

Improving user and developer experiences in HPC by applying user experience insights

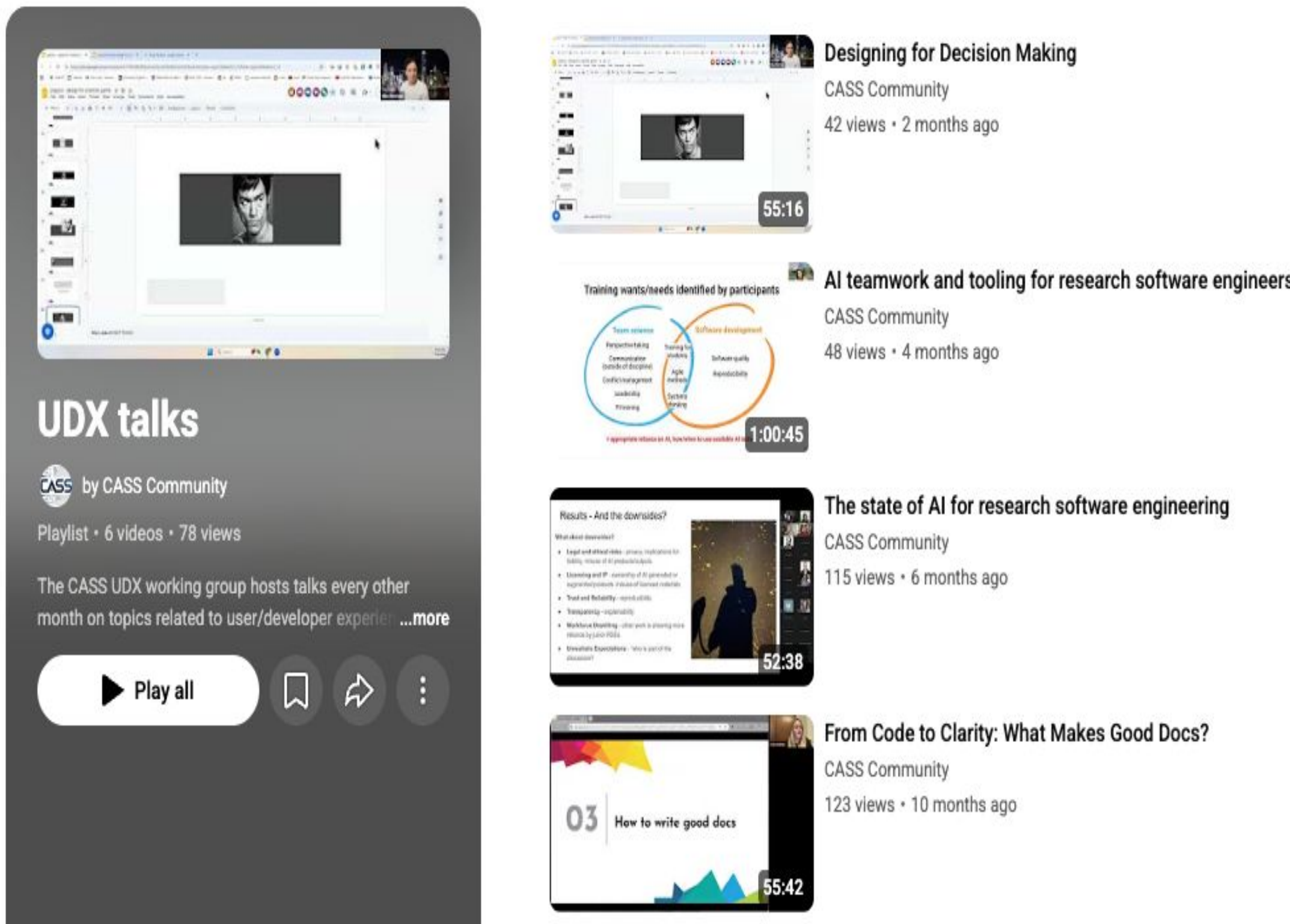
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PESO and CASS apply user experience methods, build reusable resources and shared knowledge, and collaborate with software teams to improve user and developer experiences (UDX)

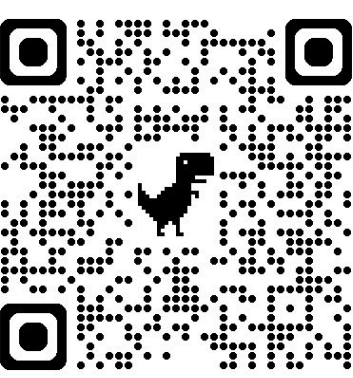
- UDX issues can hinder adoption and use of software as well as make development unnecessarily difficult
- PESO UDX work focuses on enhancing the usability, accessibility, and productivity of PESO and CASS tools
- PESO’s strategy is to empower and assist developers

Building knowledge

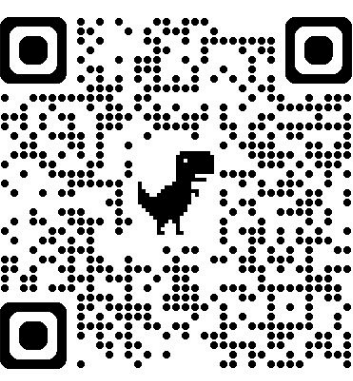


We host webinars and discussion hours on UDX topics, showcasing tools and upskilling the community.

Watch past talks at go.lbl.gov/udx-webinars. Find slides in the UX in Science Zenodo community.



Register for webinars
1st Tues of odd months, 12pm Eastern
Next meeting: Sept 1



Register for discussion hours
1st Tues of even months, 12pm Eastern
Next meeting: Oct 6 (August cancelled)

Applying UX methods + building resources

We use interviews, heuristic evaluations, and collaborative exercises as assessment tools

Example: We identified opportunities to improve community stewardship of E4S by conducting interviews about how stakeholders approach stewardship and usability work themselves

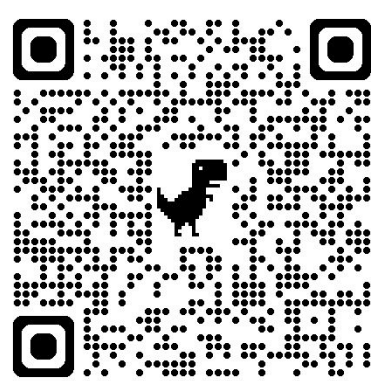
An insight: Abstraction can improve usability by hiding complexity from users and lowering barriers to entry. However, this strategy can backfire when abstraction obscures responsible parties

A recommendation: Create routes for users to contact E4S member packages as needed; promote and document ways for users to provide feedback to E4S

What’s a heuristic evaluation? Jakob Nielsen provides ten principles or *heuristics* that interactive tools should follow to ensure usability¹. A heuristic evaluation involves assessing a design or tool for adherence to these principles. Scan the code below and get involved with our study to learn more.



Want to get involved in building resources and see our methods in action?



Scan to volunteer!

To adapt standard design guidelines for HPC settings, we are seeking volunteers who will conduct a heuristic evaluation of a software product’s usability and then participate in an interview about their experience.

Collaborating with teams

A partnership between The Good Docs Project and CASS will provide software packages with documentation support.

Technical writers from The Good Docs Project will be paired with volunteering software teams to audit their documentation and provide recommendations for improvement.

How to write like a caveman (credit: Daniel Beck)

The interface provides the ability to instruct the operating system to render items between event dispatches.



INTERFACE TELL OPERATING SYSTEM. OPERATING SYSTEM RENDER. ITEM RENDER BETWEEN EVENT.

The interface tells the operating system to render items between events.

Slide from the UDX webinar, “From code to clarity: What makes good docs?” Delivered by the Good Docs Project².

1. Jakob Nielsen. (1994, April 24). 10 Usability Heuristics for User Interface Design. Nielsen Norman Group. <https://www.nngroup.com/articles/ten-usability-heuristics/>
2. The Good Docs Project. (2025, September 2). From code to clarity: What makes good docs?. Zenodo. <https://doi.org/10.5281/zenodo.17049866>

pesoproject.org | cass.community



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