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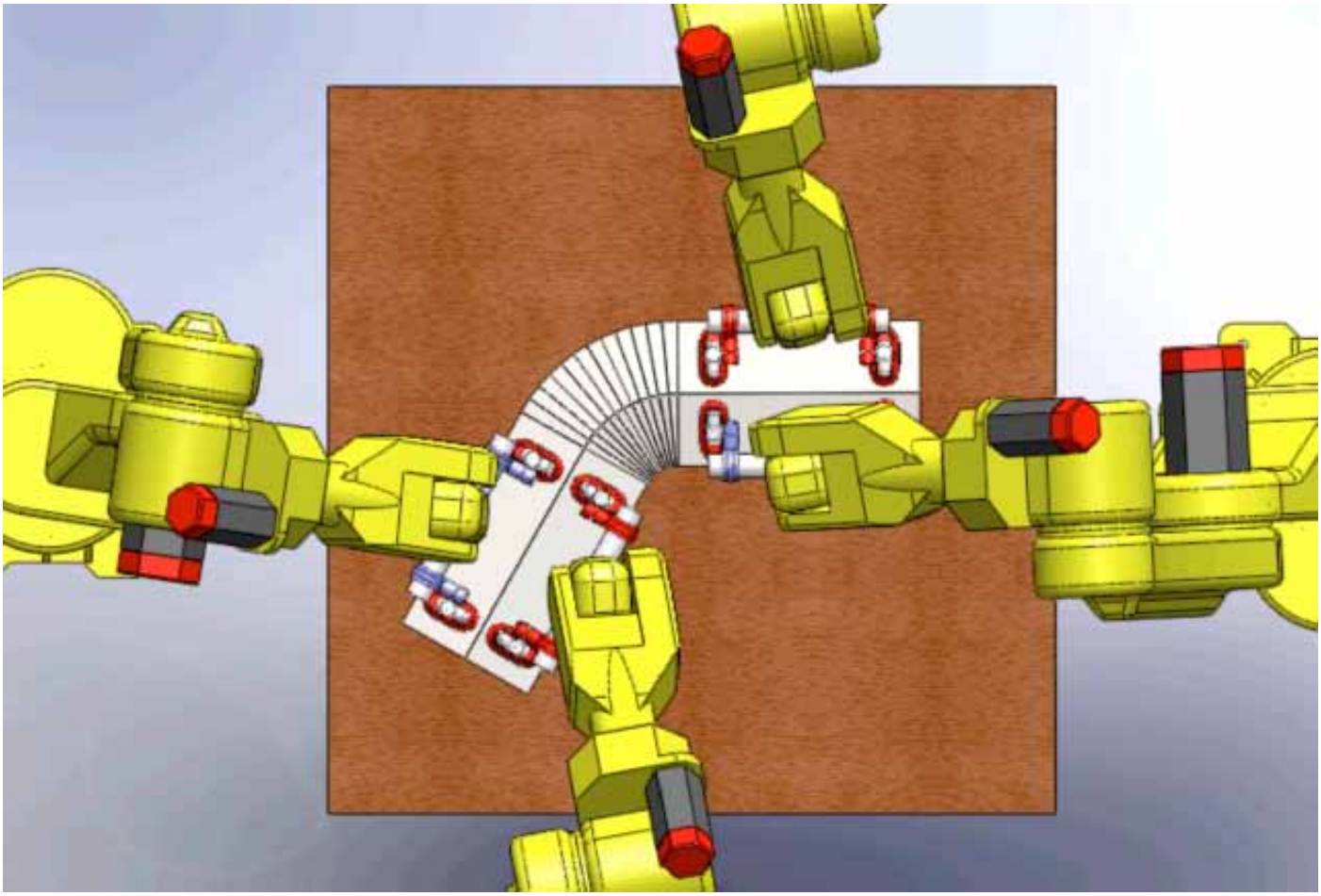
sales, training and support

KANGAROO Live Physics for Rhino and Grasshopper

RoboFold®
Rapid Sheet Metal Forming™

CURVED FOLDING

generative design for robotic manufacture



Rhinoceros®
NURBS modeling for Windows

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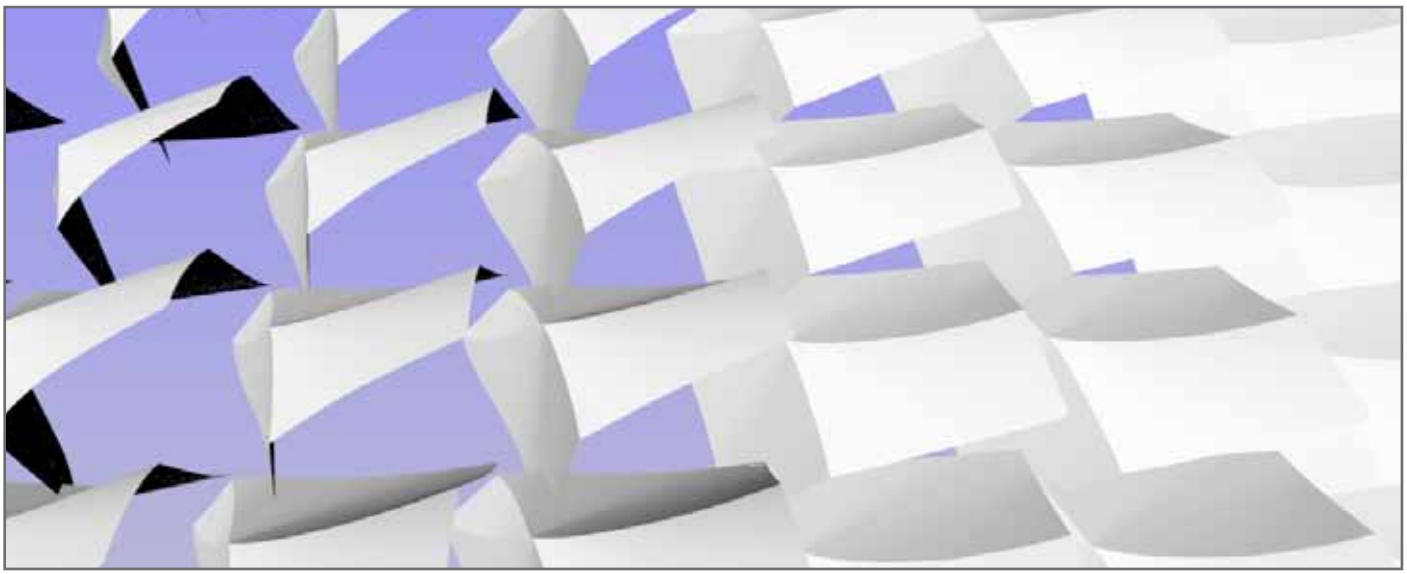
Simply Rhino presents a series of training workshops focused on the use of the Kangaroo physics engine plugin in Rhino's Grasshopper for the generative design and optimisation of components for the RoboFold metal forming technology.

The RoboFold technology is unique in it's ability to use CNC robots to make self similar components. The forming is achieved by folding sheet metal along curved crease lines. This will be explored in the first workshop through the design of facade elements, such as rainscreen cladding and solar shading.

This training workshop is appropriate for professionals and students. Discounts apply to students.



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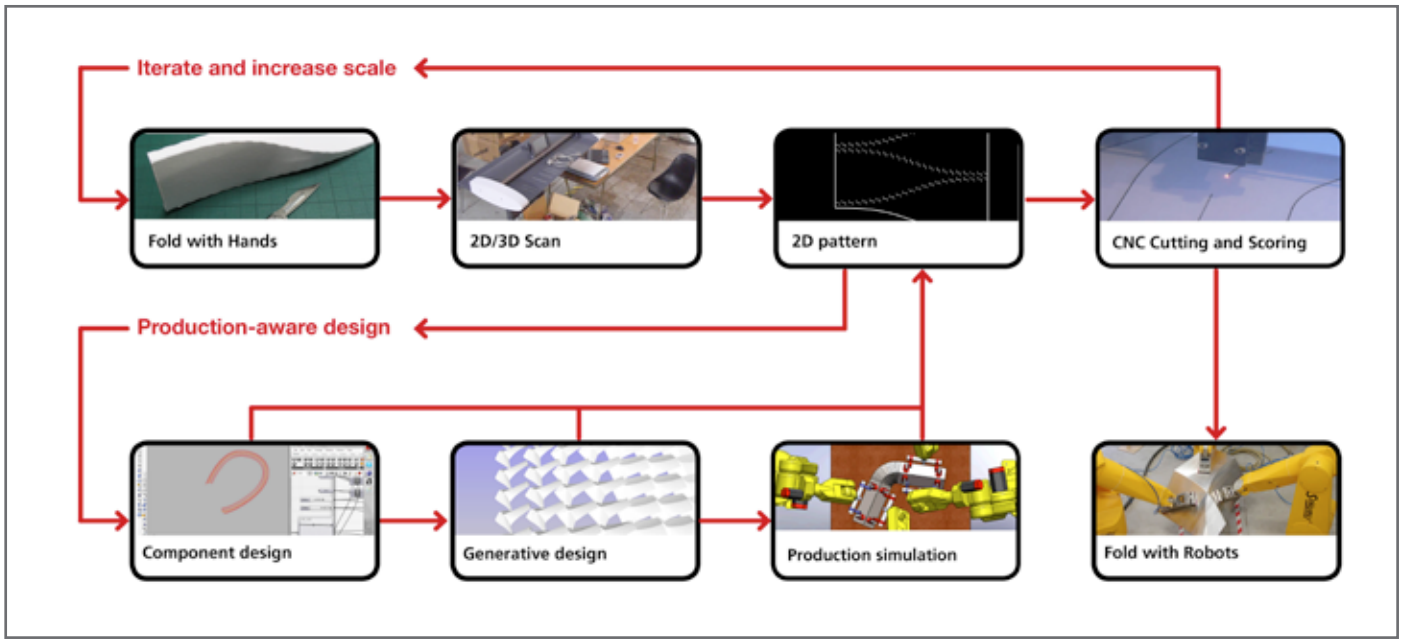
format

Gregory Epps, inventor of the RoboFold technology, and Daniel Piker, author of the Kangaroo physics engine plugin for Grasshopper, will teach the workshop content.

Over two days, we will be taking you through the RoboFold design development workflow used to optimise components for robotic manufacture; from physical sketch models and import techniques for digital component creation using Kangaroo, to generative design methodologies in Grasshopper and simulation of robotic production, as well as output of models using the on site vinyl cutter.

see simplyrhino.co.uk for pricing, dates and details



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schedule and content

Day 1: Fold It!

09:00 - Folding Thinking

An introduction to folding through hands on experimentation. Teams generate a library of forms and use these to meet the design challenge.

11:00 - Analogue to Digital

Card models are analysed for surface rulings, then scanned and converted to a planar-quad mesh fold pattern.

13:00 - Lunch break

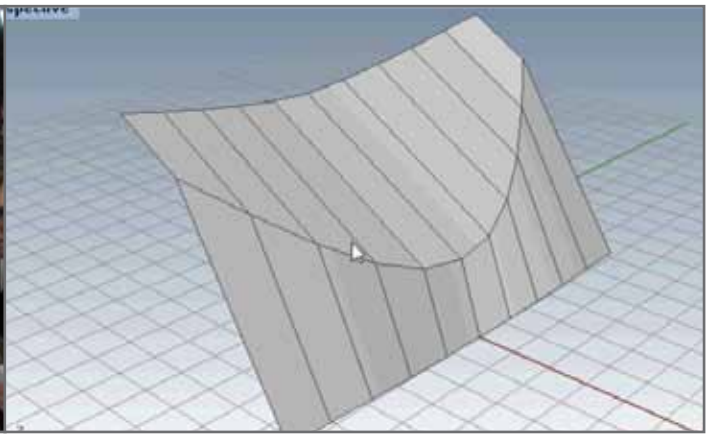
14:00 - Fold Simulation

Participants design parametric curved folding components and drive geometric variation using custom Grasshopper definitions.

16:00 - Robotic Simulation

Using robotics plugins, the components are verified for manufacture.

18:00 - End of Day 1



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Day 2: Make It!

09:00 - Generative Array

The parametric component is linked to performance criteria, such as solar gain/shading, on a non-uniform facade. This determines the variation in each element. Fabrication data for each individual component is extracted.

11:00 - Prototype Component

The CraftROBO desktop vinyl cutter is used to output components at desktop scale for folding by hand.

13:00 - Lunch break

14:00 - Facade Build

Components are assembled and evaluated on pre-prepared facade sub structure.

16:00 - Evaluation and Upload

Presentations are made. Feedback is given. Photos, renderings, definitions and videos are uploaded to www.curvedfolding.com (where appropriate).

18:00 - End of Day 2

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links

manufacturing technology - www.robofold.com
design and software network - www.curvedfolding.com

Kangaroo - www.kangaroophysics.com
Dan Piker - www.spacesymmetrystructure.com

organiser and software distributor - www.simplyrhino.co.uk
grasshopper plugin - www.grasshopper3D.com
rhino software - www.rhino3D.com

see you there...