

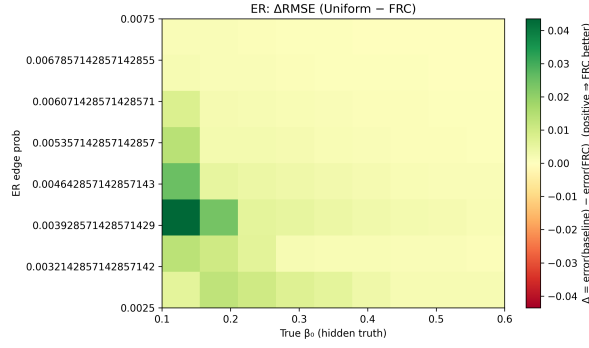
Supplementary Materials for:
Analysing Disease Spread on Complex Networks
Using Forman-Ricci Curvature

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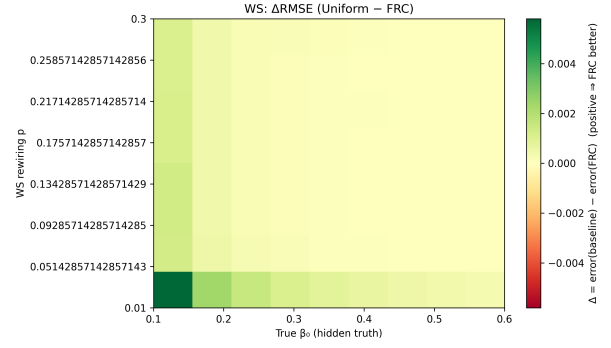
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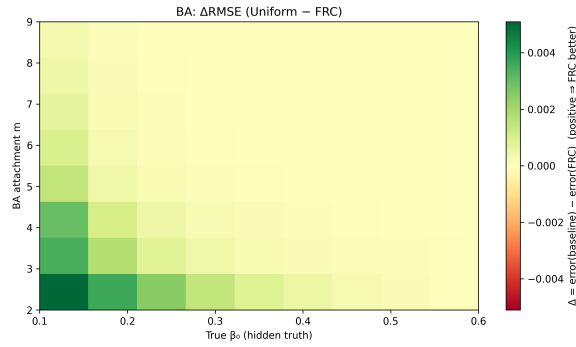
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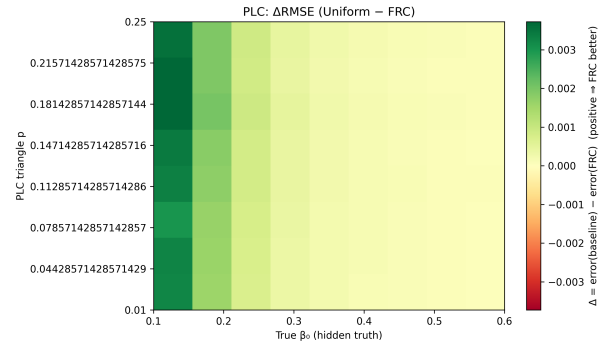
(a) ER



(b) WS



(c) BA



(d) PLC

Figure S1: Uniform comparison. Sensitivity heatmaps of ΔRMSE on the holdout window, defined as $\Delta\text{RMSE} = \text{RMSE}(\text{Uniform}) - \text{RMSE}(\text{FRC})$. Positive values indicate the curvature-weighted model has lower error (better). The color scale is symmetric about zero (reds < 0 , greens > 0). Axes: columns vary the true baseline transmission β_0 ; rows vary the family's clustering knob (ER: edge probability; WS: rewiring p ; BA: attachment m ; PLC: triangle probability).

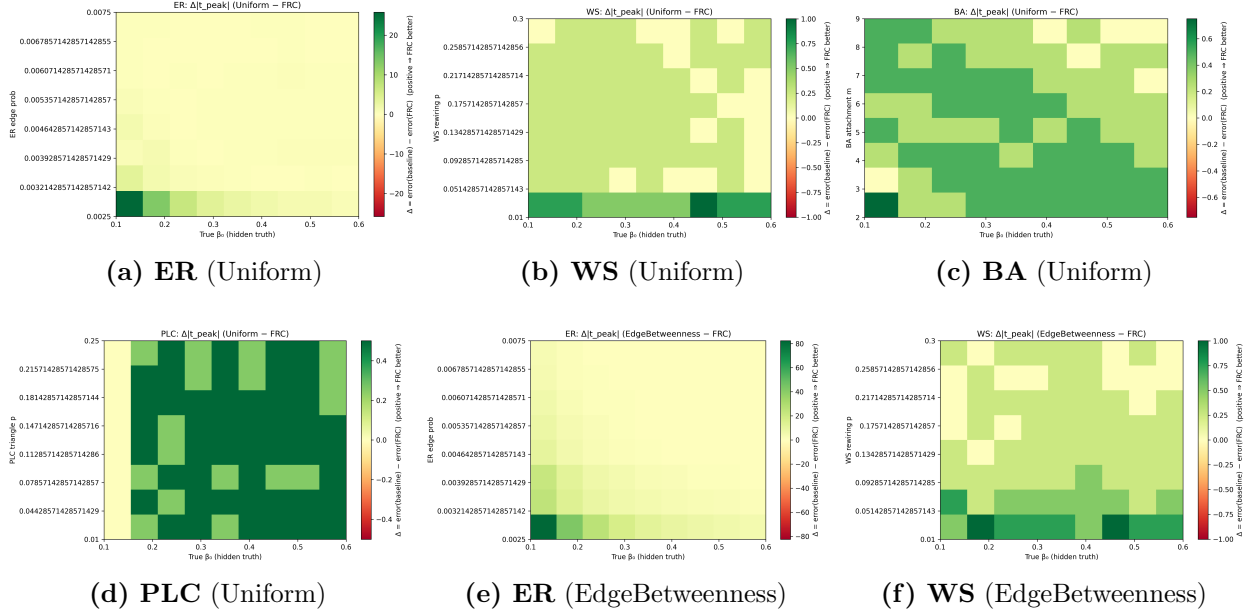


Figure S2: Sensitivity heatmaps of $\Delta|t_{\text{peak}}|$ on the holdout: $\Delta|t_{\text{peak}}| = |t_{\text{peak}}|_{\text{baseline}} - |t_{\text{peak}}|_{\text{FRC}}$. Positive values indicate FRC achieves a closer peak time to the hidden truth. Top/bottom-left: Uniform vs FRC; bottom-middle/right: EdgeBetweenness vs FRC. Color scale is symmetric about zero, following the conventions of Fig. S1.

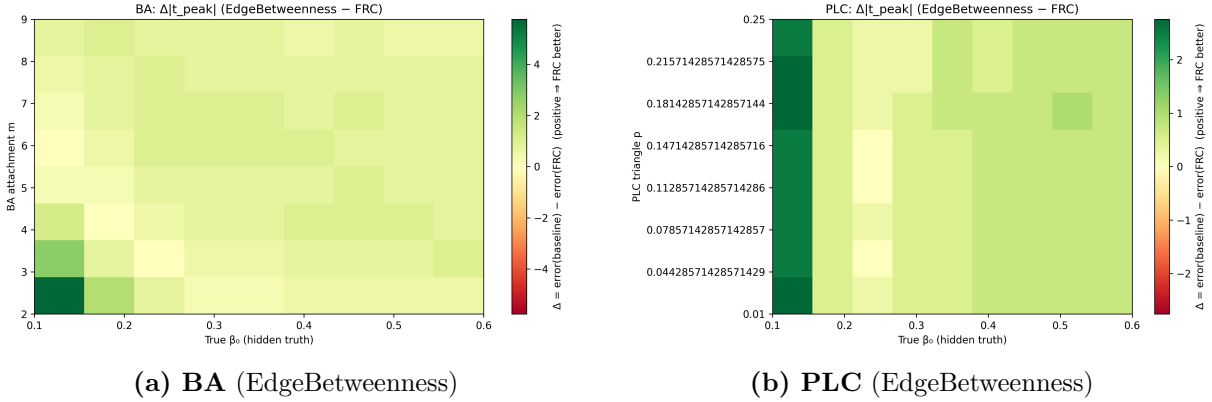


Figure S3: Peak-time error (EdgeBetweenness vs FRC). Sensitivity heatmaps of $\Delta|t_{\text{peak}}| = |t_{\text{peak}}|_{\text{baseline}} - |t_{\text{peak}}|_{\text{FRC}}$ for Barabási–Albert (BA) and Power–Law Cluster (PLC) networks. Positive values indicate the curvature-weighted model has smaller peak-time error (better). Axes: columns vary the true baseline transmission β_0 ; rows vary the family's clustering knob (BA: attachment m ; PLC: triangle probability). Color scale is symmetric about zero, following the conventions of Fig. S1.

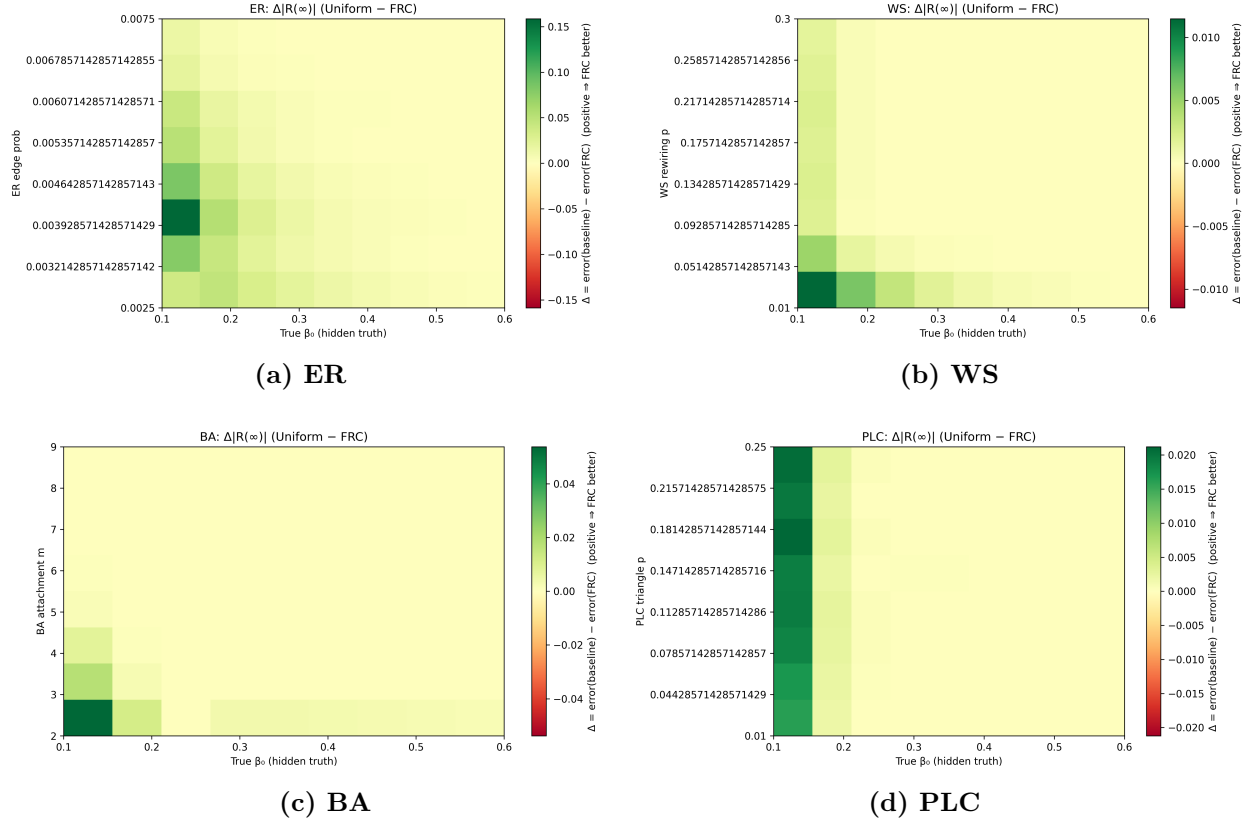


Figure S4: Final-size error (Uniform vs FRC). Sensitivity heatmaps of $\Delta|R(\infty)| = |R(\infty)|_{\text{Uniform}} - |R(\infty)|_{\text{FRC}}$. Positive values indicate the curvature-weighted model is closer to the hidden truth (better). Axes: columns vary the true baseline transmission β_0 ; rows vary the family's clustering knob (ER: edge probability; WS: rewiring p ; BA: attachment m ; PLC: triangle probability). Color scale is symmetric about zero and follows the conventions of Fig. S1.