

Sci & Tech Watch

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Stop, Stop, Stop, and Read This

by Kathiann
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Imagine someone has thrown a ball at your face. As it gets closer to you, it also appears bigger, which tells you how soon you'll get smacked. This simple phenomenon is called optical looming, and it could make driving safer.

Researchers Paul Milgram and Zhonghai Li, at the University of Toronto, created a computer simulation to test driver reactions to optical looming. "When we drive a car, we use the looming of the optical image of the car ahead in a similar way," Dr. Milgram explains.

Brake lights at a car's back end, together with the centre brake light in the rear window, form a triangle. The larger that triangle looks, and the faster that triangle increases in size, the quicker the driver behind will react — by braking

sooner to avoid smashing into the car ahead. Drivers following a car respond to the optical looming of this triangle. It's basically a visual trick.

The researchers' computer program fiddled with optical looming. Like in a video game, test drivers drove a car, following another car. Sometimes the front car's brake light triangle got bigger faster than it normally would based on its speed — it was a visual cue to slow down. When that happened at "night" or in "bad weather", test drivers "driving" the rear car braked faster.

For real cars, back brake lights would light up a slightly bigger area only when drivers braked hard or suddenly. It's a simple idea that could help many drivers avoid a pain in the rear end. ↗

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