

STRATOS mini-symposium at ISCB 2023, August 31 2023

## **Ten years STRATOS initiative - brief summary of progress and plans for the future**

Coordinators:

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Description:

The STRATOS (STREngthening Analytical Thinking for Observational Studies) initiative, is a large collaboration of experts in many different areas of biostatistical research. It was launched at a half-day Mini-Symposium at ISCB 2013. In Milan it will commemorate the 10<sup>th</sup> anniversary with a full-day mini-symposium.

The objective of STRATOS is to provide accessible and accurate guidance in the design and analysis of observational studies ([www.stratos-initiative.org](http://www.stratos-initiative.org)).

We will reflect on our experiences and progress and discuss about the future of the STRATOS initiative and its ability to improve research in data science, specifically in the health sciences.

Program:

### **Session 1 (9.00-10.40)**

**9.00-9.50**

***Experience and progress with developing guidance for the analysis of key topics in observational research***

**Sauerbrei W**, Abrahamowicz M, Le Cessie S, Huebner M, Keogh R, Carpenter J for the STRATOS initiative

**9:50-10.15**

***Level 1 guidance on conducting and reporting sensitivity analyses for missing data***

**Lee K**, Carpenter J for TG1

**10.15-10.40**

***Aims of the new Open Science panel***

**Luijken K**, Hoffmann S, Boulesteix A-L for the Open Science panel

## **Session 2 (11.00-12.40)**

**11.00-11.25**

***Ongoing research towards state-of-the-art in variable and functional form selection for statistical models***

Heinze G, Perperoglou A, Sauerbrei W for TG2

**11.25-11.50**

***How to include time-varying exposures prone to measurement error in survival analyses***

Proust-Lima C, Philipps, Deffner V, Boshuizen H, Freedman L, Thiébaud A for TG4

**11.50-12.15**

***Evaluating the impact of covariate measurement error on functional form estimation in regression modelling***

Perperoglou A, Abrahamowicz M, Gustafson P, Kipnis V, Thiébaud A, Ferreira Guerra S, Freedman L for TG2 and TG4

**12.15-12.40**

***Statistical analysis of high-dimensional biomedical data: A gentle introduction to analytical goals, common approaches and challenges***

Ambroggi F, Rahnenfuehrer J, De Bin R, McShane L for TG9

## **Session 3 (13.30-15.10)**

**13.30-13.55**

***The slowly changing landscape of predictive modeling in biomedicine***

Lusa L, Kappenberg F, Schmid M, Sauerbrei W, Rahnenführer J

**13.55-14.20**

***Counterfactual prediction for personalized healthcare using observational data***

Van Geloven N, Steyerberg EW, Wang J, Didelez V, Keogh RH for TG6 and TG7

**14.20-14.45**

***Recommendations to handle patient reported outcome data in oncology cancer trials***

Le Cessie S, Goetghebeur E, Thomassen D on behalf of work package 3 of the SISAQOL-IMI consortium

**14.45-15.10**

***Comparing quality of life - while alive - between treatment and (external) controls: methods for real world analysis in clinical trials***

Goetghebeur E, Reynders D, Thomassen D, le Cessie S on behalf of work package 3 of the SISAQOL-IMI consortium

## **Session 4 (15.30-16.30)**

***Panel discussion about the future of STRATOS***

Chair: Carpenter J (London, UK)