Computer Animation: from particles to complex models...... and beyond!

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Computer animation is now used in films and video games for simulating complex scenes with amazing results. We will see how the computer animation of the smallest body we can consider, a particle, can be the root for the animation of very complex bodies like virtual cloths, deformable and rigid 3D models, fluids, etc. The numerical algorithms needed to move a particle, can be generalized to huge systems of particles. Moreover, expressing the appropriate relationship between these particles, you can simulate finally, the behavior of very complex models.