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Computational Physics – Exercise 7

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1   Coding the Swendsen-Wang Algorithm

We coded the Swendsen-Wang Algorithm, it can be found at [1].
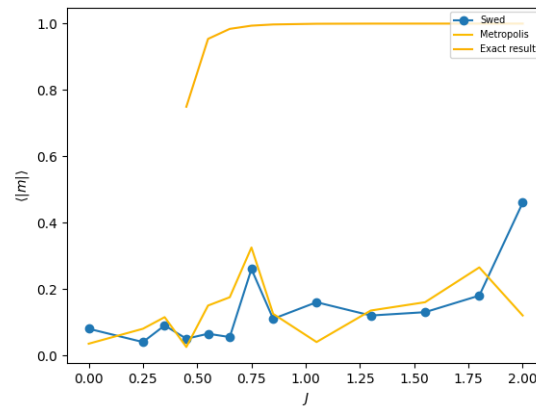
2   Computing observables

Figure 1: A plot of $\langle |m| \rangle$ vs J for exact and different algorithms

3   The Monte Carlo history of m

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4 Calculating the autocorrelation time

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5 Comparing dynamical exponents

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References

[1] P. Anancia Devaneyan and R. K. Senthilkumar. Exercises for the Physics 760: Computational Phyics course during the WS 22/23 Term.