

# Rough interfaces

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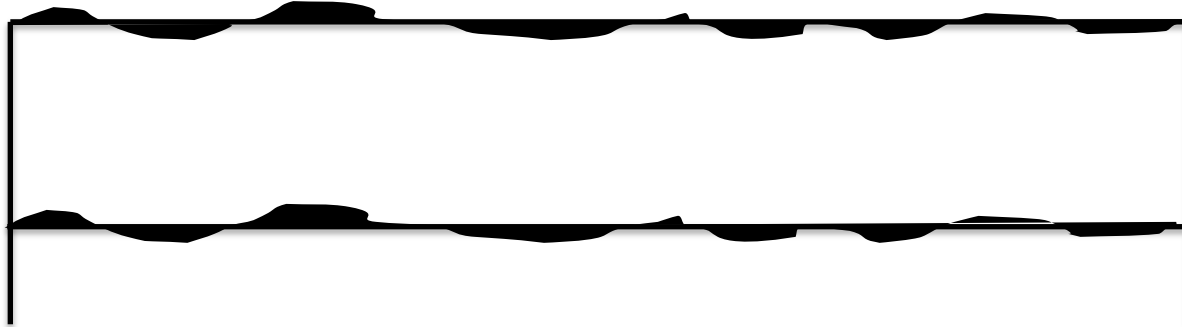
MLZ is a cooperation between:

# Overview

- Introduction
- Effects of rough interfaces
- Scattering models for roughness in BornAgain
- Usage in BornAgain

# Introduction

- Roughness formalism based on Schlomka et al.
- Height of roughness follows normal distribution with mean zero and standard deviation  $\sigma$



# Effects of roughness

- Height-height correlation function:

$$\langle \phi(r)\phi(r+R) \rangle = \sigma^2 \exp\left[-|R/\xi|^{2h}\right]$$

- Influence on Fresnel coefficients in each layer (tanh profile in BornAgain)
- Diffuse scattering

# BornAgain demo