

## Numerical computation of the basic reproduction number

Dimitri Breda<sup>a</sup>, Simone De Reggi<sup>a</sup>, Francesca Scarabel<sup>a,b</sup>, Rossana Vermiglio<sup>a</sup>,  
Jianhong Wu<sup>c</sup>

<sup>a</sup> CDLab – Computational Dynamics Laboratory

Department of Mathematics, Computer Science and Physics, University of Udine (Italy)

<sup>b</sup> Department of Mathematics, The University of Manchester (UK)

<sup>c</sup> LIAM – Laboratory for Industrial and Applied Mathematics

Department of Mathematics and Statistics, York University (Canada)

dimitri.breda@uniud.it, dereggi.simone@spes.uniud.it,

francesca.scarabel@manchester.ac.uk, rossana.vermiglio@uniud.it, wujh@yorku.ca

The twentieth century has witnessed the emergence of the basic reproduction number as a key player in assessing the growth of a population or the spread of a disease. Only in the nineties this quantity has been rigorously characterized as the spectral radius of a positive linear operator, promoting since then the use of increasingly realistic, yet more complicated, models. In this talk we would like to present some recent developments [1, 2, 3] in the numerical approximation of this number, first illustrating a spectrally accurate discretization framework and then discussing its convergence. As an application we consider models of epidemics structured by individual traits as, e.g., age or immunity.

## References

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