



GENERATIONS / VANCOUVER
SIGGRAPH2018

REALISTIC RENDERING IN ARCHITECTURE AND PRODUCT VISUALIZATION

INTRODUCTION

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Charles University | Render Legion | ChaosGroup

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- Hi, my name is Jaroslav Křivánek and you are attending the course on Realistic rendering in architecture and product visualization.

WHAT IS ARCHVIZ?

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- First of all, what is architectural visualization?
- It's the art and craft of creating compelling CG images of architecture – both interiors and exteriors.
- It is a widespread discipline practiced by tens of thousands of architects and visualization professionals across the globe.
- The main purpose of archviz is *communication...*

WHAT IS ARCHVIZ?

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- Communication architect-client



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- Communication between the architect and its client, ...

WHAT IS ARCHVIZ?

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- Communication architect-client
- Architectural competitions



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- ... to convey design ideas in architectural competitions, ...

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- Communication architect-client
- Architectural competitions
- Urban planning



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- ... in urban planning, ...

WHAT IS ARCHVIZ?

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- Communication architect-client
- Architectural competitions
- Urban planning
- Real-estate



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- ... in the real-estate market, ...

WHAT IS ARCHVIZ?

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- Communication architect-client
- Architectural competitions
- Urban planning
- Real-estate
- Interior-design



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- ... in interior design.

WHAT IS PRODUCT VIZ?

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- Design process



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- Just as archviz deals with building design, product visualization deals with product/industrial design.
- It can be used to support the design process itself...

WHAT IS PRODUCT VIZ?

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- Design process
- Catalogues



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- ... create product catalogues ...

WHAT IS PRODUCT VIZ?

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- Design process
- Catalogues
- Marketing



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- ... and for other marketing purposes.

WHY COURSE ON ARCH/PROD-VIZ?

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- SIGGRAPH and ACM TOG focus mostly on CG animation/VFX
- Recent SIGGRAPH courses
 - Path tracing in production (2017,2018)
 - The Path-Tracing Revolution in the Movie Industry (2015)
- ACM TOG special issue on production rendering
 - Arnold, Hyperion, Manuka, RenderMan



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- Why do we need a dedicated SIGGRAPH course on rendering in architecture and product visualization?
- Simply because there is essentially no information on these fields here.
- Indeed, looking at the SIGGRAPH courses from the last several years, or at the recent special issue of ACM TOG on production rendering, one find out that they all focus almost exclusively on CG animation and VFX.

WHY COURSE ON ARCH/PROD-VIZ?

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- Significant global market
 - Visualizations themselves
 - **SW tools (renderers & their ecosystems)**
- Specialized needs/workflows that differ from CG animation/VFX
- Broader view of rendering



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- While CG animation and VFX are quite visible, thanks to the influx of Hollywood movies, architectural and product visualization are significant global markets – essentially every building project today involves some elements of it.
- The market is quite extensive in terms of the visualization business itself but also in terms of the software tools, namely the renderers, used to produce the visualizations.
- The workflows and tools used in architectural and product visualization differ from animation/VFX.
- So our goal is to show the rendering practice from a new angle and hopefully bring a broader perspective of the rendering field to SIGGRAPH.

COURSE OVERVIEW

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Christophe Chevallier – Norm Li

Ondra Karlík – Render Legion

Vlado Koylazov – ChaosGroup



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 v-ray



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- For that purpose, I've brought together a number of speakers with different backgrounds and focus to cover different aspect of archviz and product viz.
- Christophe Chevallier, the art director at Norm Li – one of the largest Canadian archviz houses – will introduce the field from the artist's perspective.
- Ondra Karlík, my colleague and co-founder from Render Legion will talk about the changes in archviz rendering technology over the last four years and illustrate them on the example of Corona Renderer.
- Vlado Koylazov, co-founder and CTO of Chaos Group, will share his experience with bridging the worlds of rendering for archviz and VFX in his V-ray renderer.

COURSE OVERVIEW

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Henrik Wann Jensen – Luxion



Thomas Ludwig – Glare Tech.



Indigo Renderer

Jarda Křivánek – Charles Uni,
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- Henrik Wann Jensen will use the story of the Keyshot renderer to take us to the worlds of rendering for CAD and industrial design.
- Thomas Ludwig from Glare Technologies will talk about some specifics of Indigo Renderer, such as production-ready bidirectional path tracing on the GPU.
- And finally, I will conclude by juxtaposing my experience as a rendering researcher both in the academia and in the industry, and give some directions for future rendering research.



- One organizational remark – we will be taking questions after the individual talks, but we'll be also around during the break and after the course for a chat.

NEXT UP

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Christophe Chevallier – Norm Li



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- And now, without any further ado, let me give it over to Christophe to introduce the field of archviz as such.