

**Appendix (List of plots)**

7	(Continuation of Figure 2) Uniform perturbation (IC model): Average fraction of infections vs. transmission probability $p$ plots under various degrees of perturbation for a single seed chosen randomly. . . . .	2
8	(Continuation of Figure 2) Uniform perturbation (IC model): Variance of fraction of infections vs. transmission probability $p$ plots under various degrees of perturbation for a single seed chosen randomly. These accompany Figure 7. . . . .	3
9	(Continuation of Figure 2) Uniform perturbation (IC model): Average fraction of nodes infected vs. perturbation $\epsilon$ for different transmission probability $p$ values. . . . .	4
10	(Continuation of Figure 2) Uniform perturbation (IC model): Variance of fraction of infections vs. perturbation $\epsilon$ for different transmission probability $p$ values. These are companion to Figure 9. . . . .	5
11	(Continuation of Figure 4) Uniform perturbation (IC model) Epi-curves: Fraction of new infections vs. time for selected $p$ values and different perturbations. . . . .	6
12	(Continuation of Figure 4) Sensitivity of temporal characteristics to uniform perturbation (IC model): Average of maximum number of new infections at any time vs. $p$ , for fixed perturbation $\epsilon$ values. These accompany Figure 11 and follow the same ordering. . . . .	7
13	(Continuation of Figure 4) Sensitivity of temporal characteristics to uniform perturbation (IC model): Variance of maximum number of new infections at any time vs. $p$ , for fixed perturbation $\epsilon$ values. These accompany Figure 11 and follow the same ordering. . . . .	8
14	(Continuation of Figure 5) Degree-assortative perturbation (IC model): Average fraction of infections vs. transmission probability $p$ plots under various degrees of perturbation for a single seed chosen randomly. . . . .	9
15	(Continuation of Figure 5) Degree-assortative perturbation (IC model): Variance of fraction of infections vs. transmission probability $p$ plots under various degrees of perturbation for a single seed chosen randomly. These accompany Figure 14. . . . .	10
16	(Continuation of Figure 6) Uniform perturbation (LT model): Average fraction of infected nodes vs. perturbation ( $\epsilon$ ) for various seed probabilities $s$ . . . . .	11

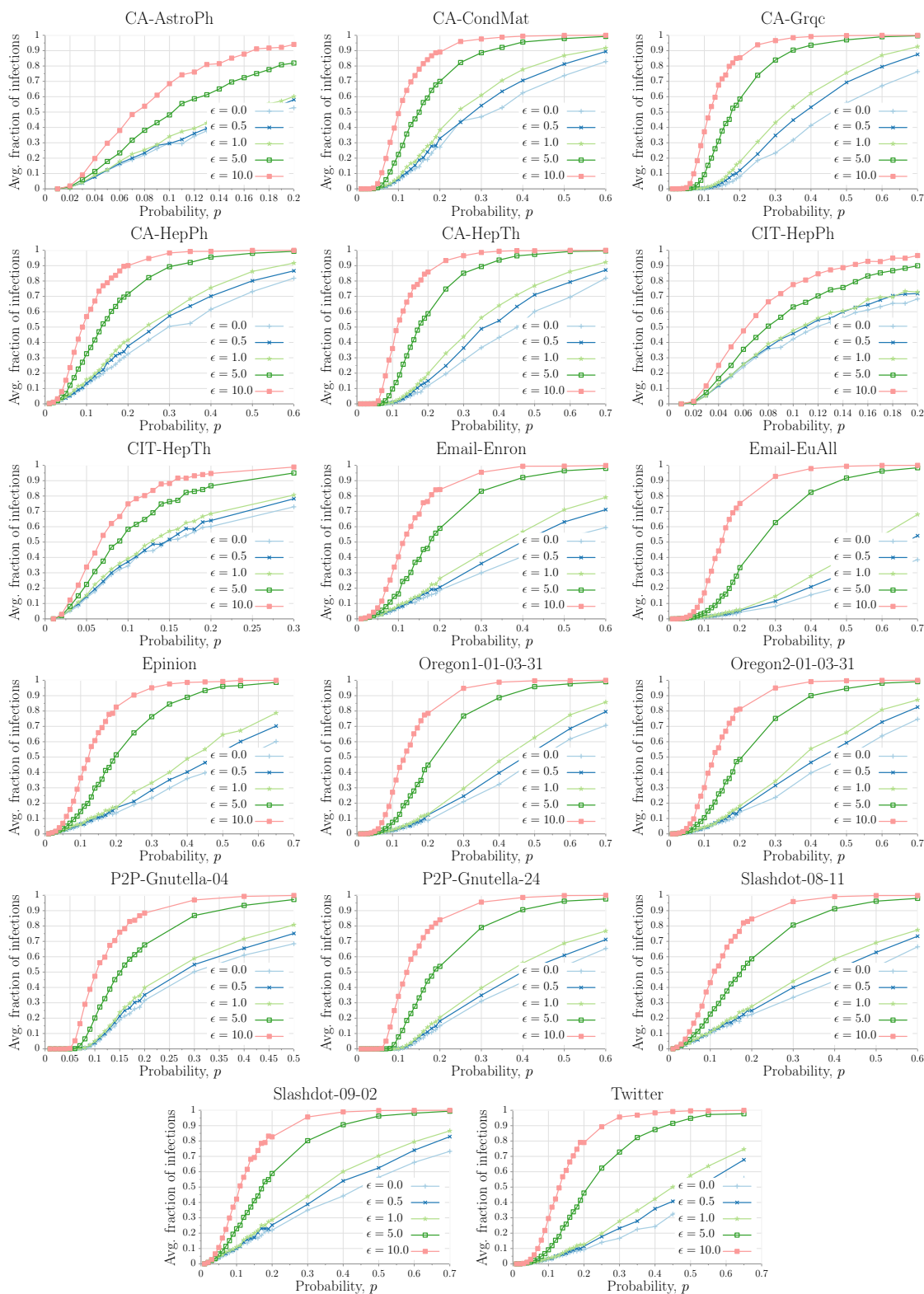


Figure 7: (Continuation of Figure 2) Uniform perturbation (IC model): Average fraction of infections vs. transmission probability  $p$  plots under various degrees of perturbation for a single seed chosen randomly.

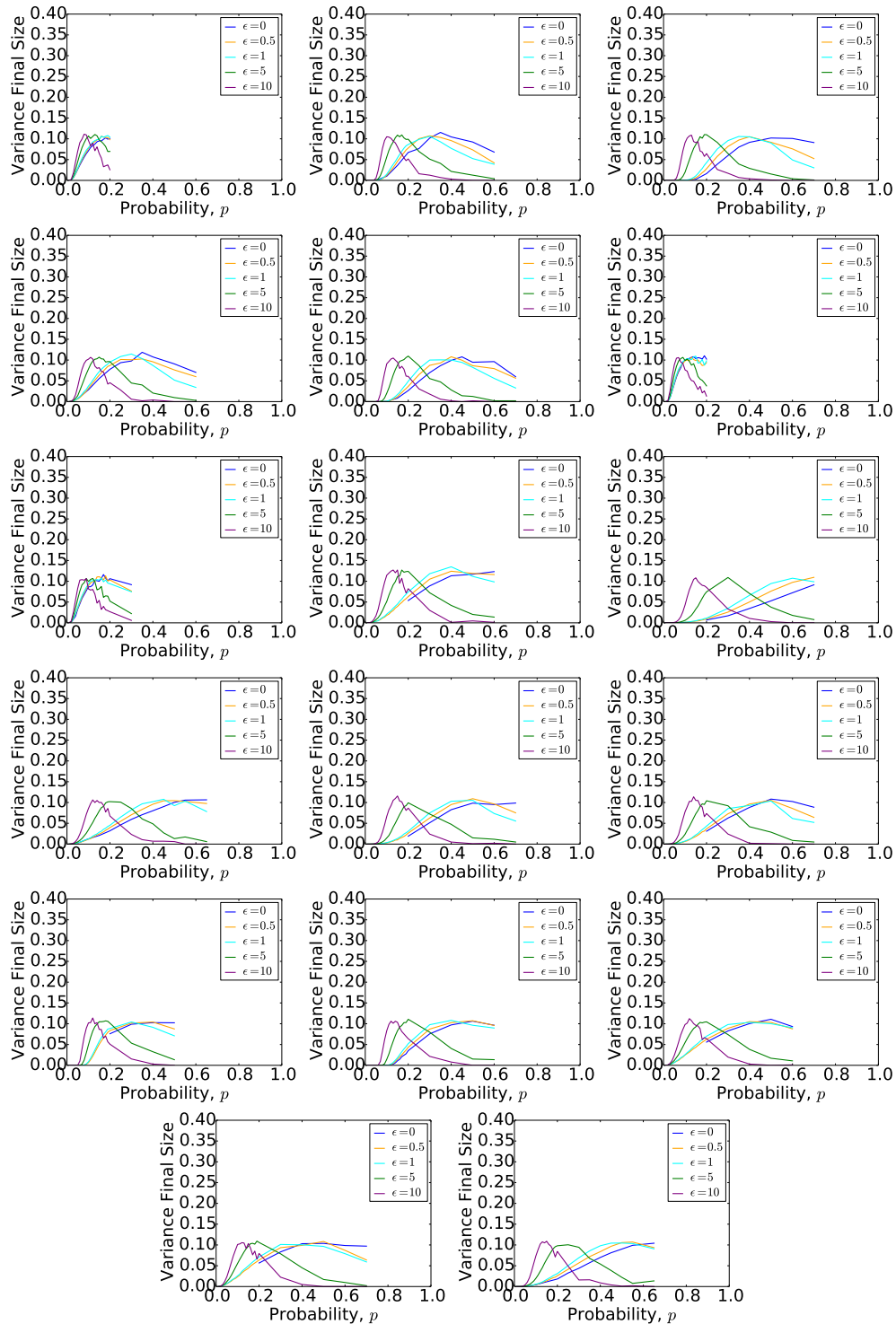


Figure 8: (Continuation of Figure 2) Uniform perturbation (IC model): Variance of fraction of infections vs. transmission probability  $p$  plots under various degrees of perturbation for a single seed chosen randomly. These accompany Figure 7.

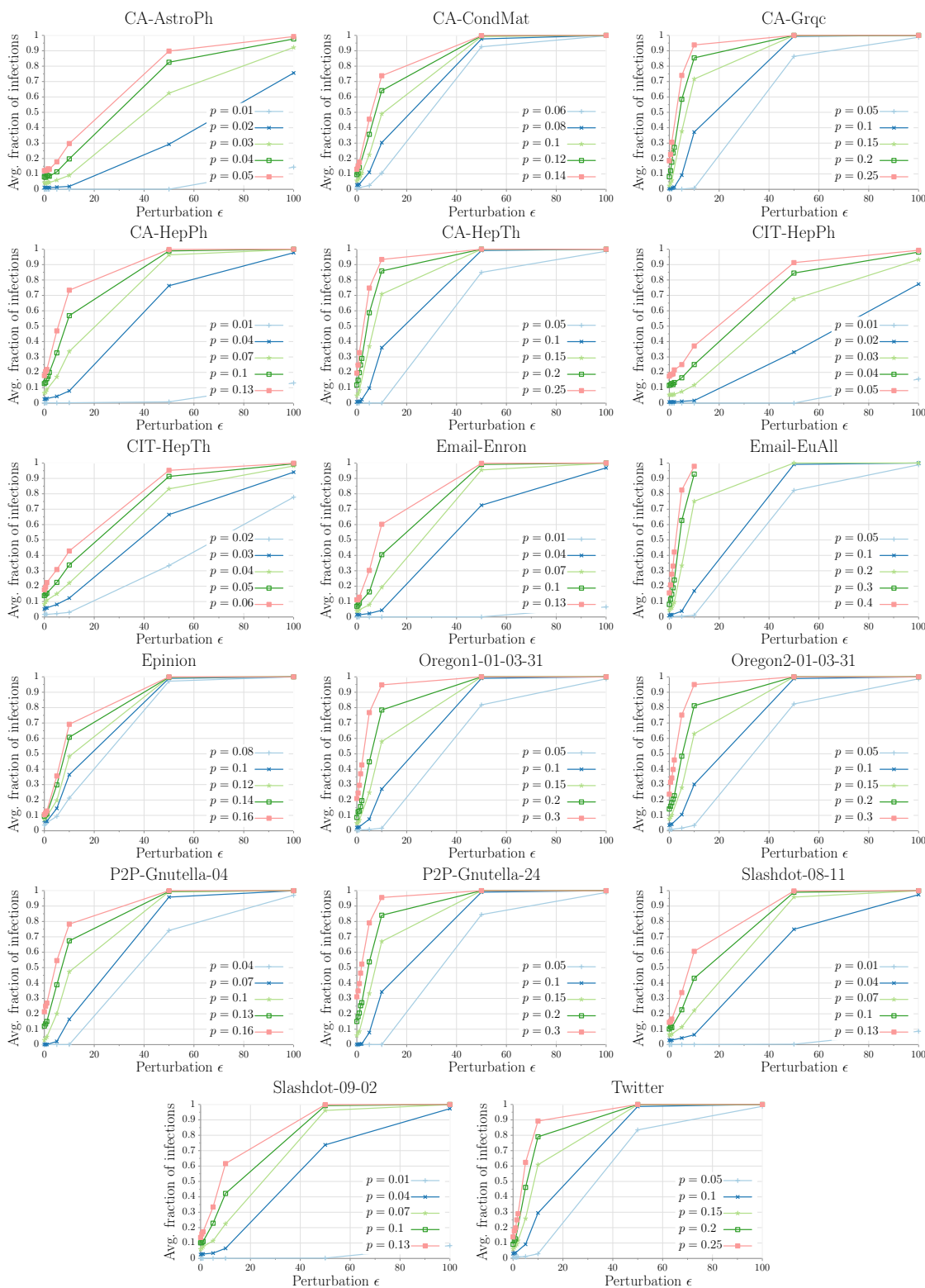


Figure 9: (Continuation of Figure 2) Uniform perturbation (IC model): Average fraction of nodes infected vs. perturbation  $\epsilon$  for different transmission probability  $p$  values.

SENSITIVITY OF DIFFUSION DYNAMICS TO NETWORK UNCERTAINTY

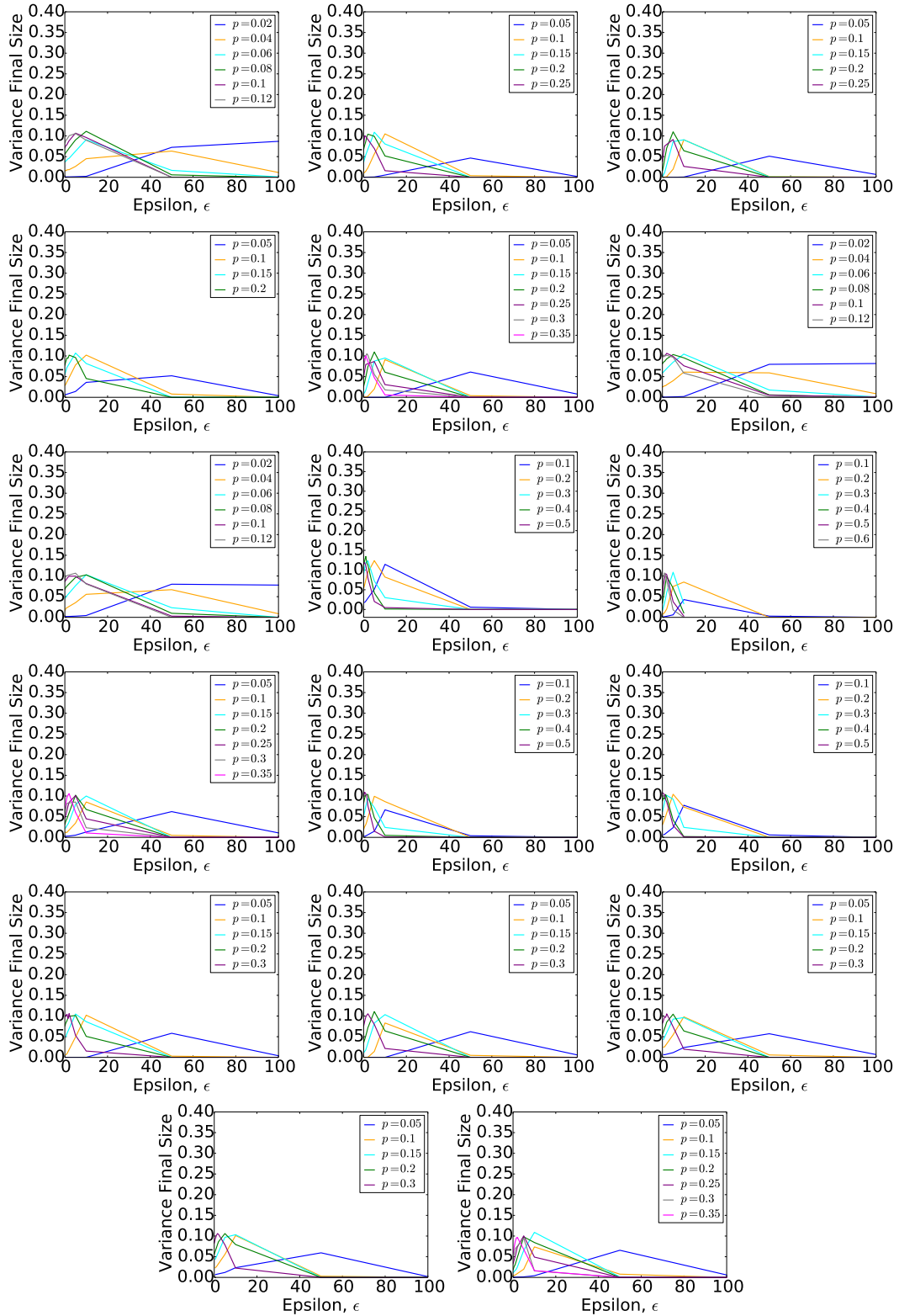


Figure 10: (Continuation of Figure 2) Uniform perturbation (IC model): Variance of fraction of infections vs. perturbation  $\epsilon$  for different transmission probability  $p$  values. These are companion to Figure 9.

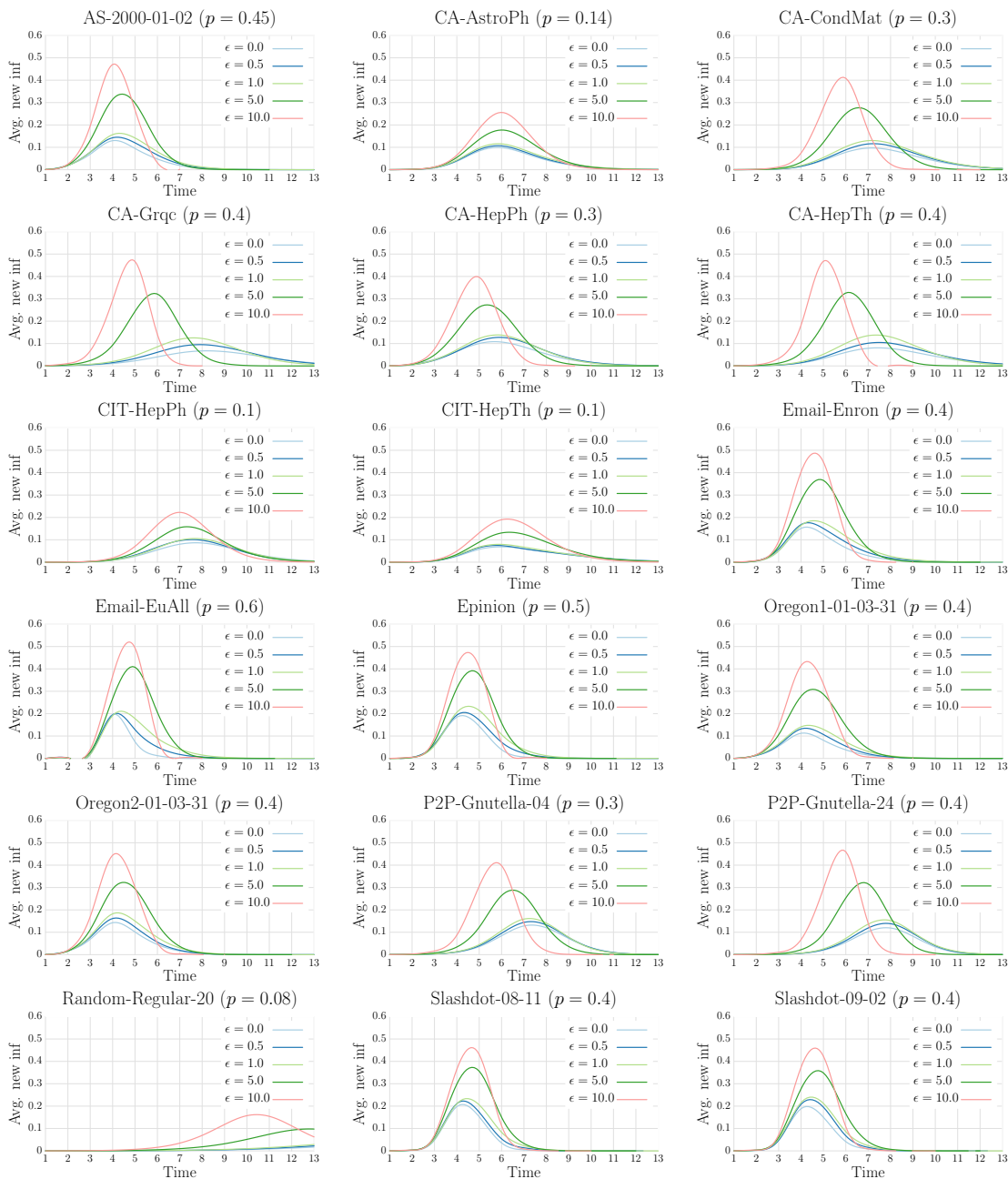


Figure 11: (Continuation of Figure 4) Uniform perturbation (IC model) Epi-curves: Fraction of new infections vs. time for selected  $p$  values and different perturbations.

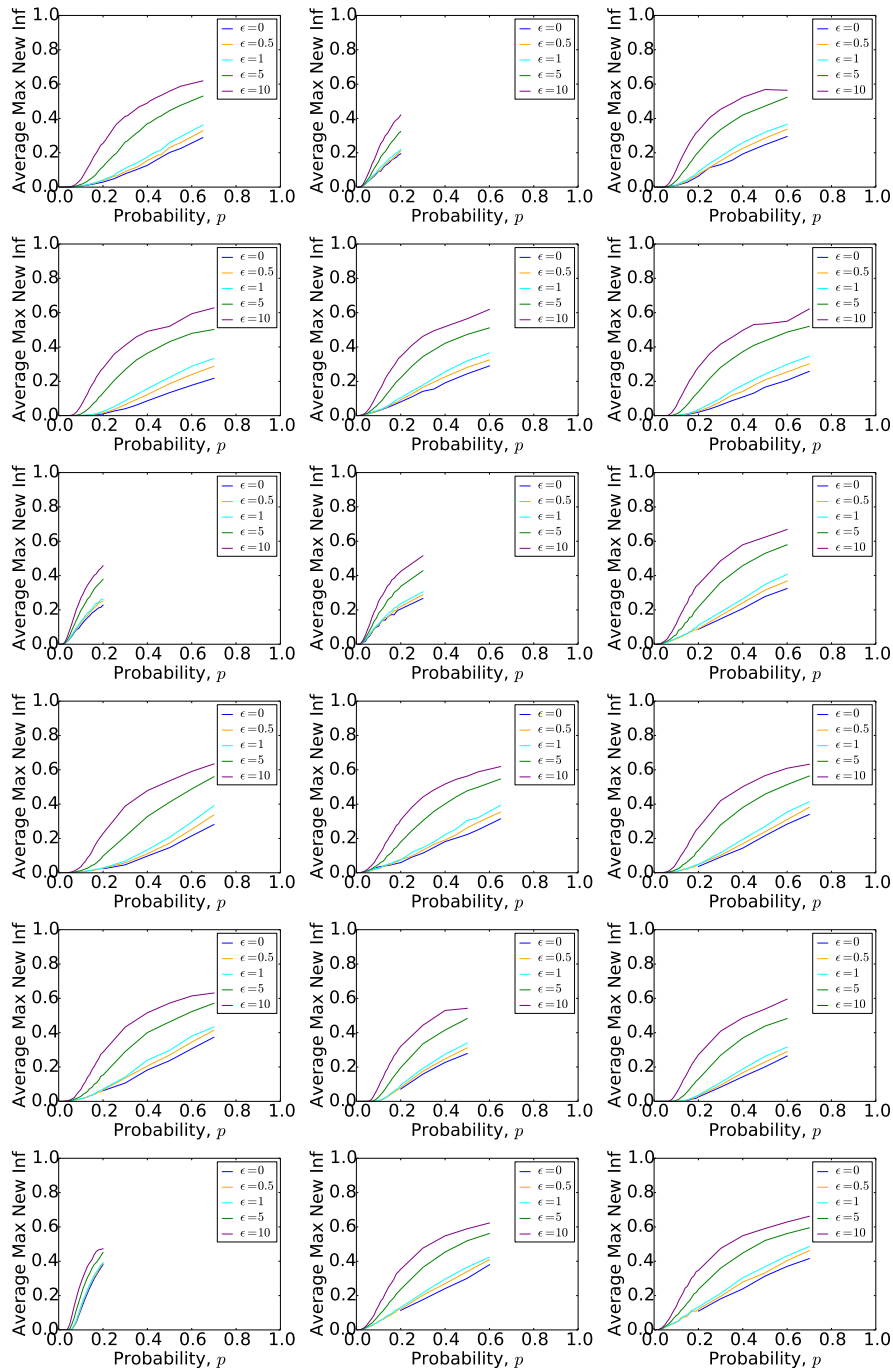


Figure 12: (Continuation of Figure 4) Sensitivity of temporal characteristics to uniform perturbation (IC model): Average of maximum number of new infections at any time vs.  $p$ , for fixed perturbation  $\epsilon$  values. These accompany Figure 11 and follow the same ordering.

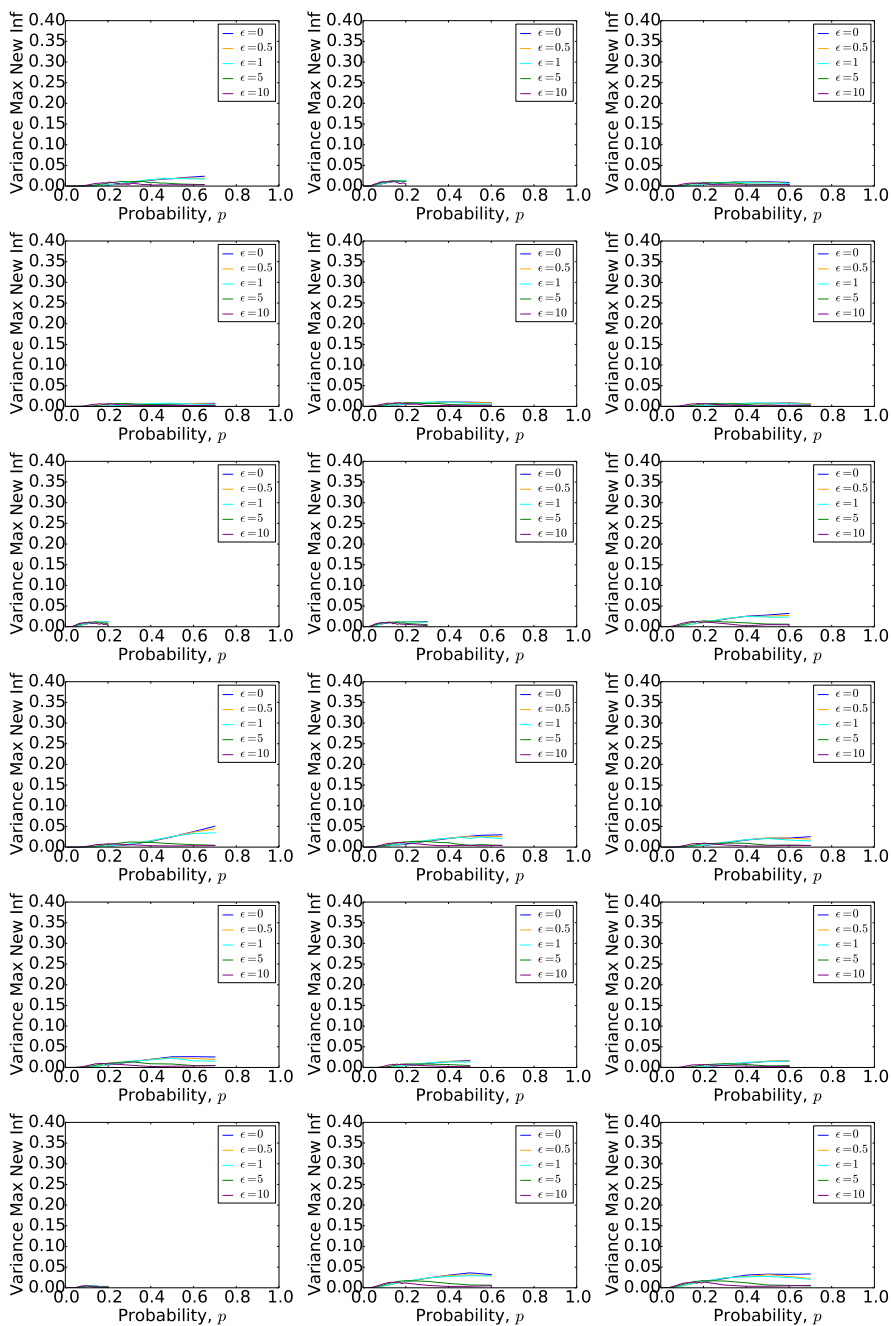


Figure 13: (Continuation of Figure 4) Sensitivity of temporal characteristics to uniform perturbation (IC model): Variance of maximum number of new infections at any time vs.  $p$ , for fixed perturbation  $\epsilon$  values. These accompany Figure 11 and follow the same ordering.



SENSITIVITY OF DIFFUSION DYNAMICS TO NETWORK UNCERTAINTY

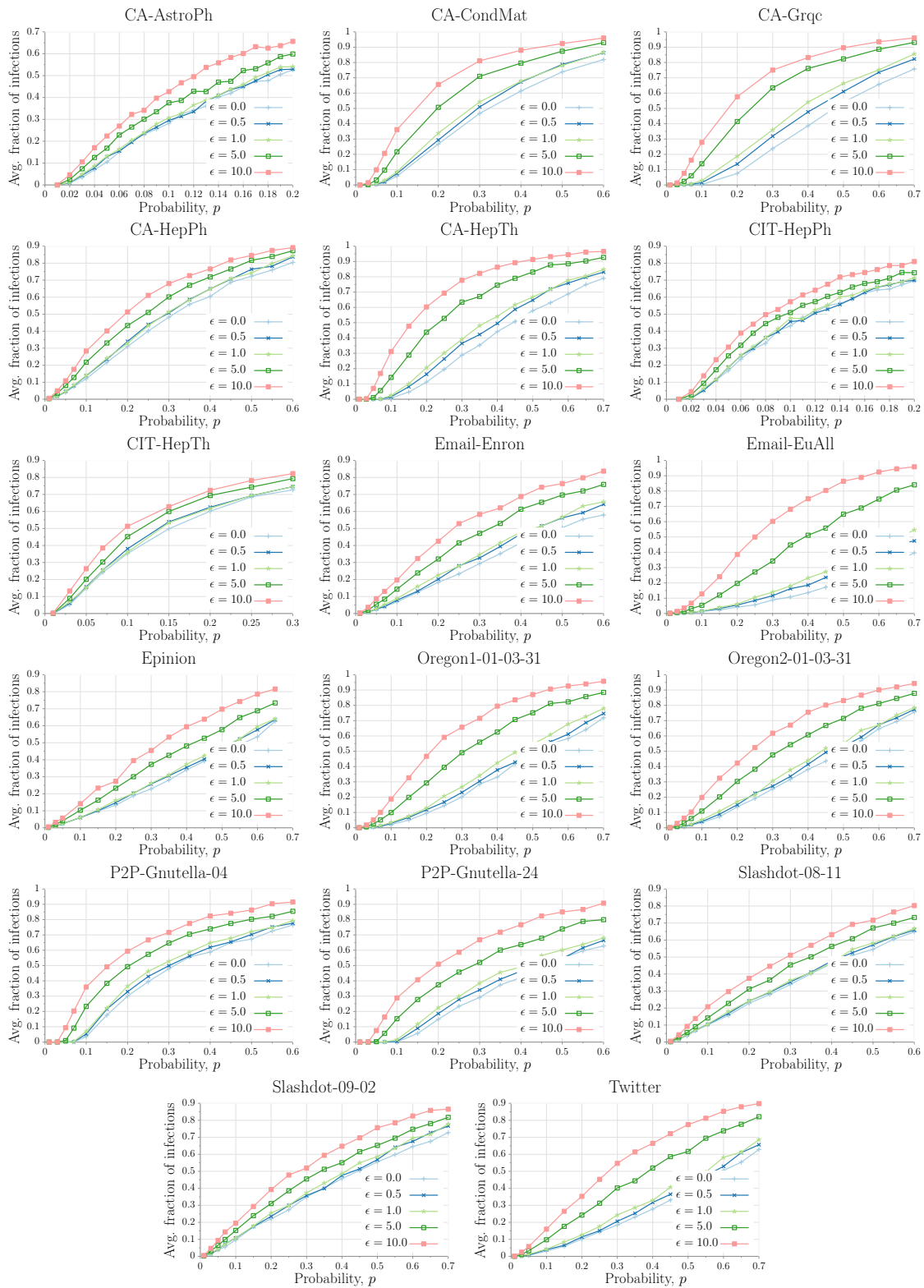


Figure 14: (Continuation of Figure 5) Degree-assortative perturbation (IC model): Average fraction of infections vs. transmission probability  $p$  plots under various degrees of perturbation for a single seed chosen randomly.

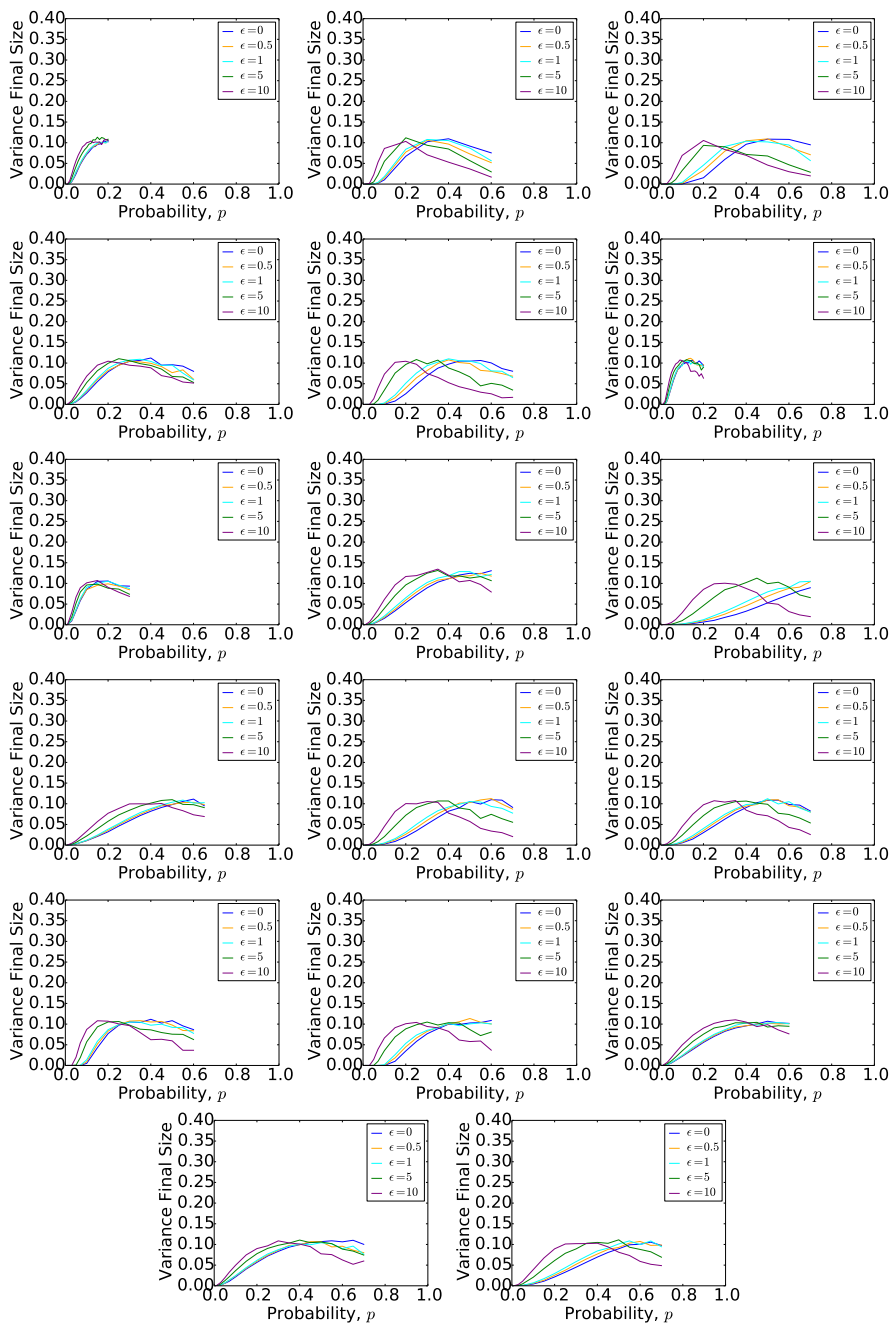


Figure 15: (Continuation of Figure 5) Degree-assortative perturbation (IC model): Variance of fraction of infections vs. transmission probability  $p$  plots under various degrees of perturbation for a single seed chosen randomly. These accompany Figure 14.

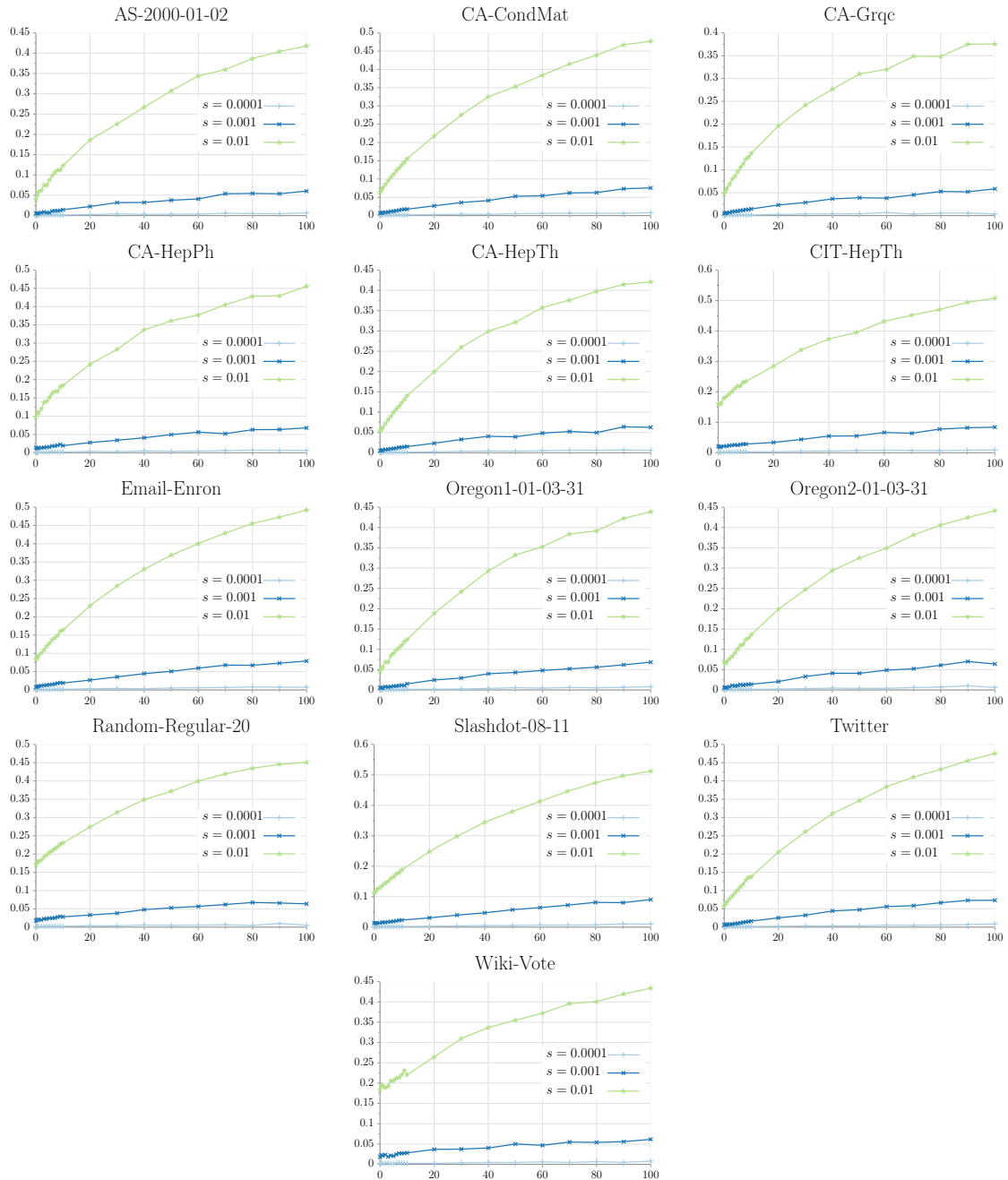


Figure 16: (Continuation of Figure 6) Uniform perturbation (LT model): Average fraction of infected nodes vs. perturbation ( $\epsilon$ ) for various seed probabilities  $s$ .