

UNIBO



OPEN SCIENCE 2019

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
CAMPUS DI CESENA

30th of September

1st of October

OPEN STATISTICS

Methods and Thinking in
Psychological Research

OPEN YOUR EYES

Eye movements in vision
research: bridging the gap
between scientific disciplines

GOAL

Although the new technologies allowed science to reach its goals much faster than in the past, the epistemological debate around scientific research probably did not keep up to such acceleration. Even within the academic world, very few pay close attention to the current debate on the so-called “**replication crisis**”, which refers to the impossibility to replicate published research on subsequent investigation. This crisis has affected not only psychology, but also other branches of science, such as sociology, medicine, and economics. Indicated by many as the highway to face the replication crisis, the practice of **sharing knowledge** is pushing its way into modern science.

Sharing largely concerns **academics**, who are asked to make every detail of their research available to their peers, but it also concerns stronger efforts in the outreach to the **non-academic community**. The symposium aims to respond to the need for a continuous **discussion** around these issues.

This symposium will celebrate the retirement of **Eng. Roberto Bolzani**, Professor of Psychometrics, which in the last 40 years has contributed dissemination of science with his publications and by teaching statistics to medicine and psychology students.

SPEAKERS AND AUDIENCE

The symposium is organized in two days:

The **first day** deals with the general theme of the replication crisis in scientific research, the comparison between different statistical approaches used for scientific demonstration, and the importance to spread accurate statistical thinking amongst both academics and the general society.

On the **second day** the reflection will develop on a particular research topic that connects psychology with other scientific disciplines, such as medicine and engineering: the study of eye movements.

International leading **scientist** are invited to present their contribution to this symposium.

Researchers from the academic and industrial world, **students, professors, scholars, journalists, publishers** and all of those who write and benefit from scientific knowledge are encouraged to participate.

The symposium is free of charge for all participants!

PROGRAM: DAY 1 – OPEN STATISTICS

“Methods and Thinking in Psychological Research”

8:30 - 9:00	Registration and welcome	
9:00 - 10:30	REPRODUCIBILITY AND OPEN-SCIENCE	Chair: Giuseppe di Pellegrino (University of Bologna, Italy)
		9:00 – 9:20 Massimo Grassi (University of Padua, Italy) Open Science: towards a change of the scientific paradigm
		9:20 – 9:40 Agnoli Franca (University of Padua, Italy) Use (and abuse) of questionable research practices in psychology
		9:40 – 10:00 Marco Perugini (University of Milano-Bicocca, Italy) Some methodological positive implications of the replicability crisis
		Open discussion
10:30 - 11:00	Break	
11:00 - 12:30	UPDATE ON BAYESIAN VS FISHERIAN INFERENCE	Chair: Mariagrazia Benassi (University of Bologna, Italy)
		11:00 – 11:20 Eric-Jan Wagenmakers (University of Amsterdam, Netherlands) The Proof of the Pudding: Frequentist vs. Bayesian Inference in Practice
		11:20 – 11:40 Herbert Hoijtink (University of Utrecht, Netherlands) Bayesian Evaluation of (Informative) Hypotheses
		11:40 – 12:00 Massimiliano Pastore (University of Padua, Italy) Improving statistical analysis by using prior and posterior distributions
		Open discussion
12:30 - 14:00	Break	
14:00 - 16:00	SPREADING STATISTICAL THINKING	Chair: Sara Garofalo (University of Bologna, Italy)
		14:00 – 14:20 Robert Calin-Jageman (Dominican University, USA) The New Statistics for Better Science: Ask How Much, How Uncertain, and What Else is Known
		14:20 – 14:40 Patrizia Agati (University of Bologna, Italy) <i>Statistics education in the Big Data era</i>
		14:40 – 15:00 Regina Nuzzo (Gallaudet University, USA) Why We Should Apply Human-Centered Design to Statistics Communication
		Hands-on: ideas and next steps

PROGRAM: DAY 2 – OPEN YOUR EYES

“Eye movements in vision research: bridging the gap between scientific disciplines”

9:00 - 9:20		Welcome and opening - Gunnar Lennerstrand (Karolinska Institutet, Sweden)
9:20 - 10:20	EYE MOVEMENTS IN CLINICAL CONTEXTS	Chair: Gunnar Lennerstrand (Karolinska Institutet, Sweden)
		9:20 – 9:35 Agneta Rydberg (Karolinska Institutet, Sweden) Orthoptic and Ophthalmological aspects on reading problems and dyslexia
		9:35 – 9:50 Kerstin Hellgren (Karolinska Institutet, Sweden) The impact of prematurity on visual perception
		9:50 – 10:05 Herman Schworm (Germany) Analysis of eye movement recordings - Clinical value
		Open discussion
10:20 - 10:50		Break
10:50 - 11:50	EYE MOVEMENTS, ATTENTION AND PERCEPTION	Chair: Francesca Frassinetti (University of Bologna, Italy)
		10:50 – 11:05 Alessandro Piras (University of Bologna, Italy) Understanding the critical processes involved in Quiet Eye: the role of microsaccades and pupil-size during fixation
		11:05 – 11: 20 Galfano Giovanni (University of Padua, Italy) Microsaccades and cognitive control processes
		11:20 – 11:35 Caterina Bertini (University of Bologna, Italy) Unseen distractors delay saccadic latency in left-lesioned hemianopic patients
		Open discussion
11:50 - 12:20	METHODS AND ANALYSIS FOR EYE MOVEMENTS	Chair: Sara Giovagnoli (University of Bologna, Italy)
		11:50 – 12:05 Ygge Jan (Karolinska Institutet, Sweden) The need for eye movements
		12:05 – 12:20 Tony Pansell (Karolinska Institutet, Sweden) Visual and vestibular influence on ocular torsion - a new approach of evaluating patients suffering from visually induced vertigo
		Open discussion
12:20- 12:50	CONCLUSION	STATISTICAL PROCEDURES IN EYE MOVEMENTS ANALYSIS Roberto Bolzani (University of Bologna, Italy)

Registration is free for all participants!
Please visit our website to reserve you place.



September 30th - October 1st, 2019



University of Bologna - Department of Psychology
Piazzale Aldo Moro, 90, Cesena (FC) - Italy



<https://eventi.unibo.it/open-statistics-2019>

**All abstracts are
available on the
website**



openstatistics@unibo.it



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INFO

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