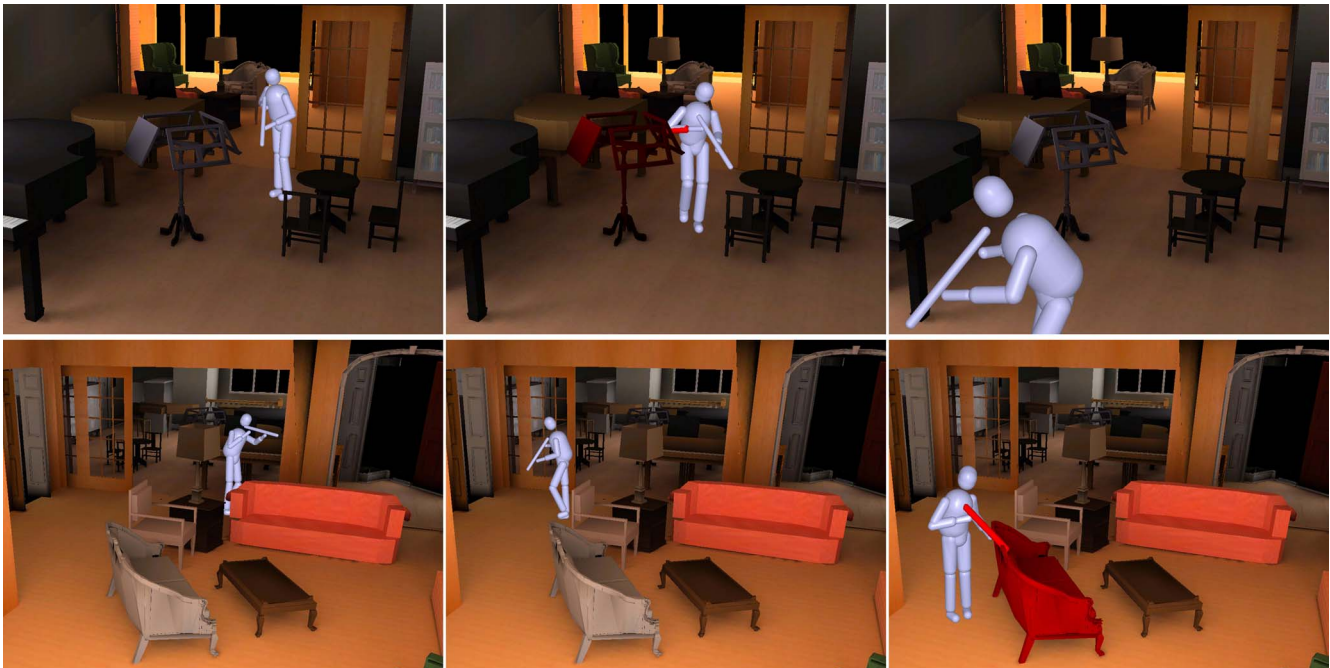


**Figure 5.** Benefits of our continuous collision detection algorithm over discrete methods. The left image shows two successive configurations of the avatar revealing a fast arm motion. No collision is detected at these discrete time steps. The middle image shows the interpolating path used to detect a collision between these two configurations. The right image shows the backtracking step used to compute the time of collision and the avatar position at that time. It highlights the time interval over which there is no collision with the virtual environment.



**Figure 6.** The benchmark environment and the avatar model used to test the performance of our algorithm. Top row: the avatar visiting the music room. In the middle image, its lower right arm collides the music stand. Lower row: the avatar in the living-room colliding with the sofa in the rightmost image.