



HARMONY

Novel tools for test evaluation and
disease prevalence estimation

<https://harmony-net.eu/>

cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

COST ACTION CA18208

Advanced Training School on Bayesian methods ***“Going beyond test evaluation and true prevalence estimation”***

Location: VISAVET Health Surveillance Center, Universidad Complutense Madrid, Spain

Dates: 12 – 14 July 2023



This 3-day event is a training school, part of the HARMONY COST Action 18208, training activities with didactic teaching and hands-on practical sessions and discussion, focusing on Bayesian statistics. The event goes beyond Bayesian methods for diagnostic test evaluation and true prevalence estimation and focuses on important aspects of Bayesian statistics, for example model selection, posterior predictive checking. This training school targets participants that have a basic understanding of Bayes theorem and with a strong interest advancing on Bayesian methods.

Funded by the HORIZON 2020
Framework Programme of the
European Union





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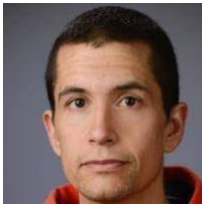


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English is the working language of this training. Participants will be guided to use the statistical language R and JAGS so it's highly recommended to bring their laptops. Pre-course preparation will also be provided to participants who want to follow the hands-on training sessions.

Primary learning objectives of the school are that participants (i) become familiar with methods for planning the sample size of prospective diagnostic test evaluation studies (ii) understand, apply and interpret methods of evaluating the fit of Latent Class models (LCMs) and (iii) compare different approaches to specifying LCMs.

Trainers



Prof. Julio Alvarez, Spain

Prof. Matthew Denwood, Denmark

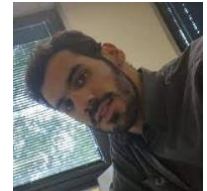


Prof Giles Innocent, United Kingdom



HARMONY consortium

Mr. Eleftherios Meletis, Greece



Trainees

The training school is organized under funding from COST Association and financial support is provided according to COST rules*.

[Selected participants will receive an official invitation from e-COST](#)

[Click here to register](#)

Last day to register: 16 April 2023

***Financial support**

The reimbursement of incurred accommodation, meals, and local travel expenses in the country is paid as one item known as daily allowance [**Spain 192 EUR/day**]. During the training school all participants have to sign the attendance list for each day to be considered eligible for reimbursement. More information on transport expenses (car travel, airplane/train/bus/ferry travel) can be found [here](#).





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Date	Start	End	Session Topic	Title	
Wednesday 12 July				To be announced	
	Basic principles of validation by simulation Alternative LCM	09:00	09:15		Welcome and Introductions
		09:15	10:00	Didactic Teaching	Recovering simulated parameter values
		10:00	10:45	Practical Session	
		10:45	11:00		Coffee break
		11:00	11:45	Didactic Teaching	Posterior predicted p-values (recovering test contingency tables)
		11:45	12:30	Practical Session	
		12:30	12:45		Coffee break
		12:45	13:15	Didactic Teaching	Random effects formulation used in medicine
		13:15	14:00	Practical Session	
		14:00	15:00		Lunch break
Thursday 13 July	09:00	09:30	Didactic Teaching	Determining the objective (What is the desired outcome?)	
	09:30	10:15	Practical Session		
	10:15	10:45		Coffee break	
	10:45	11:15	Didactic Teaching	Obtaining an answer by simulation (i.e. brute force)	
	11:15	12:00	Practical Session		
	12:00	12:30		Coffee break	
	12:30	13:00	Didactic Teaching	Theory - Limitations and Calculation	
	13:00	14:00	Practical Session		
	14:00	15:00		Lunch break	
Friday 14 July	09:00	11:00	Discussion	Visualizing prior → Posterior change (Prior/Data conflicts) DIC to justify model selection for BLCM (including covariance terms) - good or bad idea?	
	11:00	11:30		Coffee break	
	11:30	13:00	Discussion	HMC vs MCMC - should we be moving away from JAGS? Should we write a position paper as HARMONY experts?	
	13:00	14:00		Event Closure – Lunch box	

