(a) The multilevel mesh hierarchy. (b) Improvement of a static approximation. Warmer colors indicate higher quadric error. As seen in the histogram, our result has more vertices with low error, and fewer with high error. (c) Single frame of a 20,000v cloth simulation. (d) An 800v dynamic approximation produced by our method. (e) The 800v approximating mesh. (f)-(h) Three frames of a running elephant with selective refinement on our dynamic hierarchy (region near yellow bar is refined more).