



**Figure 1:** Estimated growth rates as a function of time for SEIR-models. The gray horizontal ribbons are the largest eigenvalue of the different generator matrices, see Equation (3), and the red and blue ribbons converging to them are the observed growth rates, i.e. a linear least squares fit to  $\sum_j I_j$  on log scale to either the 10  $[-4, 5]$ , red) or 20  $[-9, 10]$ , blue) surrounding days. The growth rate is associated with the middle of the interval rather than the end to align with theoretical values. The striped vertical band indicates the 10%-point of  $\max_{j>1} \exp[(\text{Re}(r_j) - r_1)t]$  corresponding to  $\ln(10)\tau$  to illustrate the time scale set by Equation (6). The rows are initialization of the outbreak in different age groups, and the columns are normalization of the largest eigenvalue to match the infectiousness of either the Omicron variant in December 2021 or Delta variant in June 2021 in Denmark [13].