

A long-exposure photograph of a city street at night. The image shows a multi-lane road with a curved overpass. Light trails from cars are visible, creating streaks of white, yellow, and red. Tall buildings with lit windows are in the background. The overall scene is dark with artificial city lights.

JAIF 2022, Valence (FR)

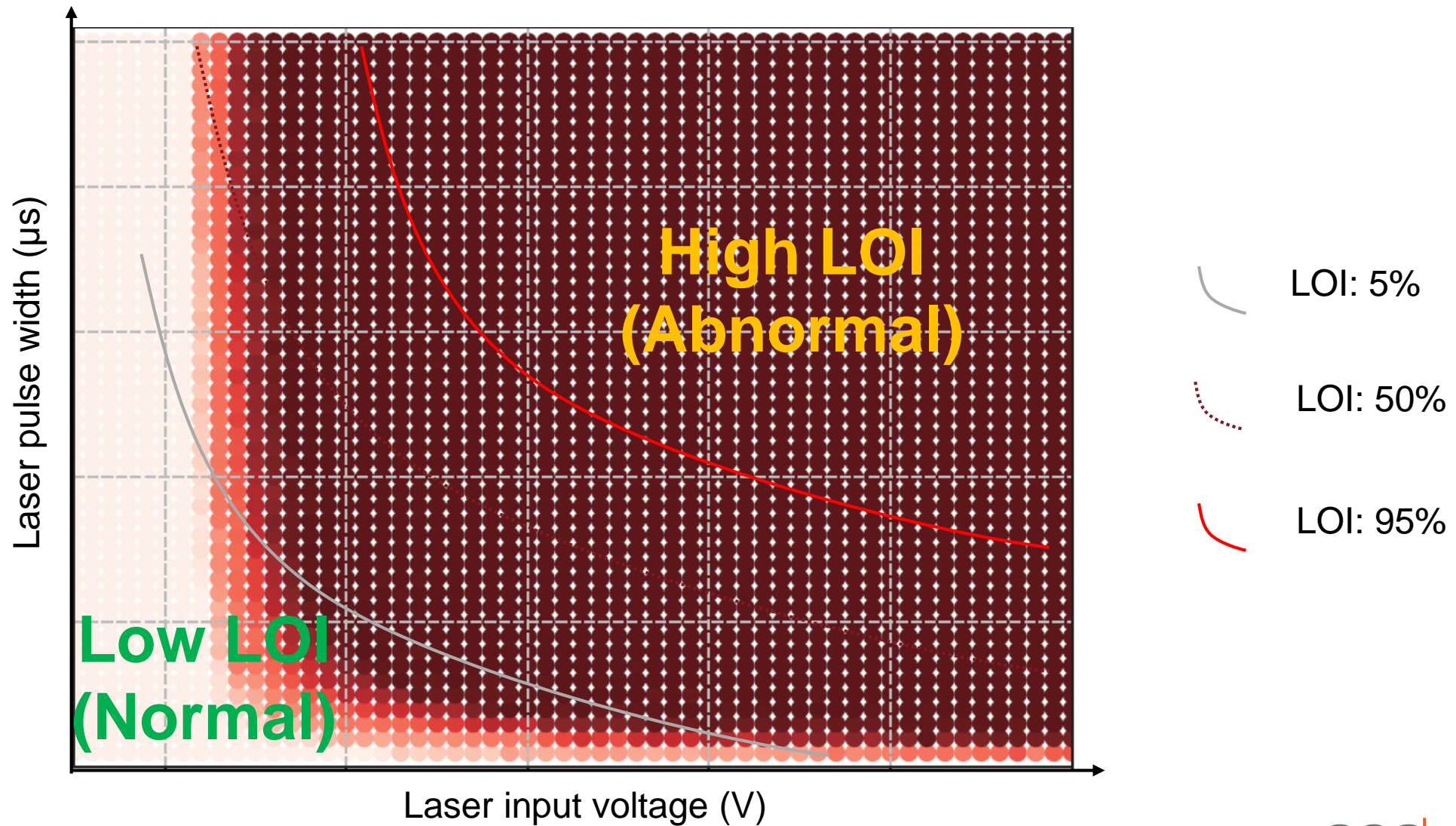
A Fast Characterization Method for Semi-invasive Fault Injection Attacks

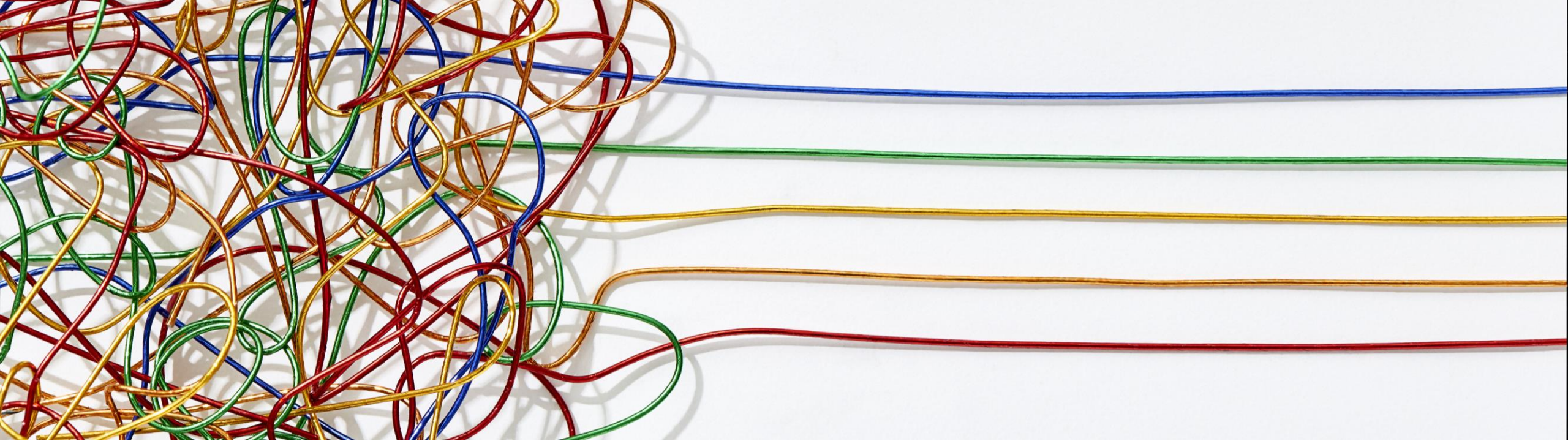
Lichao Wu, *Noemie Beringuier-Boher*, Gerard Ribera, Stepjan Picek

Why Characterization?



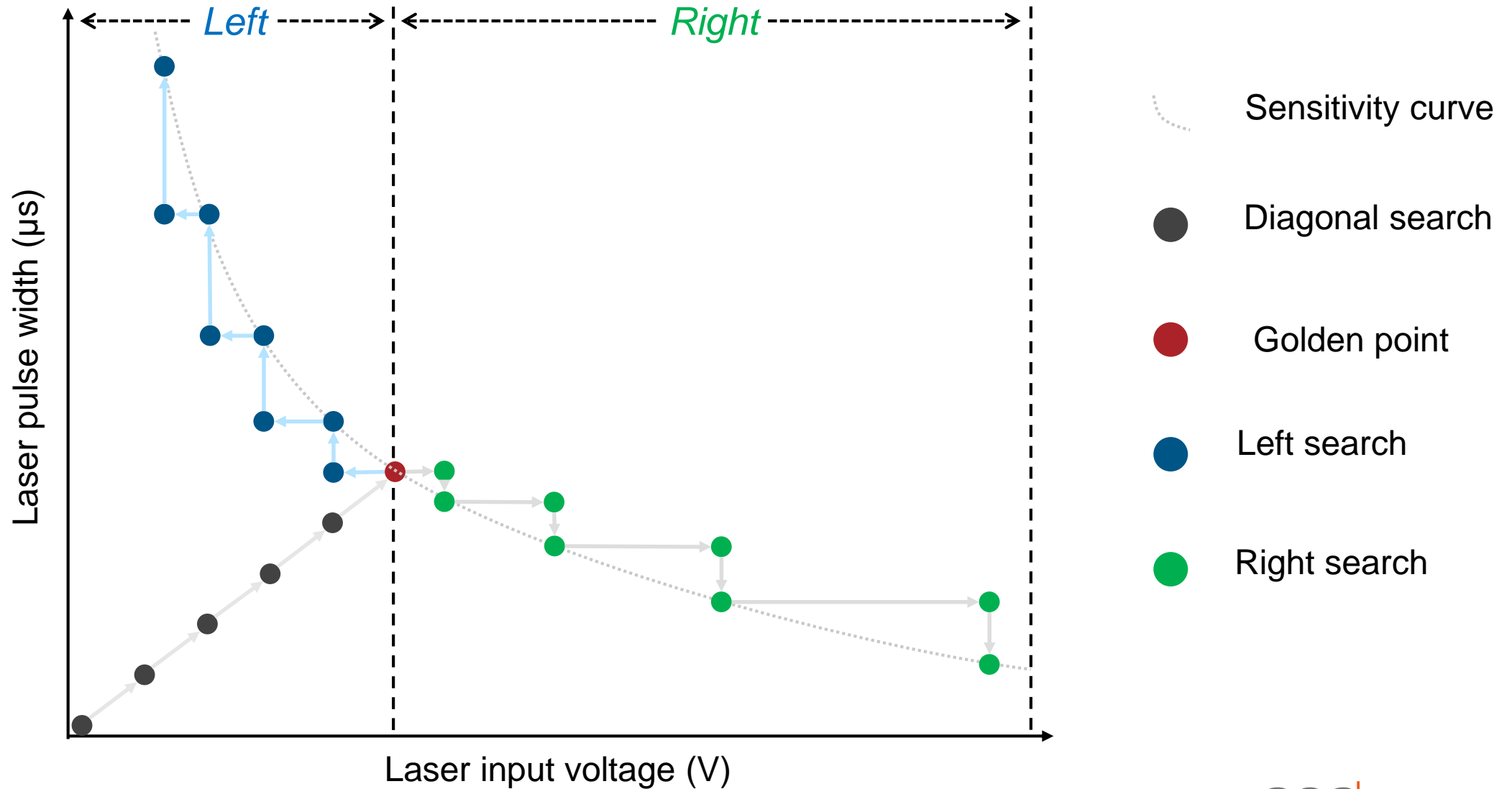
How to Characterize?





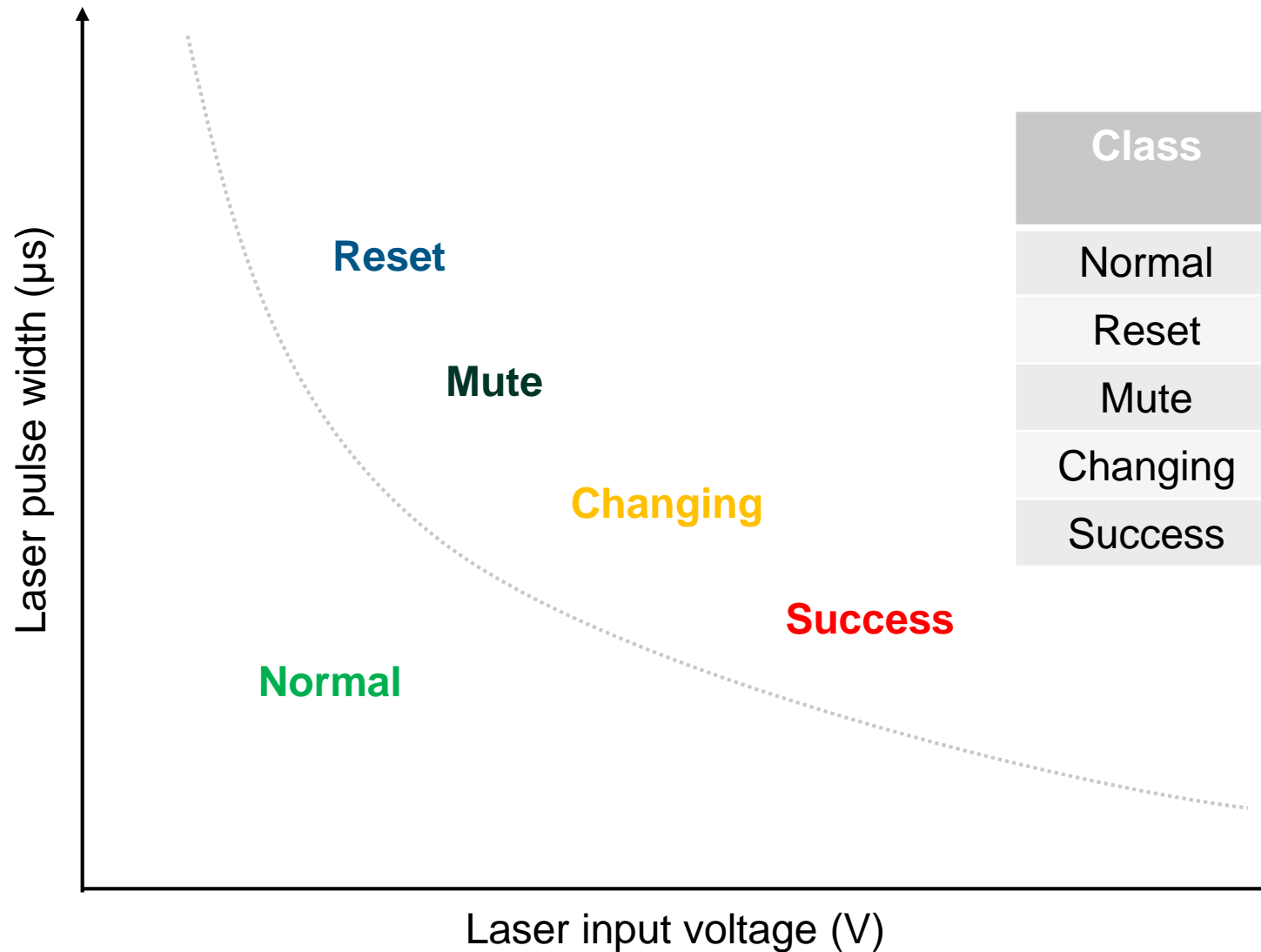
Fast Characterisation Methodology

Sensitivity Curve Generation

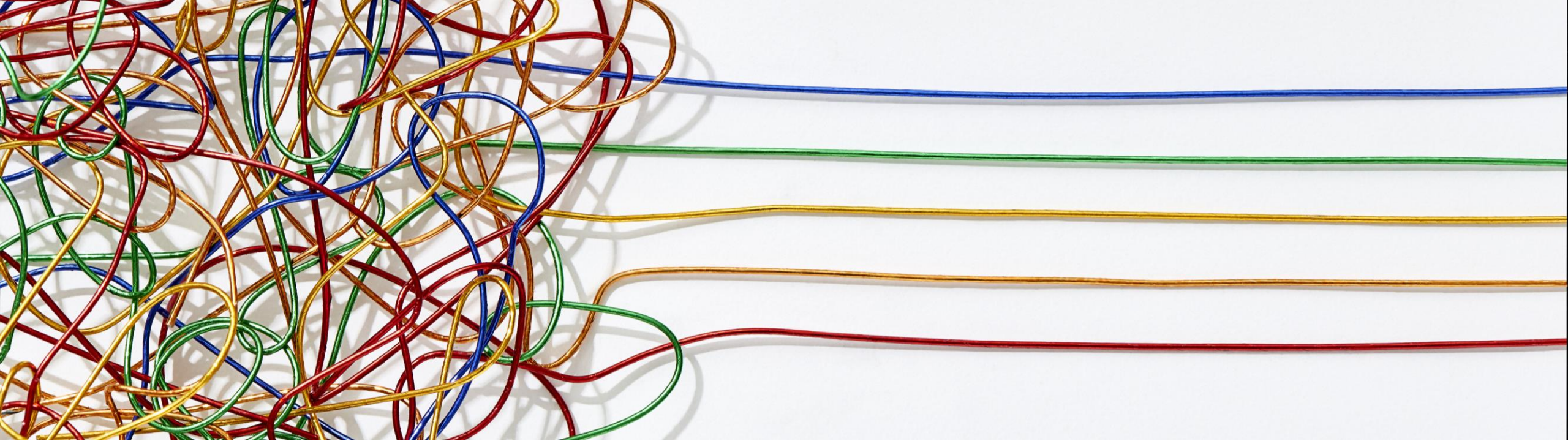




Evaluation: Impact Score (IS)



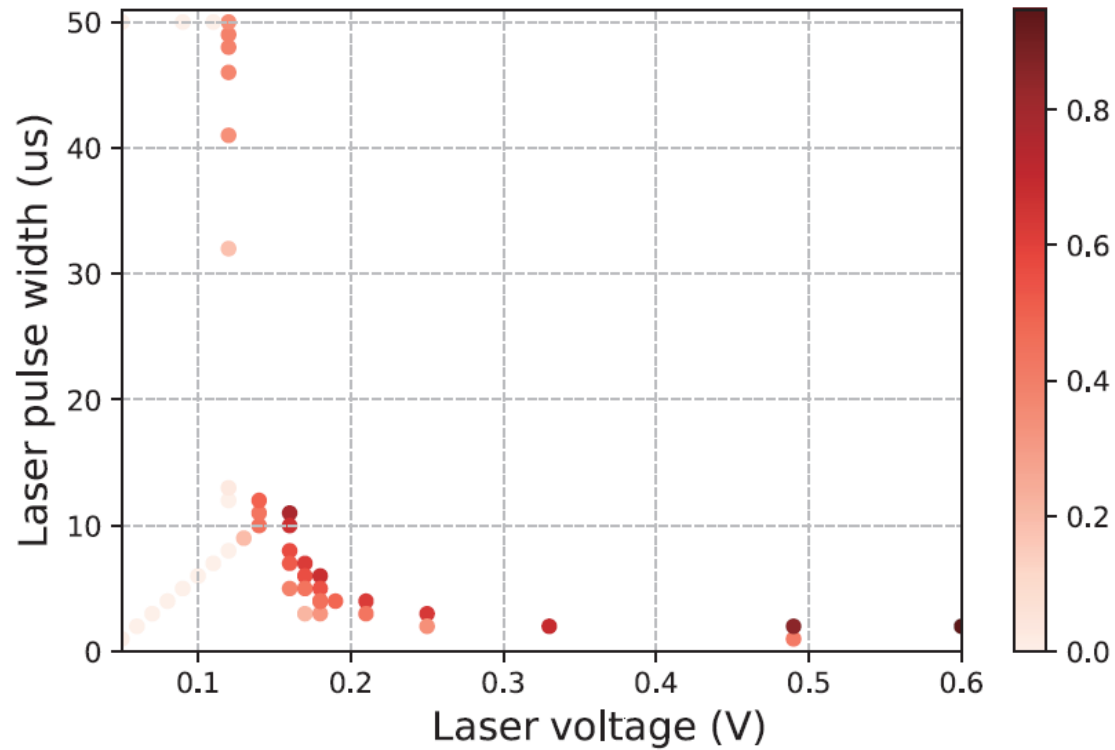
Class	Detected	Manipulated	Score
Normal			0
Reset	+		10
Mute	+	+	20
Changing		+	50
Success		++	100



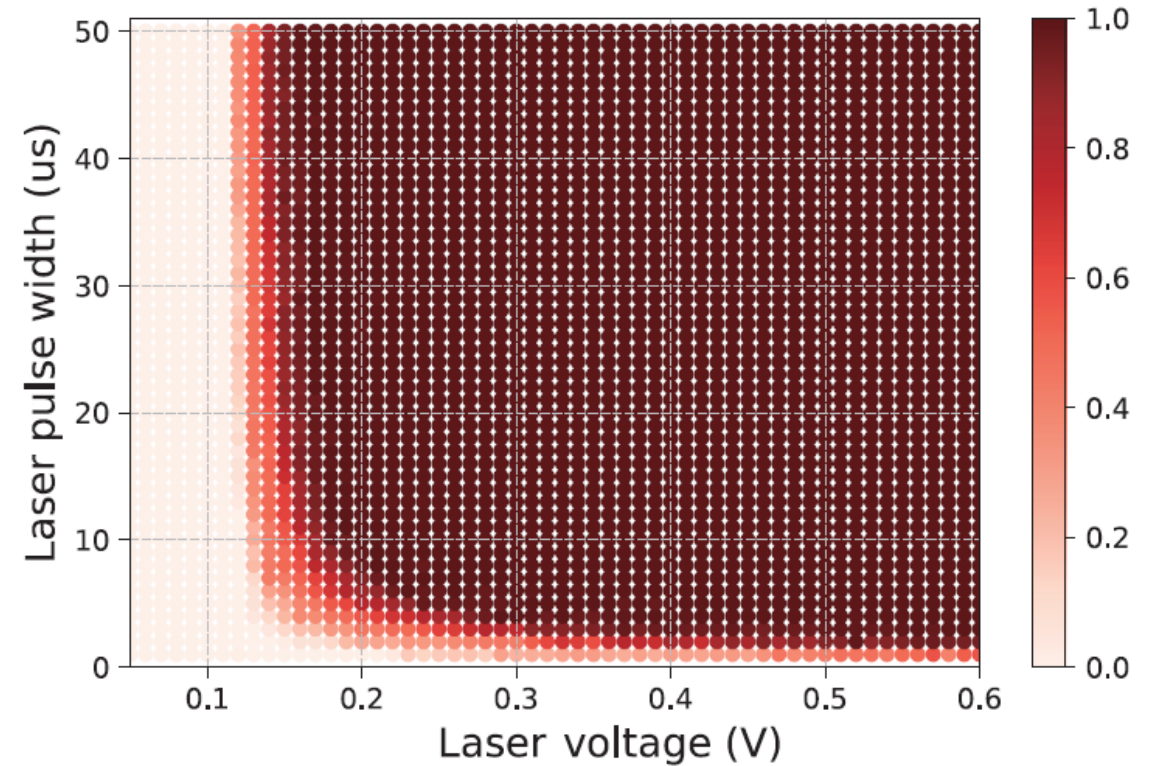
Experimental Results

Sensitivity Curve Generation

Sensitivity Curve

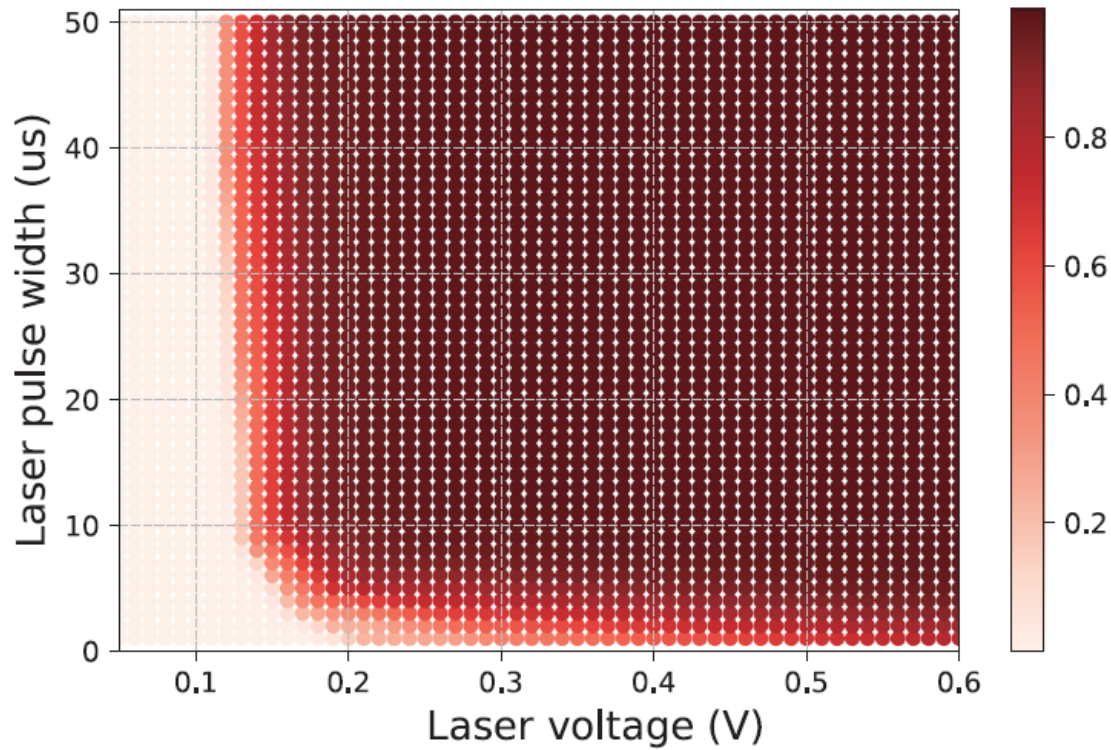


Exhaustive Scan

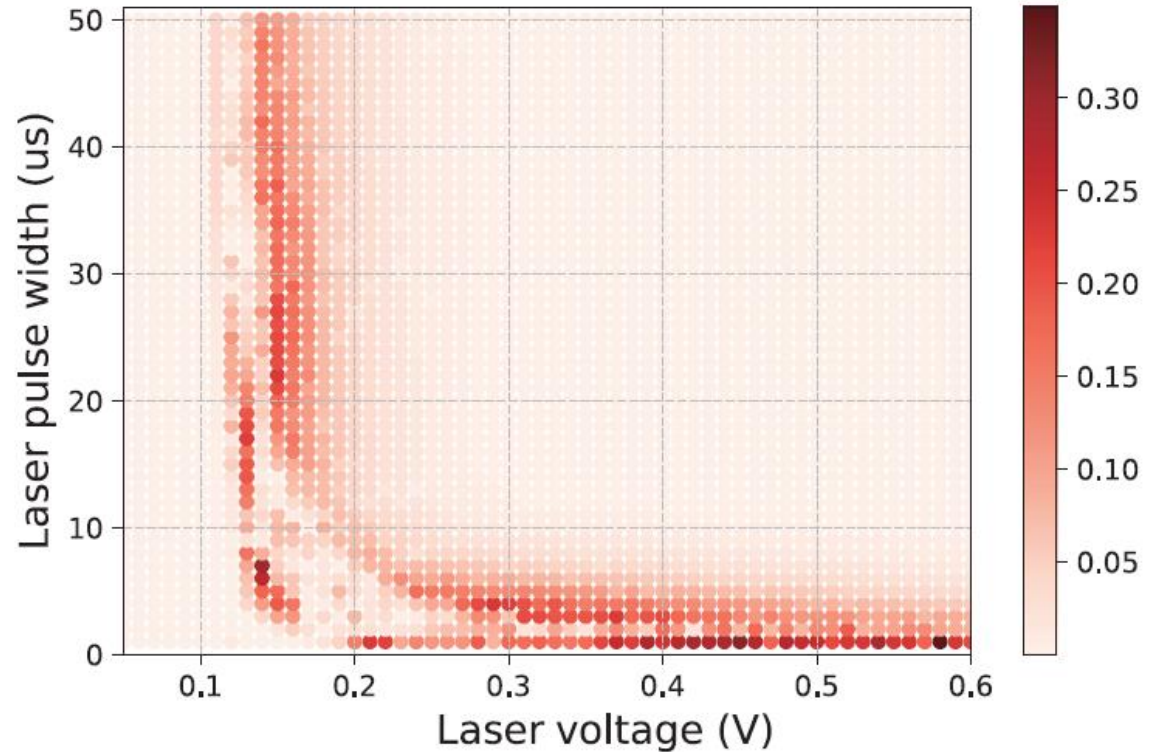


Sensitivity Curve Evaluation: Predicting LOIs

Prediction Result

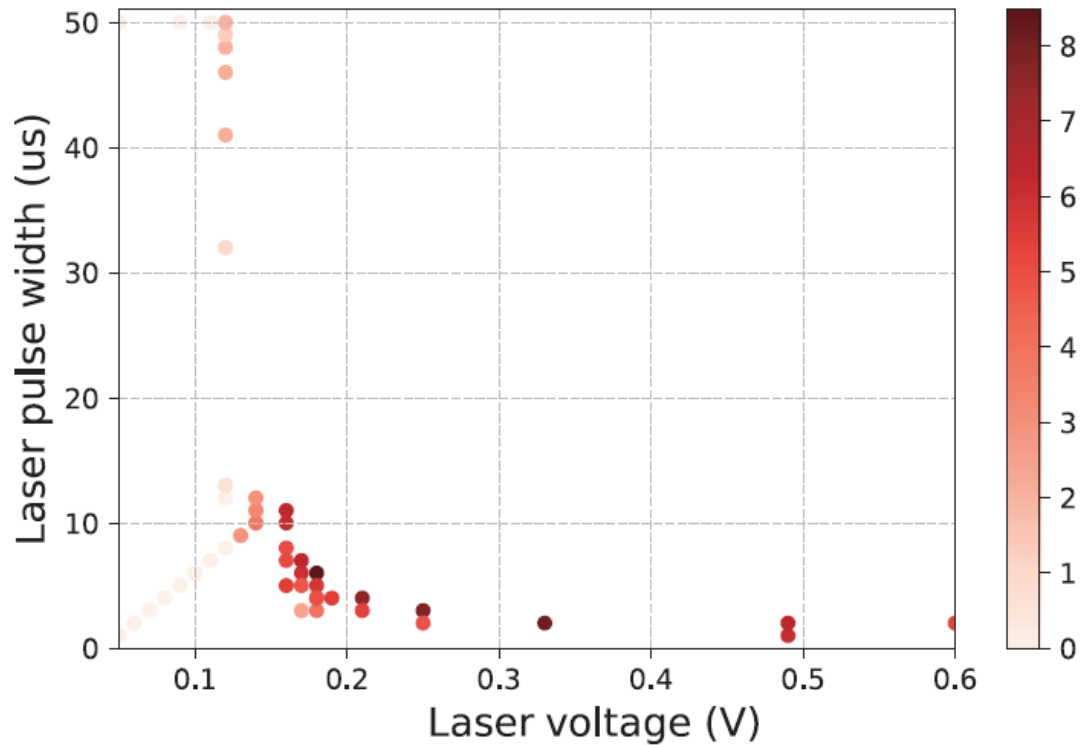


Exhaustive Scan/Prediction Error

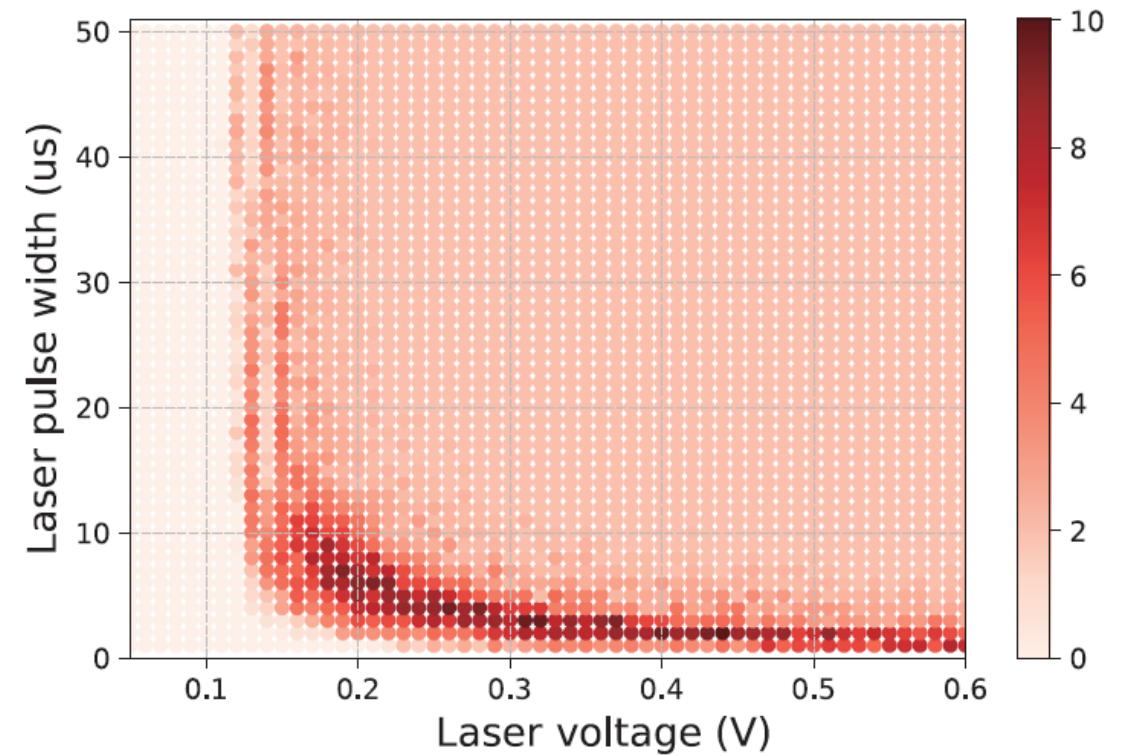


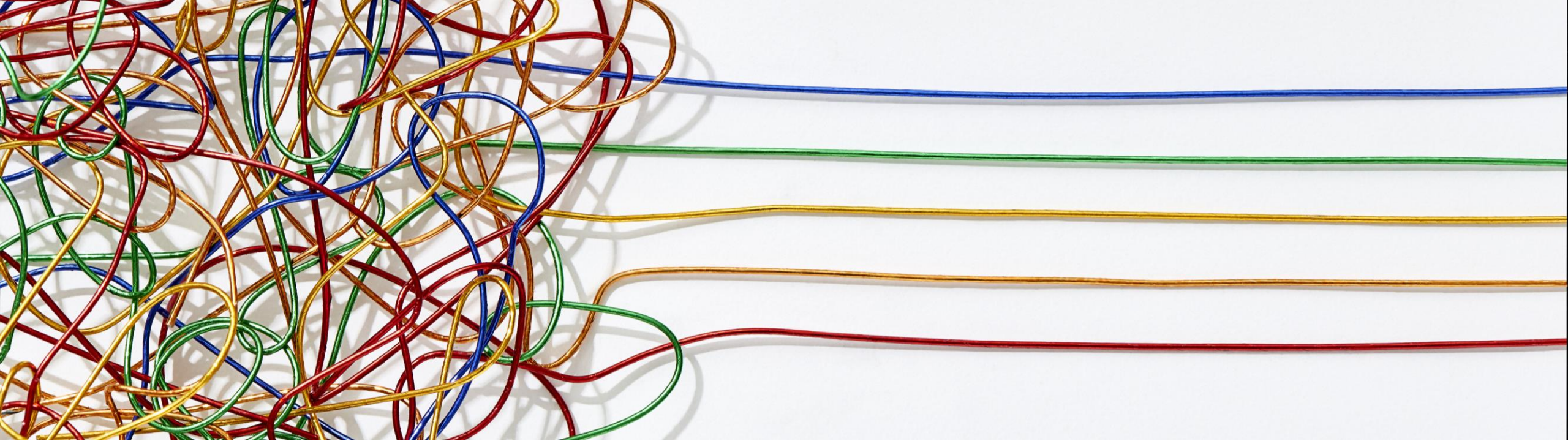
Sensitivity Curve Evaluation: Impact Score (IS)

Sensitivity Curve



Exhaustive Scan





Application

a stable and effective method for evaluation

Back to Origin



Attack Strategically





Thank you!

Do you have any questions?

Noemie.beringuier-boher@sgs.com

