

Monday December 14 <sup>th</sup>	Tuesday December 15 <sup>th</sup>	Wednesday December 16 <sup>th</sup>	Thursday December 17 <sup>th</sup>	Friday December 18 <sup>th</sup>
<p>9:30 to 12:00 am</p> <p>General introduction to mathematical modelling: concepts, objectives and main classes of epidemic models (population vs individual based, deterministic vs stochastic, spatial models)</p> <p>Instructor: E. Vergu (INRAE)</p>	<p>9:30 to 12:00 am</p> <p>The basic reproduction number (R0): defining the concepts and expression derivation. Exercises.</p> <p>Instructor: E. Vergu (INRAE)</p>	<p>9:30 to 12:00 am</p> <p>Introduction to the methods and issues surrounding parameter estimation in epidemic models (1): general concepts and main objectives.</p> <p>Instructor: S. Cauchemez (Institut Pasteur) <i>To be confirmed</i></p>	<p>9:30 to 12:00 am</p> <p>Network and metapopulation models. Why networks are interesting tools in epidemiological contexts ?</p> <p>Lab: Network visualization with R and shiny</p> <p>Instructor: P. Crépey (EHESP)</p>	<p>9:30 to 12:00 am</p> <p>What can we learn from mathematical models? Unnaturally-born outbreaks as an example (1): general concepts and main objectives</p> <p>Instructor: E. Vergu (INRAE)</p>
<b>12h: Lunch</b>	<b>12h: Lunch</b>	<b>12h: Lunch</b>	<b>12h: Lunch</b>	<b>12h: Lunch</b>
<p>1:00 to 4:00 pm</p> <p>Building SIR-like epidemic models: various structures for various situations.</p> <p>Instructor: E. Vergu (INRAE)</p>	<p>1:00 to 4:00 pm</p> <p>Predicting the effect of interventions with the reproduction number</p> <p>Instructor: E. Vergu (INRAE)</p>	<p>1:00 to 4:00 pm</p> <p>Introduction to the methods and issues surrounding parameter estimation in epidemic models (2): practical aspects.</p> <p>Instructor: S. Cauchemez (Institut Pasteur) <i>To be confirmed</i></p>	<p>1:00 to 4:00 pm</p> <p>Lab : Using GleanViz, an epidemic simulator able to capture the worldwide spreading of diseases, to answer public health questions.</p> <p>Instructor: P. Crépey (EHESP)</p>	<p>1:00 to 4:00 pm</p> <p>What can we learn from mathematical models? Unnaturally-born outbreaks as an example (2): articles reading and practical aspects</p> <p>Instructor: E. Vergu (INRAE)</p>