

# Propagation Behavior of Ribbed Plasmonic Waveguides

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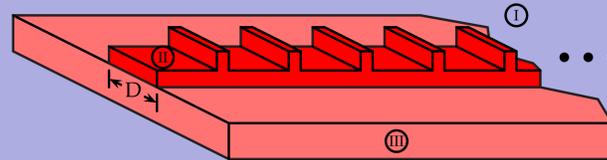
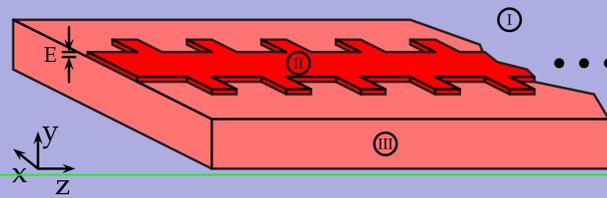
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## Contribution

We introduce a method for expression invariant face recognition. A generative 3D Morphable Model (3DMM) is used to separate identity and expression components. The expression removal results in increased recognition performance, even on difficult datasets, without a decrease in performance on expressionless datasets.

It is applicable to any kind of input data, and was evaluated here on textureless range scans.

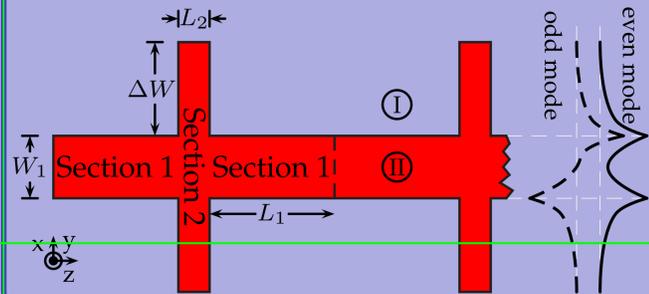
## Ribbed Plasmonic Waveguide



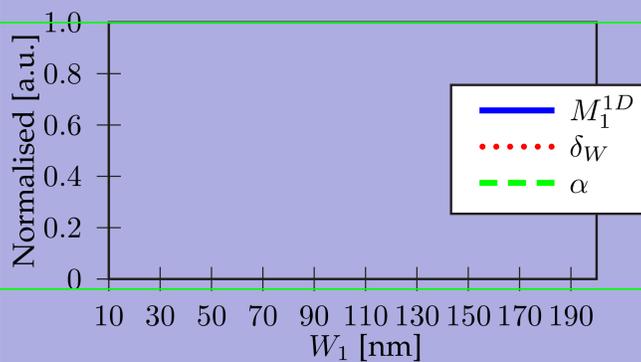
A Plasmonic Waveguide consists of a metallic strip II (here gold  $\epsilon_m = -20.758 - k1.269$ , at  $\lambda = 750 \text{ nm}$ ) on or within a dielectric medium I, III (here  $\epsilon_d = 4$ )

## Ribbed Plasmonic Waveguide

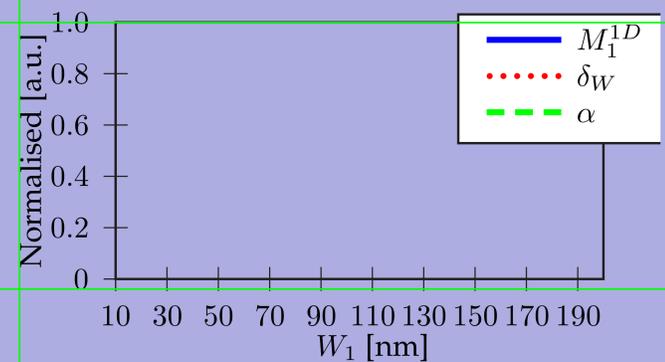
In order to keep down the numerical overhead the simulations are done on a symmetrical 2D ribbed waveguide as seen below. The symmetric nature of the waveguide makes it much easier to distinguish between the even and odd modes of the plasmonic waveguide.



## Results



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