

# some thoughts on future of BSDF materials, models & Radiance

Peter Apian-Bennewitz

pab advanced technologies Ltd  
Freiburg, Germany  
info@pab.eu

10th *Radiance* workshop, Lawrence Berkeley National Laboratory

- new BSDF material and LBNL work are major improvements, specially for complex fenestration and materials
- Radiance is an established framework e.g. for post-processing on top of rtrace, rpict
- gonio-photometric (pgII) measurements are fairly advanced high resolution, high dynamic range, fast, comprehensive

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- future directions depend on *your* feedback too

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models complex elements with a minimum of measurements

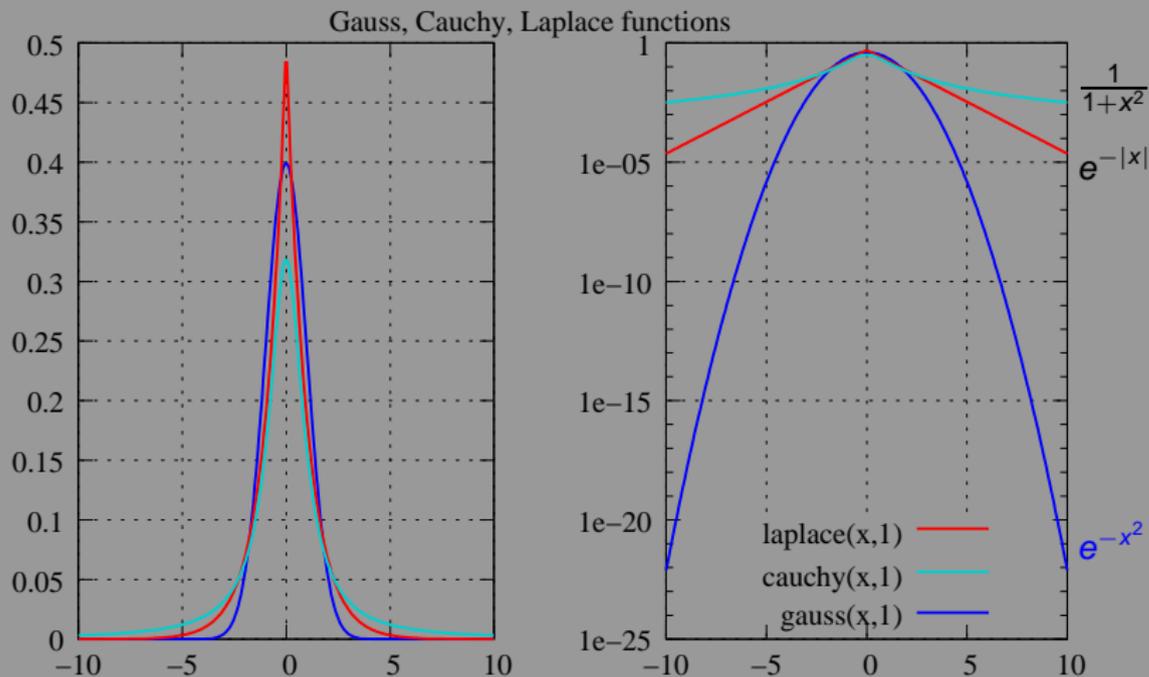
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- support of BSDF in photon-map extension  
would be very powerful in practice for light redirecting elements

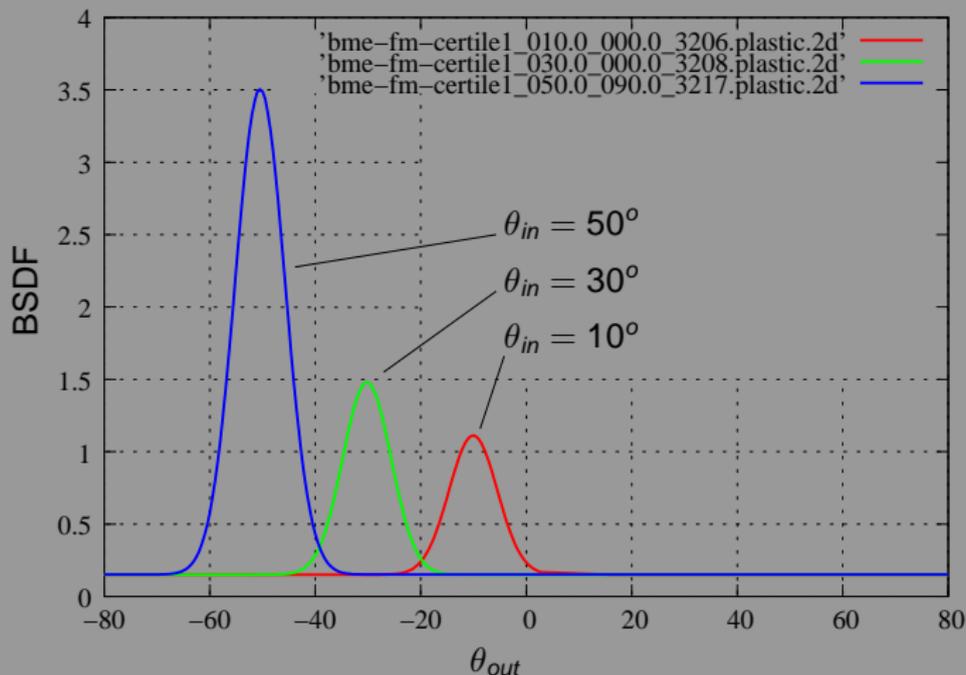
# alternatives to Gaussian model



all are known as probability distributions in Physics

# interpolation between incident angles ( $\theta_{in}, \phi_{in}$ )

simple example: shiny floor-tile

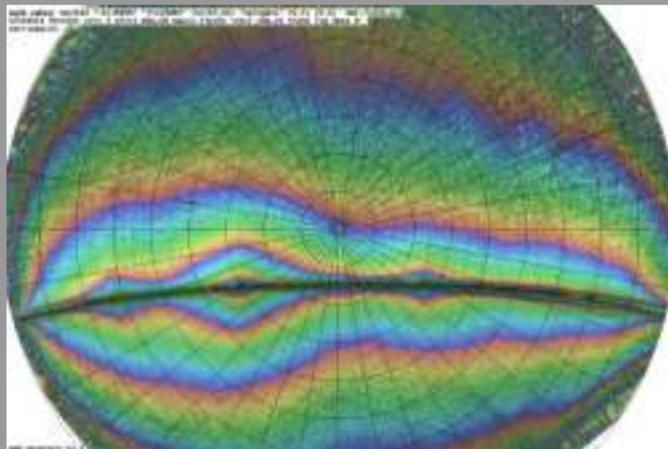


question: interpolation between similar shapes without a model ?

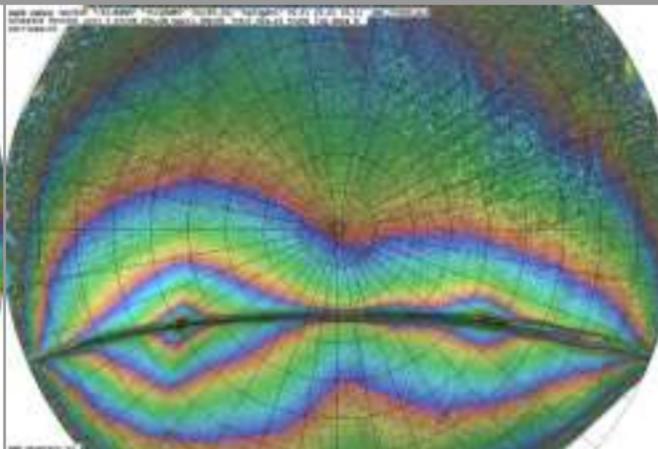
# interpolation between incident angles ( $\theta_{in}, \phi_{in}$ )

advanced example: multi walled transparent sheet roof material

Lexan Thermoclear Sheet LTC162, multiwall sheet  
(log scale)



$\theta_{in} = 30^\circ, \phi_{in} = 30^\circ$



$\theta_{in} = 50^\circ, \phi_{in} = 30^\circ$

possible MOLIA concepts: feature recognition, motion vectors , ...

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  - as part of the release process
- built upon existing level of Radiance

last slide.

- feedback ? Yes please ! appreciated at [info@pab.eu](mailto:info@pab.eu)
- or on [radiance-dev@radiance-online.org](mailto:radiance-dev@radiance-online.org)

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