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Instant Visualization of Secondary Structures of Molecular Models

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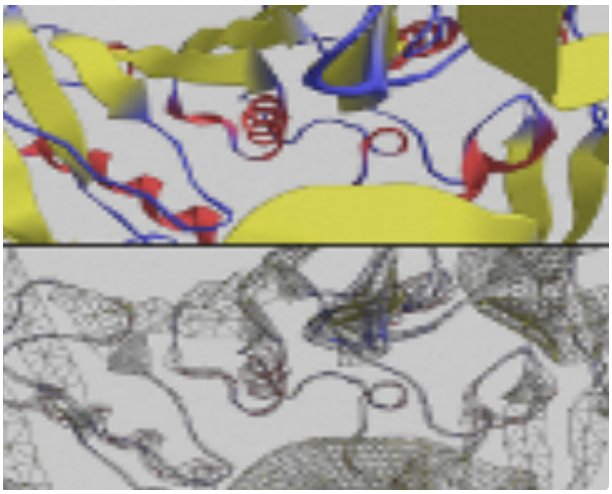

Molecular Dynamics simulations are of key importance in the drug design field. Among all possible representations commonly used to inspect these simulations, Ribbons has the advantage of giving the expert a good overview of the conformation of the molecule. Although several techniques have been previously proposed to render ribbons, all of them have limitations in terms of space or calculation time, making them not suitable for real-time interaction with simulation software. In this paper we present a novel adaptive method that generates ribbons in real-time, taking advantage of the tessellation shader. The result is a fast method that requires no precomputation, and that generates high quality shapes and shading.

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