



BIOSTATNET 4th GENERAL MEETING

Promoting national and international excellence
in biostatistics research.

Biostatistics and Data Science: challenges and opportunities.

DETAILED PROGRAMME

Santiago de Compostela, Spain
January 25 – 26, 2019

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ORGANISED BY

Red Nacional de Bioestadística (BIOSTATNET)

Grupo de Bioestadística y Ciencia de Datos Biomédicos (GI-2127), *Departamento de Estadística, Análisis Matemático e Optimización, Universidade de Santiago de Compostela.*

Biostatech, S.L.

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SHORT PROGRAMME

Friday, January 25th 2019

09.00 – 09.30	Reception of participants
09.30 – 10.00	Opening Session
10.00 – 10.45	Session 1: Biostatnet: Goals Reached
10.45 – 11.30	Coffee Break-Poster Session I
11.30 – 12.30	Session 2: “Statistical Science and Data Science” <i>Keynote Speaker: Prof. Sharon-Lise Normand, Harvard Medical School (US)</i>
12.30 – 14.00	Session 3: Parallel Oral Communications - Senior Researchers - Young Researchers (I)
14.00 – 15.45	Group Picture of Participants-Lunch Break
15.45 – 17.15	Session 4: Parallel Oral Communications - Young Researchers (II) - Young Researchers (III)
17.15 – 17.45	Coffee Break-Poster Session II
17.45 – 18.45	Session 5: Young Researchers-Round Table "Mentoring SEB-Biostatnet, building the future of biostatistics in Spain"
18.45 – 19.45	Session 6: Assembly of BIOSTATNET Members
21.15	Biostatnet Dinner

Saturday, January 26th 2019

09.30 – 11.00	Session 7: Parallel workshops - Statistical Software Development - Divulgación Científica
11.00 – 11.30	Coffee Break-Poster Session III
11.30 – 13.00	Session 8: Panel Discussion “Data Science, Statistics, and Training”
13.00 – 14.00	Session 9: "Flexible Distributional Regression Models: Methodology, Software, Applications" <i>Keynote Speaker: Nikolaus Umlauf, Universität Innsbruck (Austria)</i>

09.00–09.30 **Reception of participants and delivery of documentation.**

09.30–10.00 **Opening Session** (Salón Obradoiro – Hotel NH Collection Santiago de Compostela)

10.00–10.45 **Session 1. Biostatnet: Goals Reached**

(Salón Obradoiro – Hotel NH Collection Santiago de Compostela)

Speaker: Carmen Cadarso, BIOSTATNET Coordinator, Universidade de Santiago de Compostela

10.45–11.30 **Coffee Break – Posters Session (I)**

(Salón Obradoiro – Hotel NH Collection Santiago de Compostela)

Moderator: *Anna Espinal, Universitat Autònoma de Barcelona*

1. Longitudinal Data Analysis with Informative Time Measurements: a simulation study.

Adriana Vieira, Universidade do Minho

2. Mixed models for longitudinal data: An application to prevalence of obesity by country income level.

Diana Pérez, BCAM

3. What is going on with the sardines? A Bayesian longitudinal study.

Gabriel Calvo, Universitat de València

4. A ranking procedure for functional data.

Graciela Estévez, Universidad de Coruña

5. Integration and evaluation of prognostic factors for survival in cancer patients: a holistic approach.

Guillermo Villacampa, Vall d'Hebron Institut d'Oncología

6. Survival analysis in professional sports injuries with multivariate regression trees.

Lore Zumeta, BCAM

7. Information matrix for survival models with informative censoring.

M^a Jesús Rivas, Universidad de Salamanca

8. Microbiome-phenotype linear relations in boar sperm.

Samanta López, Universitat de Barcelona (UB), and Universitat Oberta de Catalunya (UOC)

9. A mediation analysis within a randomised controlled trial on breast cancer screening decisions.

Sandra Bertrán, Institut de Recerca Biomèdica de Lleida (IRBLleida)

11.30–12.30 **Session 2: Keynote Speaker**

(Sala Obradoiro - Hotel NH Collection Santiago de Compostela)

Moderator: *Guadalupe Gómez, Universidad Politécnica de Catalunya*

- **Statistical Science and Data Science**

Prof. Sharon-Lise Normand, Harvard Medical School and Harvard TH Chan School of Public Health

12.30–14.00 **Session 3: Oral Communications. Session open to Senior Researchers.**

(Sala Obradoiro - Hotel NH Collection Santiago de Compostela)

Moderator: *Juan Manuel Rodríguez, Universitat de Salamanca*

1. A model of count time series considering a state-dependent under-reporting scheme.

Amanda Fernández, Humboldt-Universität zu Berlin

2. Intervention analysis based on INAR models with applications in public health.

David Moriña, Universitat Autònoma de Barcelona

3. Joint modelling for longitudinal and time-to-event in health sciences: where we are and possible extensions

Inés Sousa, Universidade do Minho

4. Fitting bioassay data and biokinetic models to estimate the intake of people exposed to random and irregular intake of radioactive particles

José Guillermo Sánchez, Universidad de Salamanca

5. Odds ratio function estimation using a generalized additive neural network

Carlos Bras Geraldés, NOVA Medical School. Centro de Estatística e Aplicações da Universidade de Lisboa

12.30–14.00 **Session 3: Oral Communications. Session for Young Researchers (I)**

(Sala Allariz - Hotel NH Collection Santiago de Compostela)

Moderator: *Inmaculada Aróstegui, Universidad del País Vasco (UPV/EHU)*

1. Joint Modelling for Longitudinal and Time-to-Event Data: A Review.

Carla Díaz, Universidade de Santiago de Compostela.

2. Improving the transparency of biomedical literature: design and rationale of a randomised controlled trial to enhance the adherence to CONSORT guidelines.

David Blanco de Tena, Universitat Politècnica de Catalunya.

3. Estimating the bounded region for fitting double-truncated Power-Laws.

Patricia Paredes, Centre de Recerca Matemàtica - UAB

4. POMA: Statistical analysis tool for targeted metabolomic data.

Pol Castellano, Universidad Politècnica de Catalunya

5. Applications of Front Micro-Rheology as a method for diagnosis and monitorization of hematological diseases.

Samantha López, Universitat de Barcelona (UB), and Universitat Oberta de Catalunya (UOC)

14.00–15:45 **Group Picture of Participants & Lunch Break**

15.45–17.15 **Session 4: Oral Communications. Session for Young Researchers (II)**

(Salón Obradoiro - Hotel NH Collection Santiago de Compostela)

Moderator: *Montserrat Rué, Universitat de Lleida*

1. Comparison of different methods for estimating population probabilities using real and simulated complex survey data.

Amaia Iparagirre, Universidad del País Vasco

2. Binary and survival joint test.

Marta Bofill, Universidad Politècnica de Catalunya

3. Bivariate quantile regression model, application to glycation data.

Óscar Lado, Universidade de Santiago de Compostela

4. Modelling probability of presence curves in the ecological niche theory framework: The case study of sardine eggs in the Bay of Biscay.

Leire Citores, BCAM

5. Space-temporal distribution of mortality for acute infection of myocardium in Galicia.

M^a José Ginzo, Universidade de Santiago de Compostela

15.45–17.15 **Session 4: Oral Communications. Session for Young Researchers (III)**

(Sala Allariz - Hotel NH Collection Santiago de Compostela)

Moderator: *Llorenç Badiella, Universitat Autònoma de Barcelona*

1. Measuring peer-review report quality in biomedical research

Cecilia Superchi, Universitat Politècnica de Catalunya

2. Copula Regression models including Functional data. Application in diabetes research.

Jenifer Espasandín, Universidade de Santiago de Compostela

3. Bayesian estimation in a two-type controlled branching model for progenitor cell populations.

Carmen Minuesa, Universidad de Extremadura

4. Bayesian Dirichlet regression using the integrated nested Laplace approximation (INLA)

Joaquín Martínez, Instituto Valenciano de Investigaciones Agrarias

5. Elastic-net regularization approach for miRNA and mRNA identification as predictors of viral rebound in HIV-infected patients.

Yovaninna Alarcón, Universitat Politècnica de Catalunya

17.15–17.45 **Coffee Break – Poster Session (II)**

(Salón Obradoiro - Hotel NH Collection Santiago de Compostela)

Moderators: *M^a Jesús Rivas, Universidad de Salamanca*

1. D-Optimal designs for distillation experiments.

Carlos de la Calle, Universidad de Castilla la Mancha

2. D-Optimal vs Filling designs in enzymatic reactions with high-substrate inhibition.

Irene Mariñas, Universidad de Salamanca

3. Parameters estimation in workers exposed to radioactive isotopes using multi-response models.

José Guillermo Sánchez, Universidad de Salamanca

4. Exact optimal designs for models with correlated observations.

Juan M. Rodríguez, Universidad de Salamanca

5. Optimal-Robust selection of a diesel fuel surrogate for HCCI autoignition modelling.

Raúl Martín Martín, Universidad de Castilla la Mancha

6. D-optimal designs for any probability distribution of the response.

Sergio Pozuelo, Universidad de Castilla la Mancha

17.45–18.45 **Session 5: Round table “SEB-BIOSTATNET mentoring program”**

(Salón Obradoiro - Hotel NH Collection Santiago de Compostela)

Participants:

- Yovaninna Alarcón-Soto, *Universitat Politècnica de Catalunya-BarcelonaTech*
- Irantzu Barrio, *Universidad del País Vasco UPV/EHU*
- Marta Bofill, *Universitat Politècnica de Catalunya-BarcelonaTech*
- Mercedes Conde, *Universidade Santiago de Compostela*
- Amanda Fernández, *School of Business and Economics, Humboldt-Universität zu Berlin*
- Óscar Lado, *Universidade Santiago de Compostela*
- Joaquín Martínez-Minaya, *Universitat de València*
- Francisco Palmi, *Universidad de Castilla-La Mancha*
- Sergio Pozuelo, *Universidad de Castilla-La Mancha*
- Lore Zumeta, *Basque Center for Applied Mathematics BCAM*

18.45–19.45 **Session 6: Assembly of BIOSTATNET members**

Moderators: *Carmen Armero i Cervera, Universitat de València*

Raúl Martín Martín, Universidad de Castilla-La Mancha

21.15 **Biostatnet Dinner** (Hospedería San Martín Pinarío)

9.30–11.00 **Session 7: Parallel Workshops**

- **Statistical Software Development** (*Salón Obradoiro - Hotel NH Collection Santiago de Compostela*)

Speaker: *Alexandre Sánchez, Universidad de Barcelona*

- **Divulgación científica** (*Sala Allariz - Hotel NH Collection Santiago de Compostela*)

Speaker: *Manuel Vicente, divulgador científico y presentador del programa*
“Efervescencia” en la Radio Galega.

11.00–11.30 **Coffee Break – Poster Session (III)**

(*Salón Obradoiro - Hotel NH Collection Santiago de Compostela*)

Moderators: *M^a Teresa Santos, Universidad de Salamanca*

1. Interrupted time series regression for the evaluation of public health interventions.

Ana Clavería, Instituto de Investigación Sanitaria GALICIA-SUR

2. Modelling mixture cure models combining INLA with MCMC.

Carmen Armero, Universitat de València

3. Non-parametric Bayesian inference for a Y-linked pedigree with non-syndromic hearing impairment.

Cristina Guitierrez, Universidad de Extremadura

4. Analysis of Sociometric tests.

Ester Boixadera, Universitat Autònoma de Barcelona

5. Studying the occurrence of wildfires in Galicia using zero-one-inflated structured additive beta regression.

Manuel Marey, Universidade de Santiago de Compostela

6. Database preparation space for the comparison and modeling of forest fires in California and the Iberian Peninsula.

Phuon Vu, University of Davis, California (USA)

11.30–13.00 **Session 8: Panel Discussion “Data Science, Statistics, and Training”**

(Salón Obradoiro- Hotel NH Collection Santiago de Compostela)

Moderator: *María Xosé Rodríguez (BCAM - Basque Center for Applied Mathematics & IKERBASQUE)*

Talks

1. What is the role of Data Science in Biomedicine?

Yovaninna Alarcón (Universitat Politècnica de Catalunya, Department of Statistics and Operations Research. Barcelona, Spain)

2. Challenges and opportunities for biostatisticians in a multidisciplinary team: Are we data scientists?

Jordi Cortés (Universitat Politècnica de Catalunya, Department of Statistics and Operations Research. Barcelona, Spain)

3. Degree in Data Science and Engineering at UDC.

Mario Francisco Fernández (Department of Mathematics, Universidade de A Coruña, Spain)

Round table

Participants:

1. Jenifer Espasandín (*Unit of Biostatistics, Department of Statistics, Mathematical Analysis, and Optimization, Universidade de Santiago de Compostela, Spain*)

2. Jordi Cortés (*Universitat Politècnica de Catalunya, Department of Statistics and Operations Research. Barcelona, Spain*)

3. Mario Francisco Fernández (*Department of Mathematics, Universidade de A Coruña, Spain*)

4. Ana Clavería (*Servizo Galego de Saúde - SERGAS, Instituto de Investigación Sanitaria Galicia Sur, Vigo, Spain*)

13.00–14.00 **Session 9: Keynote Speaker - Closing session**

(Salón Obradoiro- Hotel NH Collection Santiago de Compostela)

Moderator: *Francisco Gude, Instituto de Investigación Sanitaria (IDIS)*

• **Flexible Distributional Regression Models: Methodology, Software, Applications**

Nikolaus Umlauf, Universität Innsbruck (Austria)