

VIRTUALIZING RHOTONICS

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Abbe School JENA of Photonics



digiPHOTON M.Sc. Photonics Program





- An all-English, two-year Master's Degree
- Students with different backgrounds and nationalities
- About 60-70 Freshmen every October
- A limited number of slots in an adapted online course that allows to begin studies online
- Majority of students are on-site but a significant number remain online







Preparation

1st Semester

2nd Semester

3rd Semester

Final Semester

Master's Thesis

- Kickstarter Course
- Prep-Course Math
- ✓ Lectures (Adjustment, Fundamentals)

Lab Course

- Fundamentals)❖ Experimental
- ✓ Lectures (Fundamentals, Specialization)
- > Internship

- ✓ Lectures (Specialization)
- Research Lab

- **❖ Socializing and Community Building**
 - ✓ Organized by the Professors (usually via streaming).
 - Organized by the Various Scientific Working Groups
 - Focus of the Digitalization Team



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XR TwinLab





of photonics











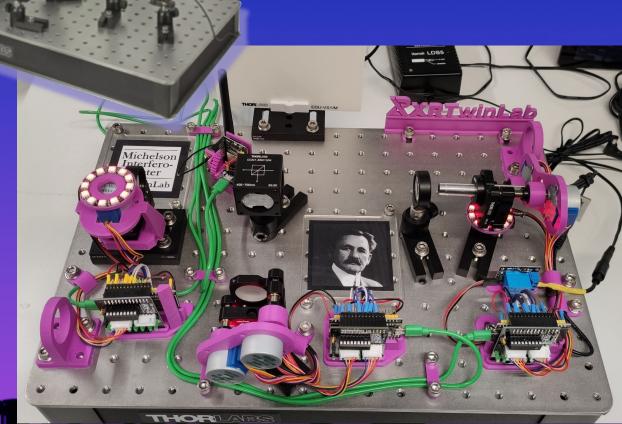


J. Kretzschmar, C. Henkel, F. Sojka, J. Domke, T.Kaiser, C. Helgert, T.Pertsch, "XR Twin Lab: an Open Source Toolbox for XR Remote Access of Experimental Setups in Photonics based on Web Technologies" Proceedings of DigiLab4U: Online-labs in education, 2022, Stuttgart, Germany













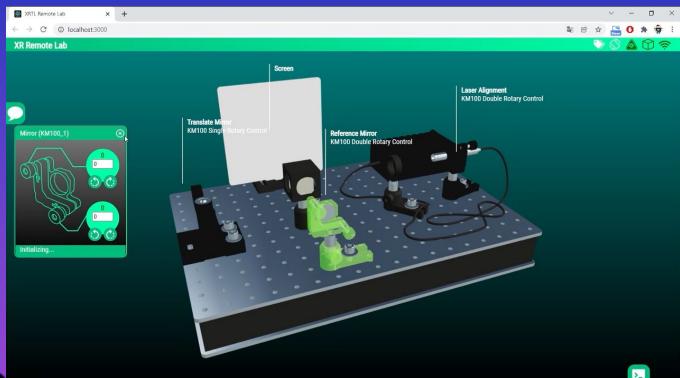












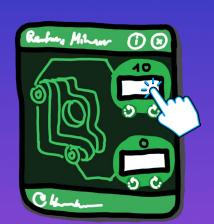
Platform-independent, modularly expandable React.js application with OpenGL rendering



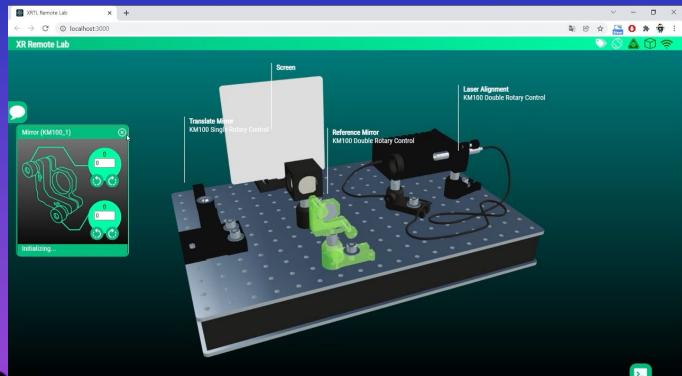












Platform-independent, modularly expandable React.js application with OpenGL rendering



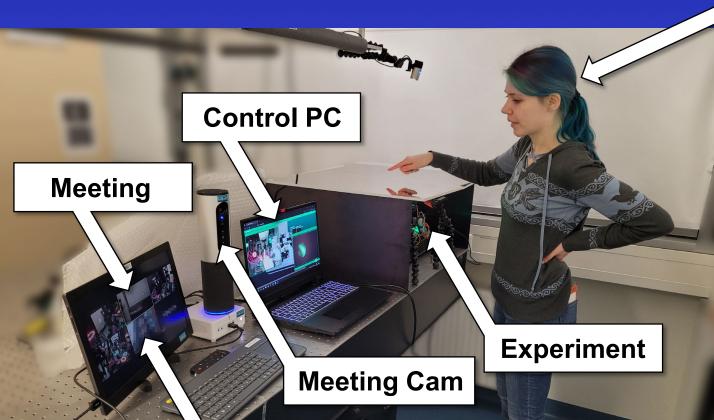
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XR TwinLab on-site view





Supervisor



Kit Michelson Interferometer with Thorlabs Educationa 3D printed attachmer a, microcontrollers Student

Platform-independent, modularly expandable React.js application with OpenGL rendering





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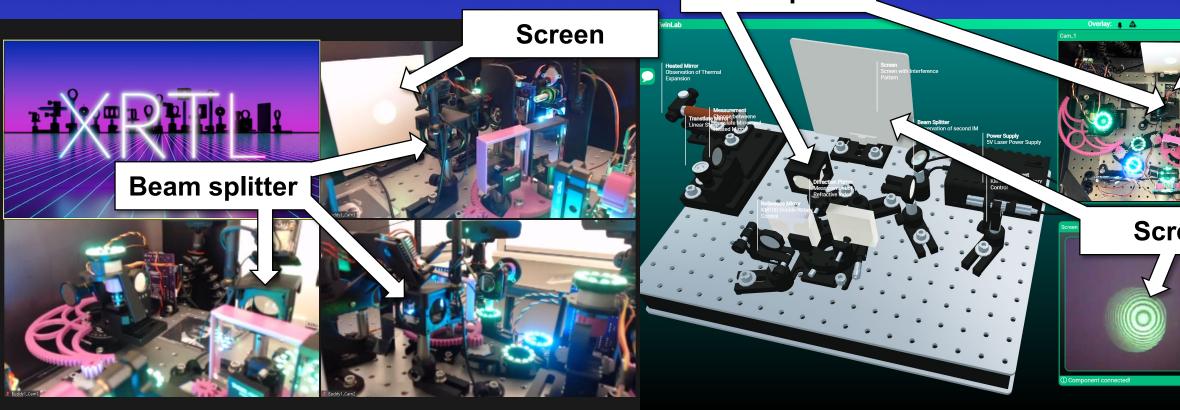
XR TwinLab online view

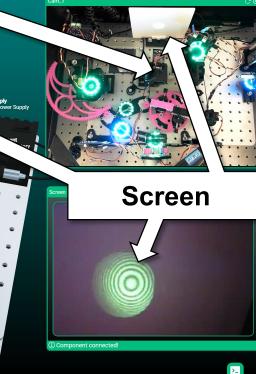




Friedrich-Schiller-Universität Jena

Beam splitter





Thorlabs Educational Kit Michelson Interferometer with 3D printed attachments, actuators, camera, microcontrollers

Platform-independent, modularly expandable React.js application with OpenGL rendering



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Try it out for yourself now!













https://xrtl.uni-jena.de/



digiphoton Thanks

Questions, Suggestions

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