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LSD: a Line Segment Detector

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- full text manuscript: PDF high-res. [?]
- source code: ZIP

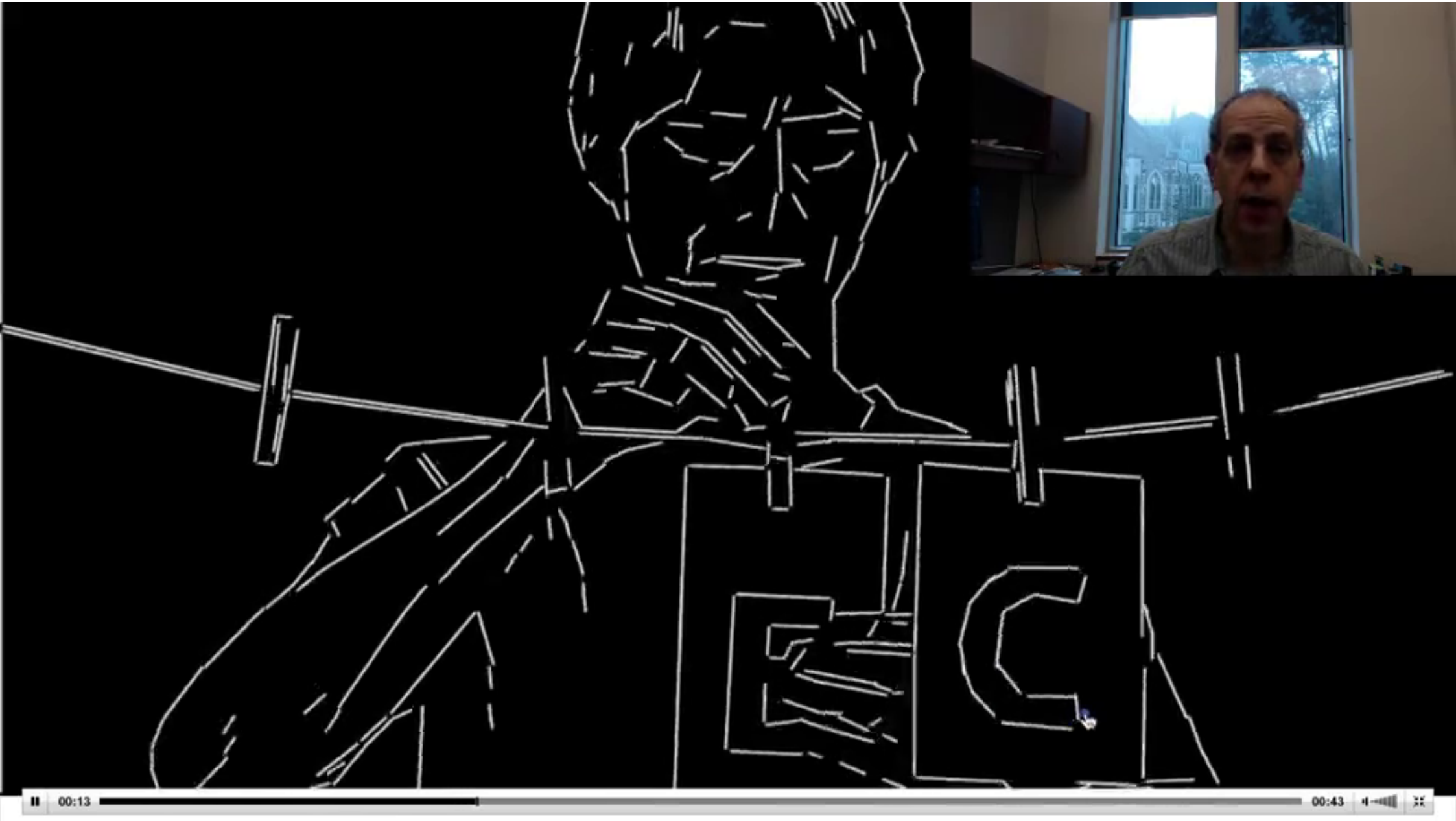
Communicated by Lionel Moisan
Demo edited by Rafael Grompone

Abstract

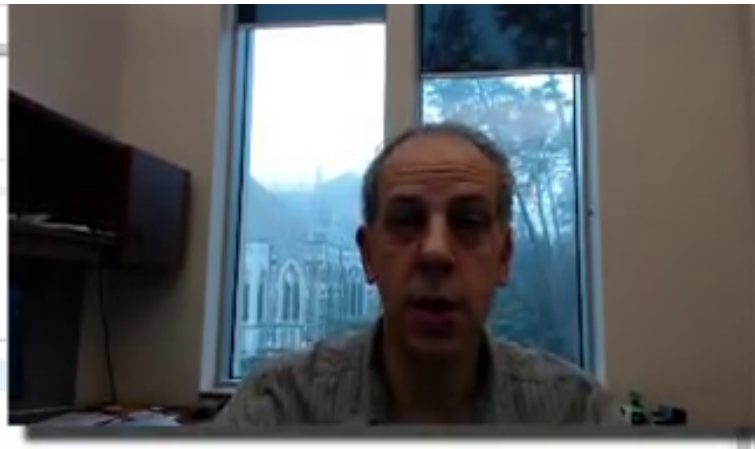
LSD is a linear-time Line Segment Detector giving subpixel accurate results. It is designed to work on any digital image without parameter tuning. It controls its own number of false detections: On average, one false alarms is allowed per image. The method is based on Burns, Hanson, and Riseman's method, and uses an a-contrario validation approach according to Desolneux, Moisan, and Morel's theory. The version described here includes some further improvement over the one described in the original article.

Supplementary Material

- sample video: MP4 [?]


00:13
00:43

demo.ipol.im/demo/gjmr_line_segment_detector/input_select?chairs.x=50&chairs.y=55



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The image was converted to gray level values.

Run the algorithm: run

Or you can run it after selecting a subimage by clicking two opposite corners of the subimage.

demo.ipol.im/demo/gjmr_line_segment_detector/result?key=EB02C5128E963A9338DAD05925CBB4CE

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Run again? new image | different subimage

Result

698 Line Segments were detected. The algorithm ran in 0.22s.

You can download the result in EPS format, in SVG format, or an ASCII file (see description below).

output

input

demo.ipol.im/demo/gjmr_line_segment_detector/result?key=2395A1C81D1F9C8CDF617E61AC9CED02

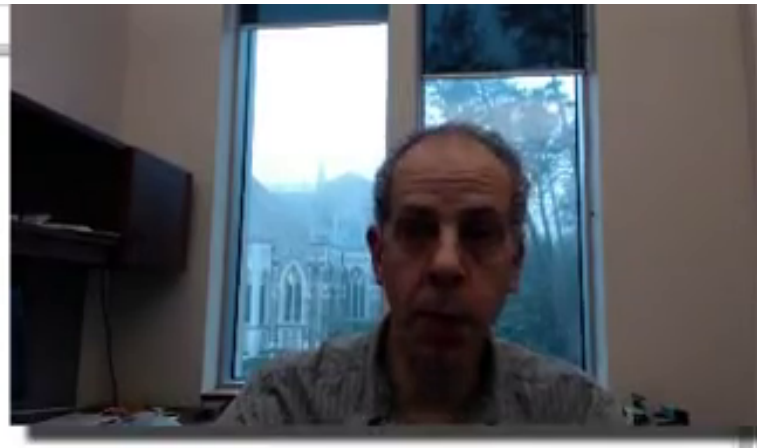
Result

847 Line Segments were detected. The algorithm ran in 0.28s.

You can download the result in EPS format, in SVG format, or an ASCII file (see description below).

output

input



demo.ipol.im/demo/gjmr_line_segment_detector/result?key=2395A1C81D1F9C8CDF617E61AC9CED02

Result

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output

input