

Fast and Scalable Position-Based Layout Synthesis (Supplement)

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APPENDIX A

CONSTRAINT APPLICATION EXAMPLE

Assume we have distance to wall constraints that we apply sequentially and pairwise distance constraints that we apply in a batch. The iteration starts by solving the distance to wall constraints sequentially, where the updated position immediately becomes available to the next distance to wall constraint. Then, we solve all the pairwise distance constraints in a batch, where each constraint provides a positional correction based on the layout object's position. These corrections are then averaged and applied to the layout objects. The next solver iteration follows.

APPENDIX B

ENERGY PLOTS

Figs. 1 and 2 provide energy plots comparing our method to simulated annealing in the tightly-packed picnic scenario. In each benchmark, the starting positions and orientations are similar, and both our method and simulated annealing use the same optimization parameters.

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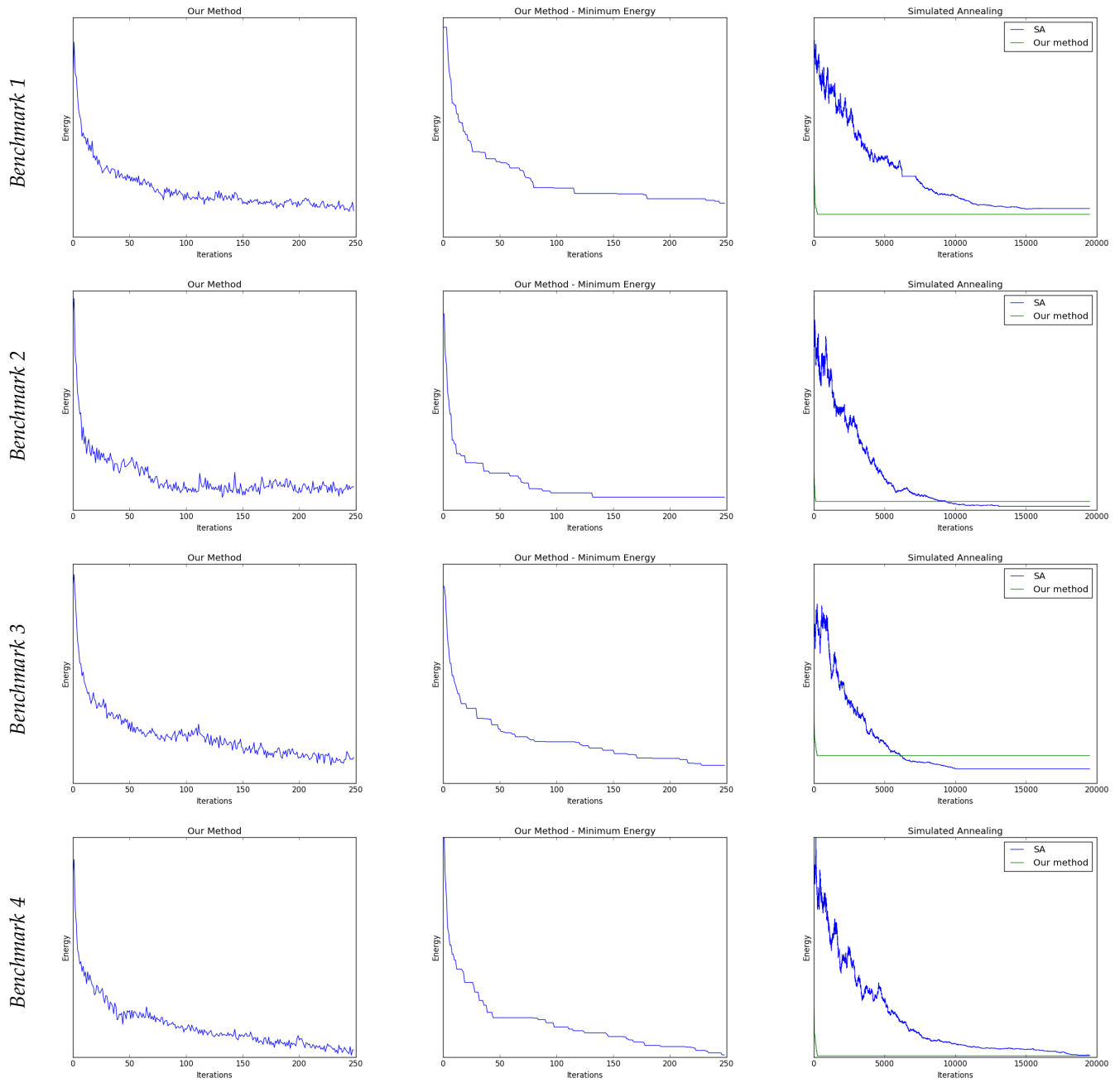


Fig. 1: Energy plots for the tightly-packed picnic.

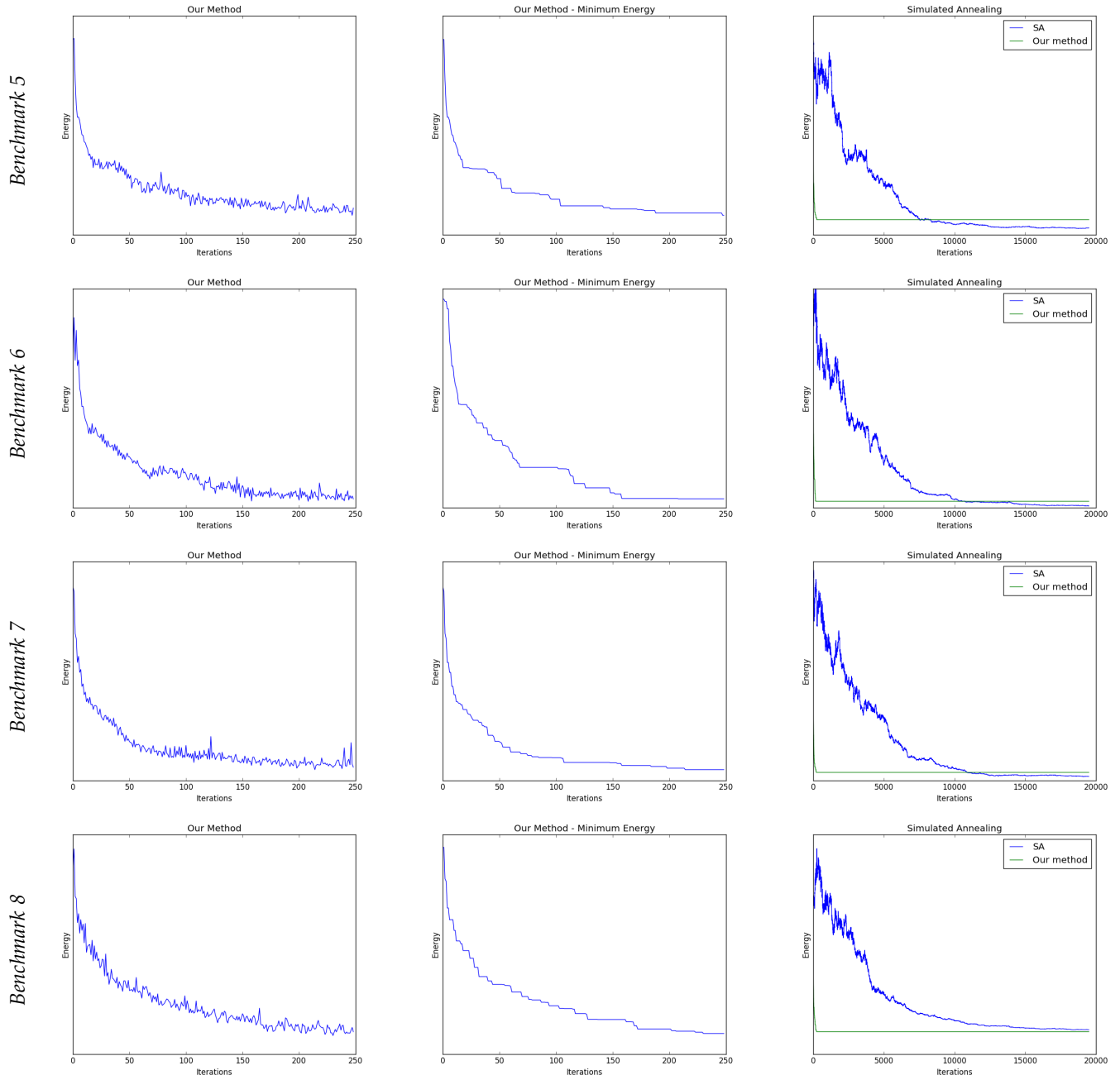


Fig. 2: Energy plots for the tightly-packed picnic (cont'd).