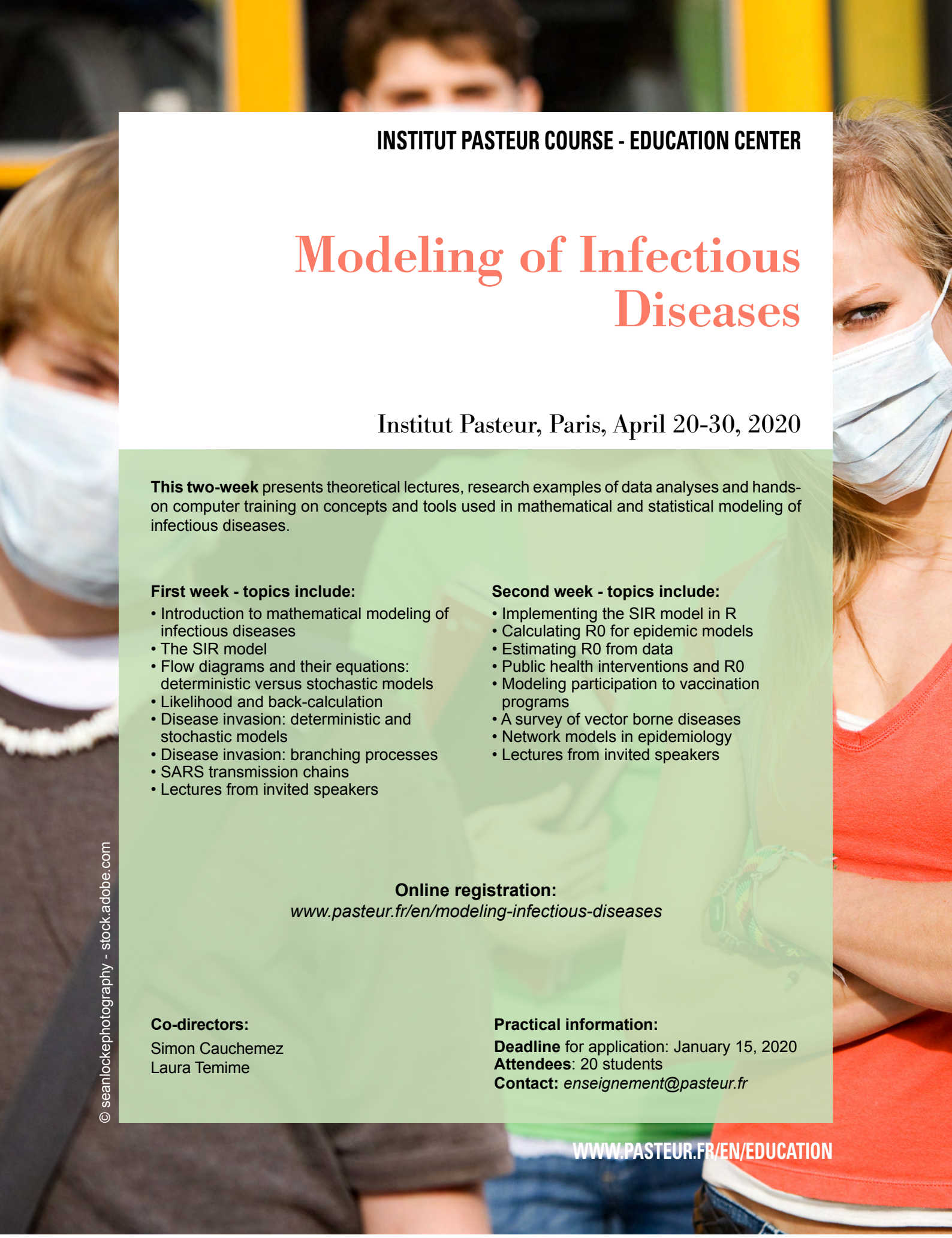

INSTITUT PASTEUR COURSE - EDUCATION CENTER

Modeling of Infectious Diseases

Institut Pasteur, Paris, April 20-30, 2020

This two-week presents theoretical lectures, research examples of data analyses and hands-on computer training on concepts and tools used in mathematical and statistical modeling of infectious diseases.

First week - topics include:

- Introduction to mathematical modeling of infectious diseases
- The SIR model
- Flow diagrams and their equations: deterministic versus stochastic models
- Likelihood and back-calculation
- Disease invasion: deterministic and stochastic models
- Disease invasion: branching processes
- SARS transmission chains
- Lectures from invited speakers

Second week - topics include:

- Implementing the SIR model in R
- Calculating R0 for epidemic models
- Estimating R0 from data
- Public health interventions and R0
- Modeling participation to vaccination programs
- A survey of vector borne diseases
- Network models in epidemiology
- Lectures from invited speakers

Online registration:
www.pasteur.fr/en/modeling-infectious-diseases

Co-directors:

Simon Cauchemez
Laura Temime

Practical information:

Deadline for application: January 15, 2020
Attendees: 20 students
Contact: *enseignement@pasteur.fr*

WWW.PASTEUR.FR/EN/EDUCATION

Institut Pasteur