</b> Chair <i>Li-Chun Zhang</i> <i>J.N.K. Rao</i> (Carleton University): Small area estimation: overview, new developments and practical issues
<b>15:00–15:30</b>	Coffee
<b>15:30–17:00</b>	<b>Session 3</b> Estimation of uncertainty <b>Room MaA102</b> Chair <i>Lola Ugarte</i> 15:30-16:00 <i>Nick Longford</i> (SNTL, Leicester, UK): On standard errors of model-based small-area estimators 16:00-16:20 <i>W. González-Manteiga</i> , <i>M.J. Lombardía</i> (Universidad de Santiago de Compostela), <i>I. Molina</i> (Universidad Carlos III de Madrid), <i>D. Morales</i> and <i>L. Santamaría</i> (Universidad Miguel Hernández de Elche): Bootstrap approximation of the mean squared error of empirical predictors 16:20-16:40 <i>Mikko Myrskylä</i> (Statistics Finland): Study on the performance of four variance estimators for logistic GREG estimator for domains 16:40-17:00 <i>Tomasz Żądło</i> (University of Economics in Katowice): On mean square error of EBLU predictors based on the formula of Royall's BLU predictor

<b>Monday 29<sup>th</sup> August (continued)</b>	
<b>15:30–17:00</b>	<p><b>Session 4 Applications</b>  <b>Room MaA211</b> Chair <i>Paavo Väisänen</i></p> <p>15:30-16:00 <i>Jorge Saralegui, Montserrat Herrador</i> (Instituto Nacional de Estadística, Spain), <i>Domingo Morales</i> and <i>Agustín Pérez</i> (Universidad Miguel Hernández de Elche): Small area estimation in the Spanish Labour Force Survey</p> <p>16:00-16:20 <i>Grazyna Dehnel</i> and <i>Elzbieta Golata</i> (University of Economics, Poznan): Attempts to estimate basic information for small business in Poland</p> <p>16:20-16:40 <i>Wojciech Gamrot</i> (University of Economics, Katowice): Estimation of a domain under nonresponse using double sampling</p> <p>16:40-17:00 <i>Jan Paradysz</i> and <i>Tomasz Klimanek</i> (University of Economics, Poznan): Adaptation of EURAREA experience in business statistics in Poland</p>
<b>17:10–18:00</b>	<p><b>Poster Session</b>  <b>MaA 1<sup>st</sup> floor lobby</b> Organizer <i>Kari Nissinen</i>  Poster presentations:</p> <p><i>Emanuela Conza</i> (University of Lecce): Small area estimation or simulation by using training images: the advent of multiple-point statistics</p> <p><i>Ana Militino</i> (Universidad Publica de Navarra), <i>Patxi Garrido</i> (Eustat, Spain), <i>Haritz Olaeta</i> (Eustat, Spain) and <i>Lola Ugarte</i> (Universidad Publica de Navarra): Small area estimations in the industrial survey of the Basque country</p> <p><i>Ranko Nedeljkovic</i> (Statistical Office of Serbia and Montenegro): Small area estimation: importance and usage in compound statistical systems</p> <p><i>Kari Nissinen</i> (University of Jyväskylä): EBLUP estimation of small area totals for unit-level panel data</p> <p><i>Cristina Rueda</i> and <i>José A. Menéndez</i> (Universidad de Valladolid): A restricted model approach to improve the precision of estimators</p>
<b>19:00–20:30</b>	<p><b>Welcoming Reception</b>  <b>City Hall</b> Vapaudenkatu 32</p>

<b>Tuesday 30<sup>th</sup> August</b>	
<b>8:00–15:30</b>	<b>Conference office</b> Building MaA 1 <sup>st</sup> floor lobby
<b>8:00– 8:50</b>	<b>Early Bird Session 5</b> New SAE developments <b>Room MaA102</b> Chair <i>Marie Cruddas</i> 8:00- 8:30 <i>Gauri Datta</i> (University of Georgia): Composite estimation of small area means using Fay-Herriot model 8:30- 8:50 <i>Ray Chambers</i> and <i>Nikos Tzavidis</i> (University of Southampton): Bias adjusted distribution estimation for small areas
<b>9:00–10:30</b>	<b>Plenary Session</b> <b>Room MaA102</b> Chair <i>Patrick Heady</i> <i>Chris Elbers</i> (Vrije Universiteit Amsterdam), <i>Jenny Lanjouw</i> (University of California, Berkeley) and <i>Peter Lanjouw</i> (The World Bank): Poverty mapping and extensions
<b>10:30–11:00</b>	Coffee
<b>11:00–12:30</b>	<b>Session 6</b> Temporal and spatial models and GIS <b>Room MaA102</b> Chair <i>Ulrich Rendtel</i> 11:00-11:30 <i>Alessandra Petrucci</i> (Università degli Studi di Firenze), <i>Monica Pratesi</i> and <i>Nicola Salvati</i> (Università degli Studi di Pisa): Geographic information in small area estimation. Small area models with spatially correlated random area effects 11:30-12:00 <i>Philip Clarke</i> (Office for National Statistics, UK), <i>Fernando Moura</i> (Federal University of Rio Janeiro) and <i>Danny Pfeffermann</i> (Hebrew University, Jerusalem): Small area estimation with varying boundaries by low level hierarchical modelling using the synthetic estimator 12:00-12:30 <i>Stephen Haslett</i> and <i>Geoff Jones</i> (Massey University, New Zealand): Small area estimation of poverty and malnutrition in Bangladesh: some practical and statistical issues
<b>11:00–12:20</b>	<b>Session 7</b> Design and weighting issues <b>Room MaA211</b> Chair <i>Imbi Traat</i> 11:00-11:30 <i>Piero Demetrio Falorsi</i> , <i>Stefano Falorsi</i> , <i>Paolo Righi</i> and <i>Fabrizio Solari</i> (ISTAT, Italy): Sampling designs for small domains estimation through multi-way stratification techniques 11:30-12:00 <i>A.F. Militino</i> , <i>M.D. Ugarte</i> and <i>T. Goicoa</i> (Universidad Publica de Navarra): Combining sampling and model weights in agriculture small area estimation 12:00-12:20 <i>Krystyna Pruska</i> (University of Lodz): Logistic regression models in small area investigations
<b>12:30–13:30</b>	Lunch
<b>13:30–15:00</b>	<b>Plenary Session</b> <b>Room MaA102</b> Chair <i>Timo Alanko</i> <i>Carl-Erik Särndal</i> (University of Montreal): Reliable statistics for subpopulations - some unresolved issues. Part I: Issues in Estimation for Domains. Part II: Consequences of nonresponse for domain estimation
<b>15:00–15:30</b>	Coffee
<b>15:30–17:00</b>	<b>Session 8</b> Evaluation of SAE methods <b>Room MaA102</b> Chair <i>Martin Ralphs</i> 15:30-16:00 <i>Ari Veijanen</i> (Statistics Finland), <i>Risto Lehtonen</i> (University of Jyväskylä) and <i>Carl-Erik Särndal</i> (University of Montreal): The effect of model quality on model-assisted and model-dependent estimators of totals and class frequencies for domains 16:00-16:20 <i>Hukum Chandra</i> and <i>Ray Chambers</i> (University of Southampton): Comparing EBLUP and C-EBLUP for small area estimation 16:20-16:40 <i>Kari Djerf</i> (Statistics Finland): EBLUP estimator: comparison of the prediction using true population information with sample level information 16:40-17:00 <i>Kaja Sõstra</i> (Statistical Office of Estonia): General restriction estimator in small area estimation
<b>15:30–17:00</b>	<b>Session 9</b> Applications and miscellaneous <b>Room MaA211</b> Chair <i>Dan Hedlin</i> 15:30-16:00 <i>Jan Kordos</i> (Warsaw School of Economics): Impact of the EURAREA project on research in small area estimation in Poland 16:00-16:20 <i>Julia Aru</i> (University of Tartu): Notes on sample covariance matrix under informative sampling 16:20-16:40 <i>Natalja Jurevits</i> (University of Tartu): The bias-corrected regression estimator 16:40-17:00 <i>Erkki Pahkinen</i> (University of Jyväskylä): Education of experts in small area statistics
<b>18:45–23:30</b>	<b>Conference Dinner - Varjola Farm Restaurant</b> (bus transportation arranged)

<b>Wednesday 31<sup>st</sup> August</b>	
<b>8:00–13:00</b>	<b>Conference office</b> Building MaA 1 <sup>st</sup> floor lobby
<b>8:00– 9:00</b>	<b>Early Bird Session 10</b> New SAE developments <b>Room MaA102</b> Chair <i>Seppo Laaksonen</i> 8:00- 8:30 <i>Ayoub Saei</i> (University of Southampton), <i>Li-Chun Zhang</i> (Statistics Norway) and <i>Ray Chambers</i> (University of Southampton): Generalized structure preserving estimation models for small areas 8:30- 9:00 <i>Li-Chun Zhang</i> and <i>Ib Thomsen</i> (Statistics Norway): A prediction approach to sampling design
<b>9:00–10:30</b>	<b>Plenary Session</b> <b>Room MaA102</b> Chair <i>Nick Longford</i> 9:00– 9:45 <i>Michel Hidioglou</i> and <i>Marie Cruddas</i> (Office for National Statistics, UK): Developing small area statistics for business surveys 9:45–10:30 <i>Danny Pfeffermann</i> (Hebrew University and University of Southampton): Small area estimation under informative sampling
<b>10:30–11:00</b>	Coffee
<b>11:00–12:45</b>	<b>Panel Discussion</b> Future Challenges of Small Area Estimation <b>Room MaA102</b> Organizer and chair <i>Ray Chambers</i> (University of Southampton) Discussants <i>Jan van den Brakel</i> (Statistics Netherlands), <i>Dan Hedlin</i> (Statistics Sweden), <i>Michel Hidioglou/Marie Cruddas</i> (Office for National Statistics, UK), <i>Risto Lehtonen</i> (University of Jyväskylä), <i>Imbi Traat</i> (University of Tartu) and <i>Li-Chun Zhang</i> (Statistics Norway)
<b>12:45–13:00</b>	<b>Closing</b> <b>Room MaA102</b>

## Scientific Committee

Ray Chambers, University of Southampton (Chair)  
Risto Lehtonen, University of Jyväskylä (Secretary)  
Patrick Heady, Office for National Statistics (EURAREA project coordinator)  
Timo Alanko, Statistics Finland  
Stefano Falorsi, Italian National Statistical Institute (ISTAT)  
Dan Hedlin, Statistics Sweden  
Montserrat Herrador, National Statistical Institute of Spain (INE)  
Jan Kordos, Warsaw School of Economics  
Aldo Russo, University of Roma Tre  
Li-Chun Zhang, Statistics Norway

## Organizing Committee

Risto Lehtonen, University of Jyväskylä (Chair)  
Kari Nissinen, University of Jyväskylä (Secretary)  
Timo Alanko, Statistics Finland  
Kari Djerf, Statistics Finland  
Sari Eronen, University of Jyväskylä  
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**University of Jyväskylä, Statistics Finland and the EURAREA Consortium**