

SAE2021 – BIG4small
Virtual Event – 20-24 September 2021
Final Program

The schedule is given in Central European Summer Time (CEST - UTC+02 ROME - ITALY)

Monday, September 20 - Day 1	
01:00 PM – 01:30 PM CEST Main Room 2	Opening and welcome <i>Matteo Lorito</i> , Rector Magnificus of University of Naples Federico II <i>Monica Pratesi</i> , President of IASS & Head of the Programme Committee <i>Roberta Siciliano</i> , Head of the Programme Committee <i>Antonio D’Ambrosio</i> , Head of the Local Committee
01:30 PM - 02:30 PM CEST Main Room 1	Plenary session 1 - Chair: Roberta Siciliano - Discussant: <i>Monica Pratesi</i> From Survey Sampling to Small Area Estimation - <i>Graham Kalton</i>
02:30 PM – 02:45 PM CEST	Break
02:45 PM – 04:15 PM CEST Main Room 2	Invited Sessions 1: Bayesian Statistics for Small Area Estimation – Chair: Partha Lahiri Shrinkage Estimation with Singular Priors and an Application to Small Area Estimation - <i>Malay Ghosh</i> Small Area Estimation of Vaccination Coverage Using Non-Survey Sources - <i>Trivellore Raghunathan</i> Pseudo Bayesian Estimation of one-way anova model in complex survey - <i>Terrance D. Savitsky</i>
04:15 PM – 04:30 PM CEST	Break
04:30 PM – 05:30 PM CEST Room 1	Solicited Session 1 – Chair: <i>Gaia Bertarelli</i> Small Area Estimation of Monetary Poverty in Mexico using Satellite Imagery and Machine Learning- <i>David Newhouse</i> Incidence of poverty in Costa Rica: small area estimates under a Structure Preserving Estimation (SPREE) approach - <i>Alejandra Arias-Salazar</i> Leave No One Behind: SDG Monitoring using Small Area Estimation in Latin America - <i>Andres Gutierrez</i>
04:30 PM – 05:30 PM CEST Room 2	Solicited Session 2 – Chair: <i>Carmela Cappelli</i> Skew-Normal CAR models for small domain estimation in the Brazilian Annual Service Sector Survey - <i>Andre Felipe Azevedo Neves</i> Estimation of the Employment Rate by Municipality in Mexico. Interpreting Results from an SAE model - <i>Enrique de Alba</i> Small Area Estimates of Labor Force Statistics in Urban Mexico using Geospatial Data - <i>Joshua D. Merfeld</i>

05:30 PM – 07:00 PM CEST Main Room 1	Invited Sessions 2: Time series methods for Small Area Estimation – Chair: Jan Van Den Brakel Multilevel time-series models for estimation at different frequencies and regional levels - <i>H.J. Boonstra</i> Multilevel time series modeling of mobility trends in the Netherlands for small domains - <i>S. Das</i> Some Issues in Seasonal Adjustment of Time Series from Repeated Sample Surveys - <i>W.R. Bell</i>
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Tuesday, September 21- Day 2	
10:30 AM – 11:30 AM CEST Room 1	Solicited Session 3 – Chair: <i>Alfonso Piscitelli</i> Flexible Small Area Estimation of Theil Index using Mixture of Beta - <i>Silvia De Nicolò</i> On properties of MSE estimators of the EBLUP for some class of Linear Mixed Models in small area estimation - <i>Malgorzata Krzciuk</i> Inference on quantiles in small area based on estimates of the distribution function - <i>Tomasz Stachurski</i>
10:30 AM - 11:30 AM CEST Room 2	Solicited Session 4 – Chair: <i>Giuseppe Pandolfo</i> Using Random Forests in SAE - <i>Patrick Krennmair</i> The comparison of different machine learning methods in small area prediction problems - <i>Adam Chwila</i> Statistical data integration as an extension of small area estimation for employee compensation - <i>Andreea Luisa Erciulescu</i>
11:30 AM – 01:00 PM CEST Main Room 1	Invited Sessions 3: Young Researchers' contribution to Small Area Estimation – Chair: <i>Gaia Bertarelli</i> - Discussant: <i>Angelo Moretti</i> Variable and Transformation Selection for Linear Mixed Models with Application to Small Area Estimation - <i>Yeonjoo Lee</i> Time stable empirical best predictors under a unit-level model - <i>Maria Guadarrama</i> Controlling the bias for M-quantile estimators for small area - <i>Francesco Schirripa Spagnolo</i>
01:00 PM – 01:30 PM CEST	Break
01:30 PM – 03:00 PM CEST Main Room 2	Invited Sessions 4: Issues and opportunities from record linkage and data integration in Small Area Estimation – Chair: <i>Silvia Poletini</i> Record linkage, measurement error and unit level small area estimation: a Bayesian approach – <i>Serena Arima</i> Small area estimation in a linkage errors framework: area-level vs unit-level models – <i>Loredana Di Consiglio</i> Error-in-covariates in small area estimation and a generalized Fay-Herriot Model - <i>Gauri Datta</i>
03:00 PM – 03:15 PM CEST	Break
03:15 PM – 04:15 PM CEST	Plenary session 2 Chair: <i>Monica Pratesi</i> - Discussant: <i>Roberta Siciliano</i> A Tour of Classified Mixed Model Predictions and Projections - <i>J. Sunil Rao</i>

Main Room 1	
04:15 PM – 05:45 PM CEST Main Room 2	Invited Sessions 5: Selected Challenges in Small Area Estimation – Chair: Ralf Muennich Empirical best prediction of bivariate nonlinear small area indicators – <i>Domingo Morales</i> On "qape" R package for measuring accuracy of small area predictors – <i>Thomas Zadlo</i> Regularized Small Area Estimation: A Framework for Robust Estimates in the Presence of Unknown Covariate Measurement Errors - <i>Joscha Krause</i>
05:45 PM – 07:15 PM CEST Main Room 1	Invited Sessions 6: Disaggregated data and indicators from Big data sources – Chair: Rosanna Verde – Discussant: <i>Monica Pratesi</i> Social networks data and small area estimation: a tentative solution to overcome selection bias – <i>Elena Siletti</i> Small area poverty indicators adjusted using local price indexes. – <i>Caterina Giusti</i> Small area estimation via Heteroskedastic Geographically Weighted Regression for functional data - <i>Elvira Romano</i>

Wednesday, September 22- Day 3	
10:30 AM – 11:30 AM CEST Room 1	Solicited Session 5 – Chair: <i>Carmela Iorio</i> Discovering Dynamics in Land Systems using Time Series Analysis and Non-linear Dynamical Methods - <i>Richard Aspinall</i> Small Area Estimation of Growing Stock Volume with Fay-Herriot area-level model - <i>Aristeidis Georgakis</i>
10:30 AM - 11:30 AM CEST Room 2	Solicited Session 6 – Chair: <i>Francesco Schirripa Spagnolo</i> On benchmarking small area estimators when the model is misspecified - <i>Renato Salvatore</i> Hierarchical Bayesian Spatial Small Area Model for Binary Data Under Spatial Misalignment - <i>Kindie Fentahun Muchie</i> The inverse sampling method in the Big Data Era - <i>Daniele Cuntrera</i>
11:30 AM – 01:00 PM CEST Main Room 1	Invited Sessions 7: Small area estimation for latent variables and complex indicators – Chair: <i>Maria Giovanna Ranalli</i> - Discussant: <i>Gaia Bertarelli</i> Estimating small area latent social integration of second-generation students in Italy – <i>Francesco Giovinazzi</i> Unit level models on the log-scale: a new Bayesian proposal for poverty mapping - <i>Aldo Gardini</i> Multivariate small area estimation methods for multidimensional latent wellbeing indicators – <i>Angelo Moretti</i>
01:00 PM – 01:30 PM CEST	Break
01:30 PM – 03:00 PM CEST Main Room 2	Plenary Session: Hukum Chandra Memory – Chair: <i>Raymond Chambers</i> Hukum Chandra: A Tribute – <i>J.N.K. Rao</i> Contribution of Dr. Hukum Chandra in the Theory and Applications of Survey Sampling - <i>Priyanka Anjoy</i> Hukum's work on outlier robust SAE and Non-spatial stationarity models for SAE – <i>Nicola Salvati & Nikos Tzavidis</i> NSAE: An R Package for Small Area Estimation under Spatial Nonstationarity - <i>Saurav Guha</i>

03:00 PM – 03:15 PM CEST	Break
03:15 PM – 04:45 PM CEST Main Room 1	Invited Sessions 8: Small Area Estimation in Official Statistics – Chairs: <i>Nicola Salvati & Francesco Schirripa Spagnolo</i> Small area estimates of labour market status using multinomial expectile regression - <i>Enrico Fabrizi</i> Robust small area estimation in business surveys – <i>Chiara Bocci</i> Causal inferences for official statistics – <i>Setareh Ranjbar</i>
04:45 PM – 05:00 PM CEST	Break
05:00 PM – 06:30 PM CEST Main Room 2	Invited Sessions 9: Recent Advances in Model Selection and Diagnostics for Small Area Estimation – Chair: <i>Jiming Jiang</i> – Discussant: <i>Jiming Jiang</i> Selection of auxiliary variables for two-fold subarea-level linking models in small area estimation: A simple method - <i>J.N.K. Rao</i> A Robust Goodness-of-fit Test for Small Area Estimation – <i>Mahmoud Torabi</i> Recent Advances in Measures of Uncertainty in Post Model Selection Small Area Estimation – <i>Thuan Nguyen</i>

Thursday, September 23 – Day 4	
10:30 AM – 12:00 PM CEST Main Room 1	Invited Sessions 10: Small Area Estimation for Permanent population Census and Social Surveys: new applications and methods – Chair: <i>Stefano Falorsi</i> MIND, an R Package for multivariate and multiple random effect small area estimation – <i>Andrea Fasulo</i> SAE estimation under coherence for different overlapping areas. An application for the estimation of employment and unemployment from LFS for cities and FUAs – <i>Silvia Loriga</i> Defining the sample designs for small area estimation – <i>Piero Falorsi</i>
12:00 PM - 01:30 PM CEST Main Room 2	Invited Sessions 11: Small Area estimation: new developments and applications – Chair: <i>Carmela Cappelli</i> A Hierarchical Bayesian Approach for Addressing Multiple Objectives in Poverty Research for Small Areas – <i>Stefano Marchetti</i> Best Prediction of Missing Area-Level Direct Estimates via Multivariate Modelling – <i>Anna-Lena Wolwer</i> Small area estimation via multivariate generalized linear mixed effects models – <i>Emilia Rocco</i>
01:30 PM – 02:30 PM	Break
02:30 PM – 03:30 PM CEST Main Room 2	Invited Sessions 12: Some novel developments in small area estimation – Chair: <i>Sanjay Chaudhuri</i> Robust, high-dimensional data linkage for small area statistics – <i>Snigdhanu Chatterjee</i> Covariance based Moment Equations for Improved Variance Component Estimation - <i>Sanjay Chaudhuri</i>
03:30 PM – 03:45 PM CEST	Break

03:45 PM – 04:45 PM CEST Main Room 1	Plenary Session: Andrea Saltelli – Chair: <i>Gaia Bertarelli</i> , Discussant: <i>Antonio D’Ambrosio</i> Ethics of Quantification – <i>Andrea Saltelli</i>
04:45 PM – 05:00 PM CEST	Break
05:00 PM – 06:00 PM CEST Room 1	Solicited Session 7 – Chair: <i>Francesco Schirripa Spagnolo</i> Estimation of life expectancy in small areas using big data from the municipal registry– <i>Carlo Cusatelli</i> Reliable event rates for disease mapping - <i>Harrison Quick</i>
05:00 PM – 06:00 PM CEST Room 2	Solicited Session 8 – Chair: <i>Carmela Cappelli</i> Design-based small area estimation: an application to the DHS surveys - <i>Ruilin Ren</i> Design-based composite estimation of small proportions in small domains - <i>Andrius Ciginas</i> Challenges and lessons learned in using small area estimation for official statistics “how could we help?” - <i>Haoyi Chen</i>

Friday, September 24 -Day 5	
10:30 AM – 12:00 PM CEST Main Room 2	Invited Sessions 13: Data Science Methodology Transfer: Big to Small – Chair: <i>Giuseppe Longo</i> . Discussant: <i>Giuseppe Pandolfo</i> . Bias versus statistical errors in Big data information systems - <i>Edwin A. Valentijn</i> Using proper scoring rules to derive well calibrate photometric redshift models - <i>Kai Polsterer</i> Error Mitigation in Quantum Measurement through Fuzzy C-Means Clustering– <i>Autilia Vitiello</i>
12:00 PM – 12:15 PM CEST	Break
12:15 PM - 01:45 PM CEST Main Room 1	Invited Sessions 14: Latent variables in small are models: theoretical and applied issues – Chair: <i>Serena Arima</i> – Discussant: <i>Serena Arima</i> Empirical Best Prediction for Small Area Estimation of categorical variables using Finite Mixtures of Multinomial Logistic Models – <i>Maria Giovanna Ranalli</i> Small area models with uncertainty on measurement error in covariates – <i>Silvia Polettini</i> Bayesian model selection for log-linear latent class models – <i>Davide Di Cecco</i>
01:45 PM – 02:15 PM CEST	Break
02:15 PM – 03:45 PM CEST Main Room 2	Invited Sessions 15: Inference under informative sampling – Chair: <i>Danny Pfeffermann</i> Informative or ignorable selection process: a review – <i>Daniel Bonnery</i> Spatial processes and endogenous spatial selection, estimation and prediction – <i>Francesco Pantalone</i>

	An Approximate Best Prediction Approach to Small Area Estimation for Sheet and Rill Erosion under Informative Sampling – <i>Emily Berg</i>
03:45 PM – 04:45 PM CEST Main Room 1	Award or Outstanding Contribution to Small Area Estimation
04:45 PM – 05:00 PM CEST Main Room 1	Closing Ceremony