An Object with a Striking Device and a Hostile Observer in Three-Dimensional Space

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Abstract—An autonomous object with a high-speed striking device is moving under observation, and a bodily observer has to hide from the device behind convex fragments of the surrounding area. The observer tracks the motion of the object in a safe mode. The task of the object is to evade observation by choosing its speed of motion. The observer's trajectory allowing to follow the object on the largest possible part of the object's trajectory is constructed.

Keywords: navigation, optimal trajectory, moving object, bodily observer.

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