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Dynamical Mechanism of Superdiffusive Processes and Multifractals KYUNGSIK KIM, Department of Physics, Pukyong National University, Busan 608-737, Korea, JAE-WON JUNG, National Institute of Meteorological Research, KMA, Seoul 156-720, Korea, SEUNG-KYU SEO, Department of Physics, Pukyong National University, Busan 608-737, Korea — The diffusive process and the multifractal property are investigated in the Baduk. We ascertain that the difference of position between black and white stones undergoes the superdiffusion. In our study, we mainly estimate and analyze the generalized Hurst exponent, singularity spectrum, and multifractal strength in the tipping points of the Baduk. We also discuss the multifractal property of three segments, after analyzing the multifractality. In multifractal structures, it is found that segment 5 has shown a stronger multifractal behavior than the other segments for the tipping points of the Baduk.

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