Supplementary Material

## Supplementary Tables

Table 1. The log cumulant values corresponding to the subcritical phase and critical state. 95% confidence interval is shown in brackets.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Square lattice** | | | | | | |
|  | BTW-ST | BTW-FA | FF-ST | FF-FA | M-ST | M-FA |
|  | 0.609(0.104) | 0.678(0.034) | 0.636(0.116) | 0.651(0.156) | 0.613(0.111) | 0.638(0.001) |
|  | 0.364(0.101) | 0.759(0.012) | 0.386(0.114) | 0.729(0.165) | 0.388(0.189) | 0.748(0.098) |
|  | 1.191(0.462) | 0.998(0.123) | 1.014(0.456) | 1.312(0.189) | 0.997(0.120) | 1.112(0.345) |
|  | 0.016(0.129) | 0.092(0.678) | 0.045(0.724) | 0.063(0.119) | 0.061(0.101) | 0.086(0.056) |
| **Erdos–Renyi model** | | | | | | |
|  | 0.699(0.178) | 0.732(0.159) | 0.599(0.001) | 0.689(0.139) | 0.712(0.199) | 0.734(0.201) |
|  | 0.425(0.198) | 0.781(0.201) | 0.389(0.111) | 0.711(0.194) | 0.344(0.174) | 0.835(0.178) |
|  | 0.997(0.200) | 1.013(0.199) | 1.120(0.478) | 0.996(0.197) | 1.278(0.234) | 1.113(0.211) |
|  | 0.056(0.156) | 0.058(0.178) | 0.047(0.213) | 0.072(0.199) | 0.044(0.311) | 0.041(0.211) |
| **Barabasi–Albert model** | | | | | | |
|  | 0.653(0.156) | 0.655(0.201) | 0.597(0.202) | 0.653(0.199) | 0.651(0.119) | 0.714(0.124) |
|  | 0.354(0.101) | 0.721(0.134) | 0.401(0.101) | 0.699(0.089) | 0.234(0.001) | 0.719(0.009) |
|  | 1.314(0.189) | 0.997(0.278) | 1.236(0.078) | 1.011(0.099) | 1.147(0.129) | 0.967(0.166) |
|  | 0.061(0.211) | 0.026(0.145) | 0.061(0.169) | 0.047(0.234) | 0.004(0.136) | 0.091(0.200) |

Table 2. Difference between critical time and early warning time, and increment of log cumulants. 95% confidence interval is shown in brackets.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Square lattice** | | | | | | |
|  | BTW-ST | BTW-FA | FF-ST | FF-FA | M-ST | M-FA |
|  | 0.030(0.011) | 0.060(0.014) | 0.036(0.043) | 0.056(0.016) | 0.063(0.017) | 0.088(0.045) |
|  | 0.077(0.017) | 0.133(0.077) | 0.076(0.012) | 0.078(0.035) | 0.061(0.014) | 0.080(0.020) |
|  | 0.299(0.112) | 0.241(0.134) | 0.321(0.199) | 0.271(0.123) | 0.211(0.099) | 0.254(0.164) |
|  | 0.553(0.234) | 0.511(0.311) | 0.550(0.299) | 0.571(0.156) | 0.583(0.256) | 0.694(0.301) |
|  | 1413 | 413 | 867 | 678 | 432 | 398 |
| **Erdos–Renyi model** | | | | | | |
|  | 0.028(0.011) | 0.056(0.231) | 0.089(0.020) | 0.074(0.031) | 0.054(0.011) | 0.101(0.078) |
|  | 0.056(0.020) | 0.198(0.019) | 0.101(0.099) | 0.096(0.027) | 0.078(0.021) | 0.114(0.098) |
|  | 0.395(0.178) | 0.267(0.129) | 0.311(0.101) | 0.356(0.211) | 0.199(0.099) | 0.199(0.789) |
|  | 0.499(0.210) | 0.611(0.299) | 0.631(0.301) | 0.699(0.199) | 0.498(0.211) | 0.598(0.139) |
|  | 656 | 436 | 578 | 432 | 398 | 238 |
| **Barabasi–Albert model** | | | | | | |
|  | 0.078(0.011) | 0.102(0.056) | 0.111(0.017) | 0.099(0.001) | 0.101(0.077) | 0.098(0.011) |
|  | 0.111(0.056) | 0.178(0.014) | 0.101(0.045) | 0.102(0.013) | 0.099(0.032) | 0.119(0.070) |
|  | 0.344(0.111) | 0.321(0.128) | 0.401(0.111) | 0.311(0.138) | 0.298(0.098) | 0.299(0.099) |
|  | 0.601(0.201) | 0.634(0.114) | 0.599(0.156) | 0.662(0.101) | 0.601(0.156) | 0.756(0.201) |
|  | 543 | 346 | 544 | 389 | 387 | 213 |