

IASC-LARS Report on Webinar Course on Computational Statistics and Data Science “Geostatistical Functional Data Analysis”

February 23-25, 2021



IASC- LARS SCHOOL ON COMPUTATIONAL STATISTICS AND DATA SCIENCE

The Latin American Regional Section of the IASC, the IASC-LARS School on Computational Statistics and Data Science, the IASC and the ISI held a second and successful IASC-LARS Webinar on Computational Statistics and Data Science. The webinar course “Geostatistical Functional Data Analysis” was team-taught by Professors Martha Bohorquez and Rubén Guevara from Universidad Nacional de Colombia, Colombia, from February 23-25, 2021. The course had one collaborator, Juan Guevara from Universidad Nacional de Colombia.

One hundred and eighty-five students completed their registration form on the IASC webpage. Of these 185 students¹, 71 attended the course. One hundred and thirty-eight students pre-registered for the course on the GTW platform. From now on, we will centralize student enrollment and data collection on the GTW platform.

The course was attended by 84 students, 71 students submitted their registration forms, 53 (63%) students attended on 2 or 3 days. Participants came from 23 countries², from Latin America –Brazil, Chile, Colombia, Costa Rica, México, and Uruguay—and from countries as far as away as Algeria, Germany, Ghana, India, Indonesia, Italy, Kenya, Nigeria, Pakistan, Palestine, Philippines, Rwanda, South Africa, Tanzania, Turkey, and the USA. Most of the students were undergraduate, master and PhD students (38%), also attending academics and researchers (38%), and professionals coming from government institutions and private industry, 18% of the students were female.

The International Organizing Committee consisted of Alba Martínez-Ruiz IASC-LARS Scientific Secretary (Chile), David Muñoz-Negron IASC-LARS Chairperson (Mexico), and Luis Firinguetti-Limone IASC Webinar Coordinator & Webinar Host (Chile). Katie Junasova, Junior Webmaster at the International Statistical Institute, provided support with the organization and the GoToWebinar platform.

¹ See the countries of the 185 students at the end of the document.

² Data corresponds to 71 registration forms.

The webinar course was supported by the Latin American Regional Section of the International Association for Statistical Computing (IASC-LARS), the International Association for Statistical Computing (IASC), the International Statistical Institute (ISI), and the Statistical Capacity Building Program.

Objectives of the IASC-LARS School on Computational Statistics and Data Science

- 1) To spread the knowledge base and advances in Statistical Computing in Latin America and the world,
- 2) To provide an overview of the state-of-the-art of the ongoing research in computational statistics,
- 3) To provide an overall perspective of the application of computational statistics in data science problems,
- 4) To present applications where computational statistics have been crucial to solve problems in real-life applications, and
- 5) To increase the number of researchers and practitioners in computational statistics and data science.

Agenda and course program.

Tuesday, February 23, 9.00 am.

- Background
 - ✓ Spatial and spatio-temporal scalar random fields
 - ✓ Kriging
 - ✓ cokriging
 - ✓ Examples

Wednesday, February 24, 9.00 am

- Multivariate spatial functional random field
 - ✓ Introduction to functional data analysis
 - ✓ Recent advances in spatial functional data
 - ✓ Functional principal components
 - ✓ Examples

Thursday, February 25, 9.00 am

- Spatial prediction of functional random fields
 - ✓ Functional kriging
 - ✓ Functional cokriging
 - ✓ Basic network design and redesign concepts for functional data
 - ✓ Examples

Number of students by day

Date	Attendance
Tuesday, Feb. 23	70
Wednesday, Feb. 24	57
Thursday, Feb. 25	50
Total (without replication)	84

Not all the students attended the first day.

Number of students with registration form (country, gender, and occupation): 71.

Number of students attending 1, 2, 3 or 4 days

Category	Attendance	Percentage (%)
1	31	36.90
2	13	15.48
3	40	47.62
Total	84	100.00

53 students attended on 2 or more days.

Number of students by gender

Gender	Attendance	Percentage (%)
Female	15	17.86
Male	56	66.67
No information	13	15.48
Total	84	100.00

Number of students by occupation

Occupation	Attendance	Percentage (%)
Undergraduate, master and PhD students	32	38.10
Academic and researchers	32	38.10
Government institutions	4	4.76
Private industry	2	2.38
No information	14	16.67
Total	84	100.00

Number of students by country

Country	Attendance	Percentage (%)	Country	Attendance	Percentage (%)
Algeria	1	1.19	Pakistan	1	1.19
Brazil	14	16.67	Palestine	1	1.19
Chile	2	2.38	Philippines	1	1.19
Colombia	3	3.57	Rwanda	2	2.38
Costa Rica	4	4.76	South Africa	3	3.57
Germany	1	1.19	Tanzania	2	2.38
Ghana	1	1.19	Turkey	2	2.38
India	1	1.19	Uganda	1	1.19
Indonesia	1	1.19	Uruguay	1	1.19
Italy	4	4.76	USA	1	1.19
Kenya	3	3.57	No information	13	15.48
Mexico	5	5.95	Total	84	100.00
Nigeria	16	19.05			

29 (34.52%) students are from Latin America, 29 (34.52%) from Africa, 7 (8.33%) from Asia, 5 (5.95%) from Europe, 1 (1.19%) from the USA, no information for 13 (15.48%) students.

Pre-registered students on the IASC webpage. 185 students pre-registered on the IASC website and completed their registration form. These students come from the following countries.

Country	Number of students	Percentage (%)	Country	Number of students	Percentage (%)
Algeria	1	0.54	Mexico	8	4.32
Australia	1	0.54	Nigeria	67	36.22
Bahrain	1	0.54	Pakistan	2	1.08
Brazil	25	13.51	Palestine	2	1.08
Cabo Verde	1	0.54	Panamá	1	0.54
Chile	4	2.16	Perú	1	0.54
Colombia	12	6.49	Philippines	1	0.54
Costa Rica	9	4.86	Rwanda	3	1.62
Germany	2	1.08	South Africa	3	1.62
Ghana	2	1.08	Tanzania	10	5.41
India	4	2.16	Turkey	2	1.08
Indonesia	2	1.08	Uganda	1	0.54
Iran	1	0.54	Uruguay	1	0.54
Italy	5	2.70	USA	3	1.62
Kenya	9	4.86	Total general	185	100.00
Malaysia	1	0.54			

 Report prepared and sent on March 19, 2021, by Alba Martinez-Ruiz, IASC-LARS Scientific Secretary.