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Pattern Recognition & Computer Vision

Recently, a paper/project was released in collaboration with the University of Pennsylvania and the University of Zurich tackling obstacle avoidance using a quadrotor with a monocular event-based camera. See <https://www.anishbhattacharya.com/research/evfly>.

I found this to be cool because the problem is very difficult to tackle with VIO at fast speeds in an unknown environment. Lots of robotics obstacle avoidance problems make use of LiDAR to map the environment, however, an event-based camera, can be faster because it detects changes in luminosity continuously. LiDAR has issues in fast-paced scenarios because it needs to wait for the laser that is emitted to return to the sensor to be able to get its distance measurement. Event-based cameras also are shown to work well in variable lighting conditions.