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Social distancing in epidemic models

In an epidemic, especially an epidemic of a disease regarded as serious, some individuals change their behaviour in order to try to avoid becoming infected. A fraction of the population reduces the rate of contact with other individuals by a fraction. We examine how this affects the reproduction number of the epidemic. A similar approach may be used to estimate the effect of face mask usage by a fraction of the population.

This work is joint with Fan Bai, Hausdorff Institute for Mathematics, Bonn, Germany.