



Bridges Aalto 2022

Mathematics / Art / Music / Architecture /Culture

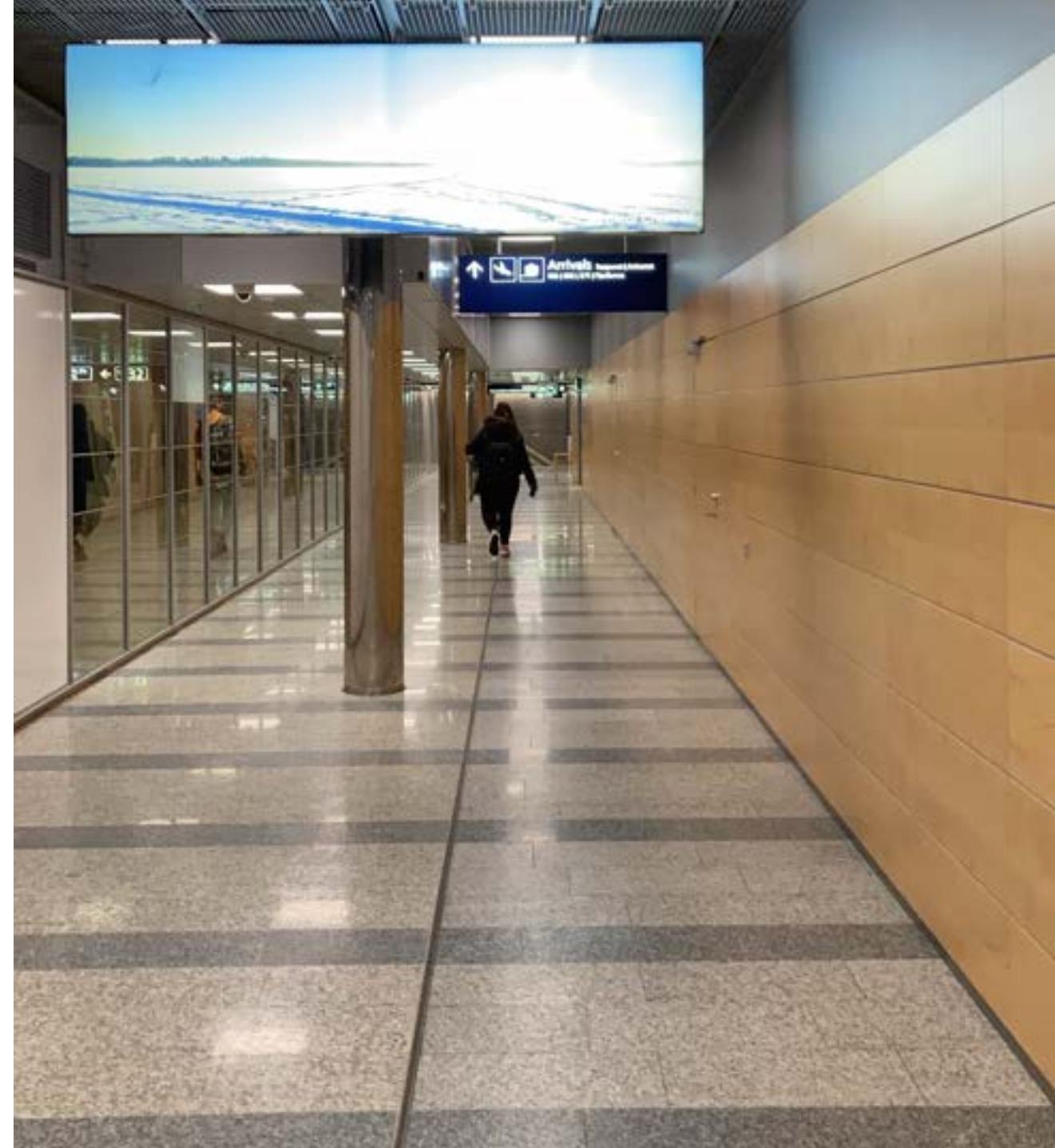
Kodai Takenaga

Contents

1. From JAPAN to FINLAND
2. Bridges Aalto 2022
3. FINLAND
4. From FINLAND to JAPAN

1. From JPN to FIN







2. Bridges Aalto 2022





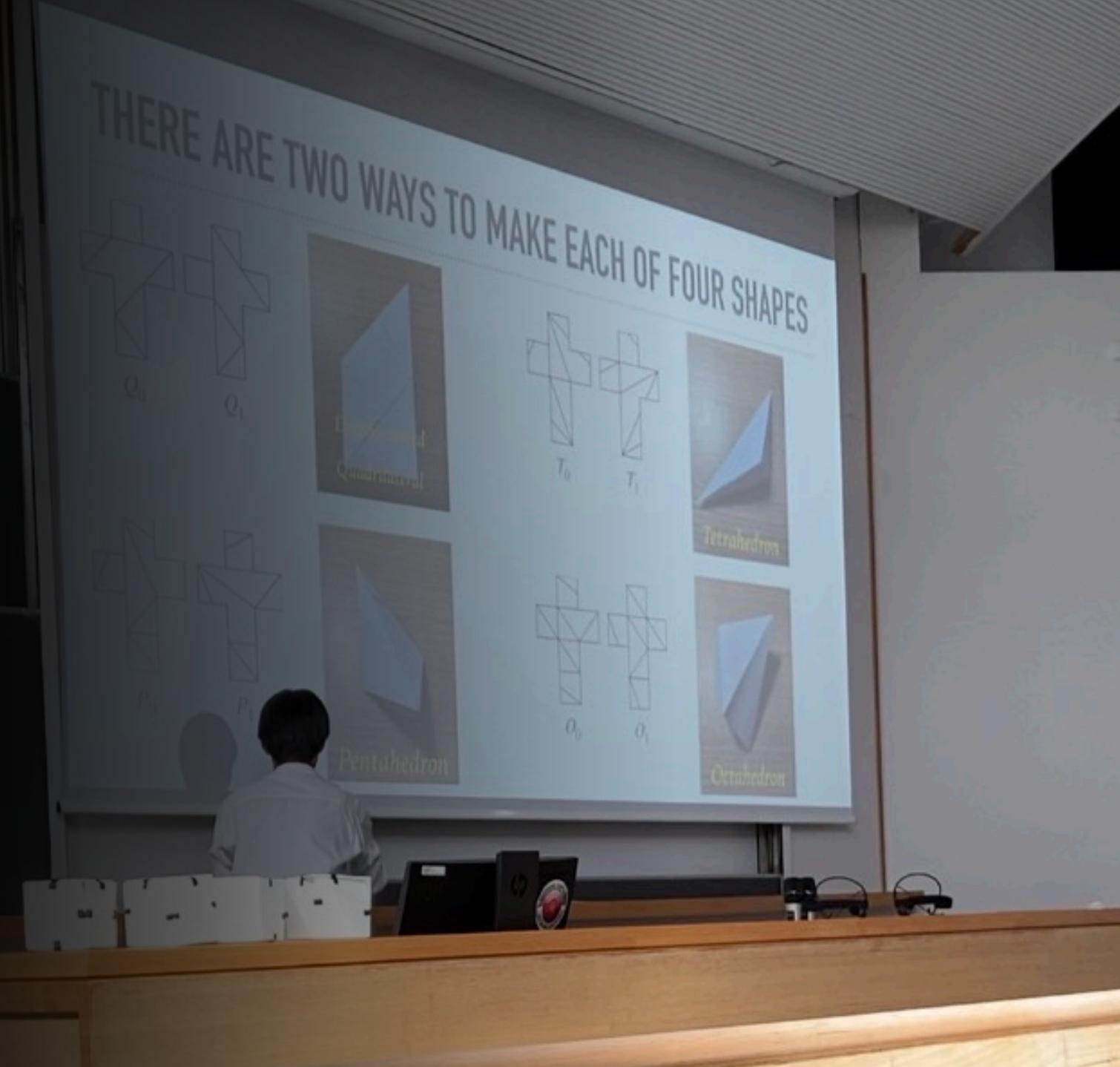
At Aalto unv.

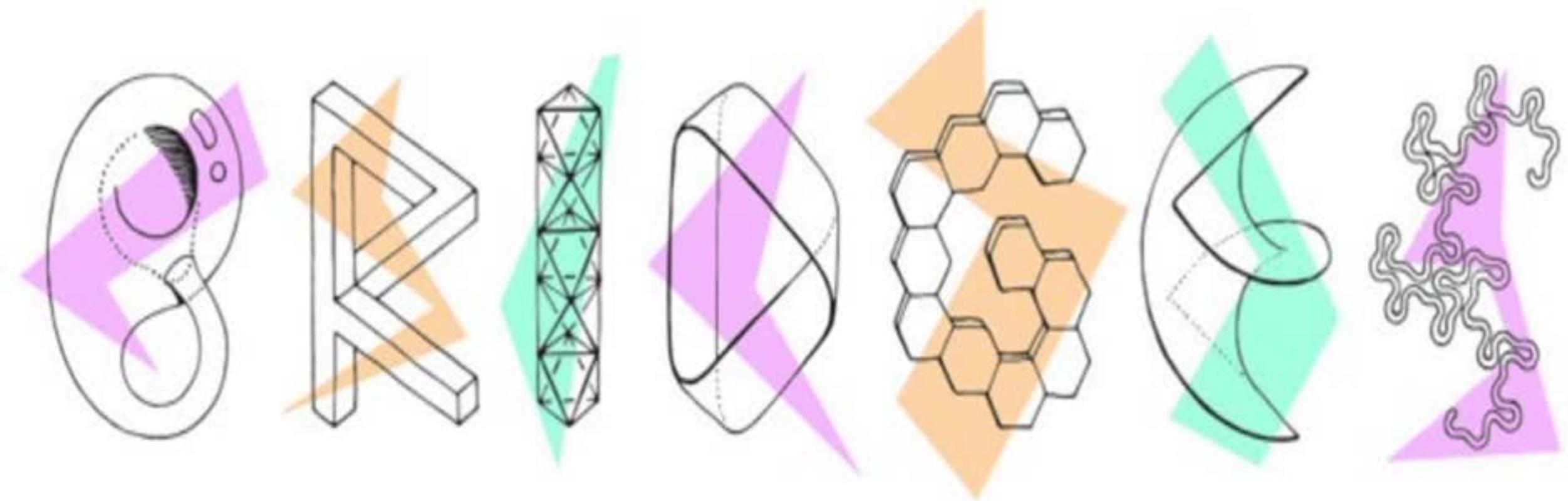






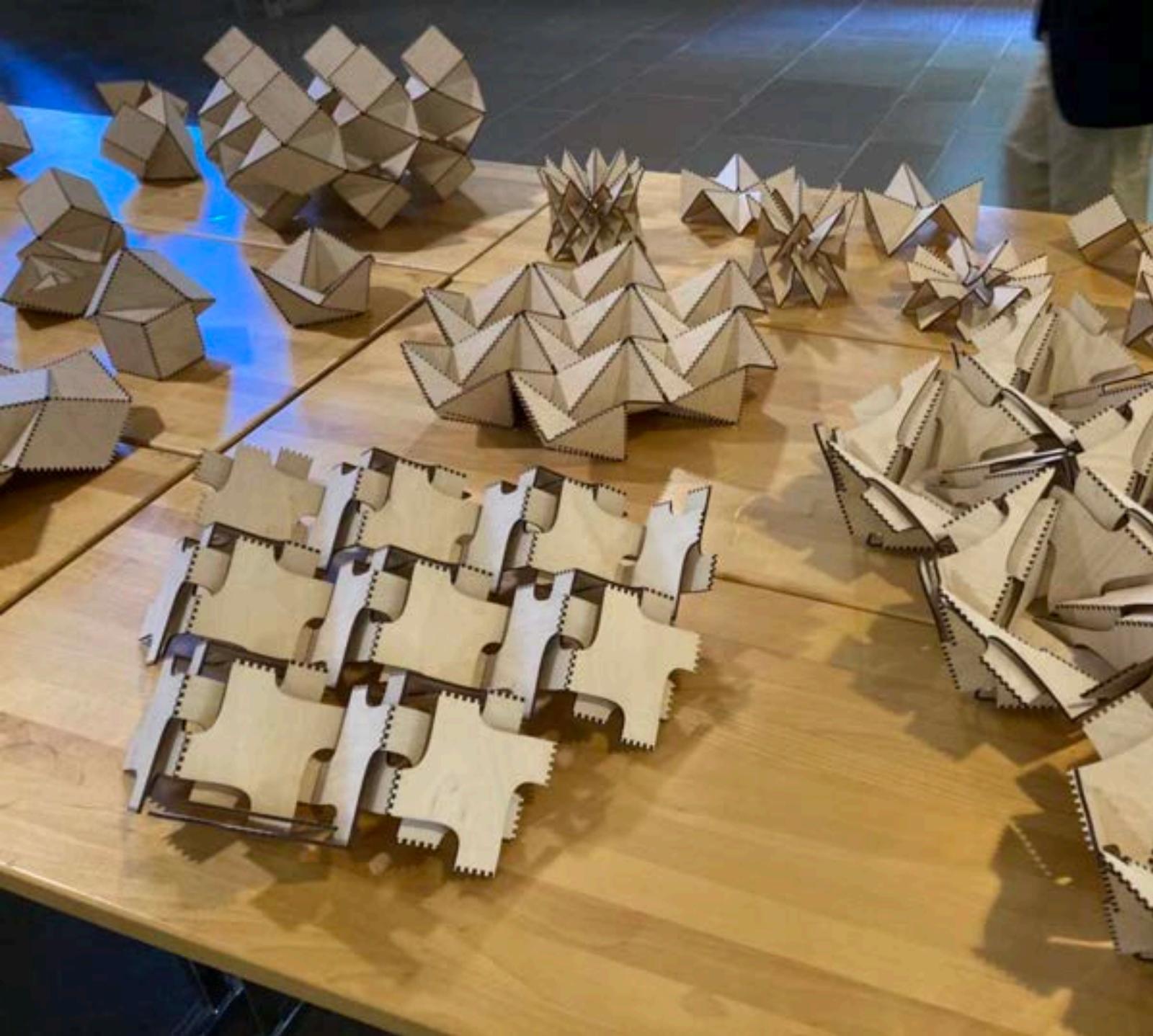
At the conference

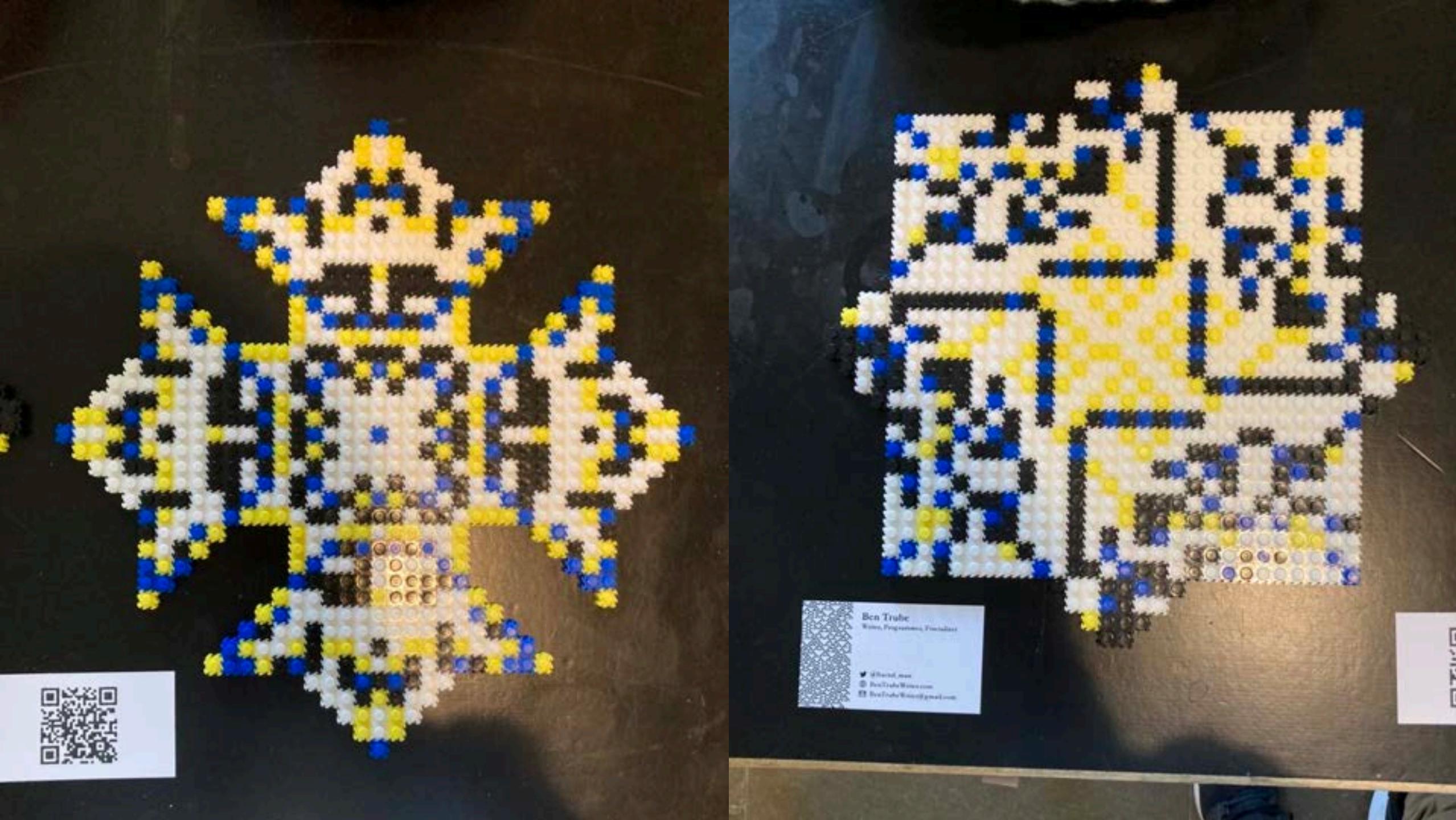




B R I D G E S A A L T O 2 0 2 2

MATHEMATICS / ART / MUSIC / ARCHITECTURE / CULTURE







PROJECTIVE CONFIGURATIONS

Workshop by Taneli Luotonniemi

Projective geometry is an elegant and illuminating domain of spatial thinking and doing. Its figures and transformations can be explored through configurations – structures consisting of points, lines, and planes. The five designs displayed arose from Luotonniemi's artistic research and were assembled with students from wooden rods during an outdoors workshop. The activity provided an instructive, simple, and sculpturally engaging approach to study mathematically challenging phenomena.



COMPLETE HEXACHORON
6 points (each an intersection of 4 lines)
15 lines (each passing through 3 points)
15 planes (6 points and 4 lines on each)



COMPLETE HEXAHEDRON
20 points (each an intersection of 3 lines)
15 lines (each passing through 4 points)
6 planes (10 points and 3 lines on each)



FANO CONFIGURATION
15 points (each an intersection of 4 lines)
15 lines (each passing through 3 points)
(10 points and 4 lines on each)



DOUBLE 45X
10 points (each an intersection of 2 lines)
15 lines (each passing through 5 points)



DESARGUES' CONFIGURATION
10 points (each an intersection of 3 lines)
10 lines (each passing through 3 points)
3 planes (10 points and 4 lines on each)



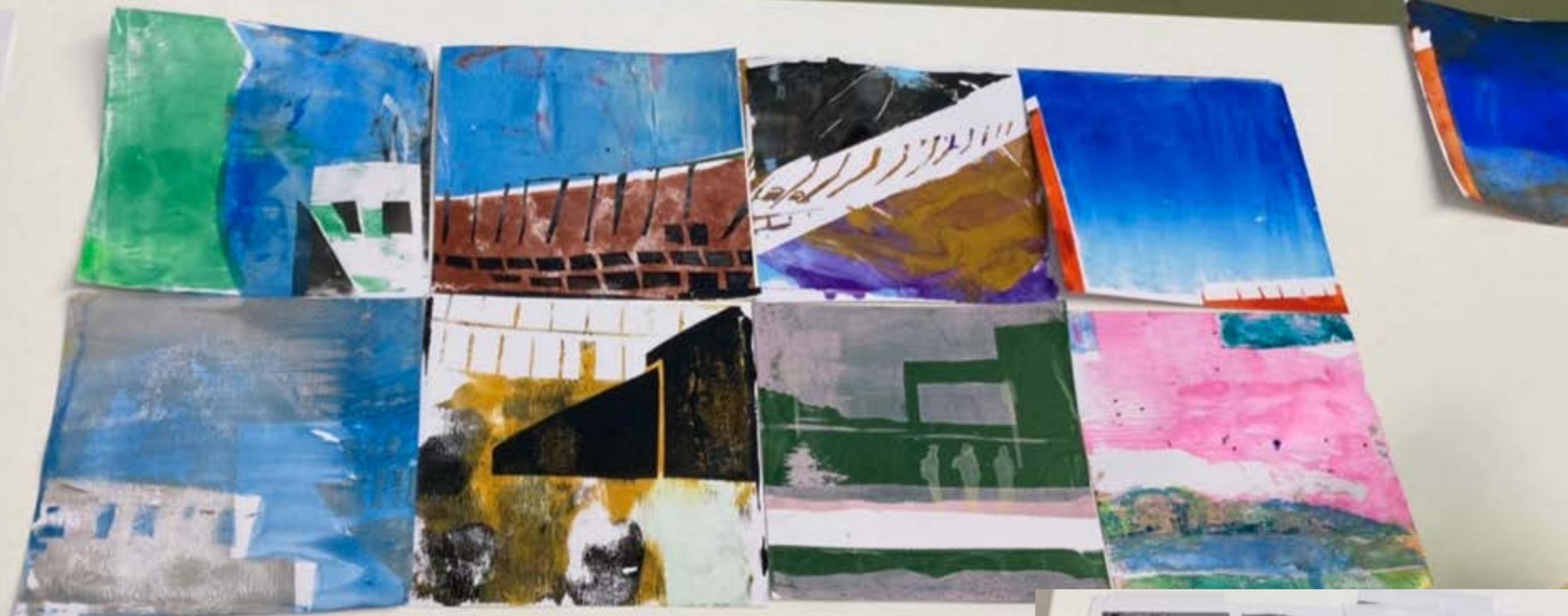
Participants:
Calvin Guillot (ELEC), Otso Hyvärinen (SCI), Sami Jepsen (SCI),
Jarno Märtysaari (ENG), Farzeh Sadeghi (AEC),
Söderström (ENG), Viljami Virolainen (SCI)













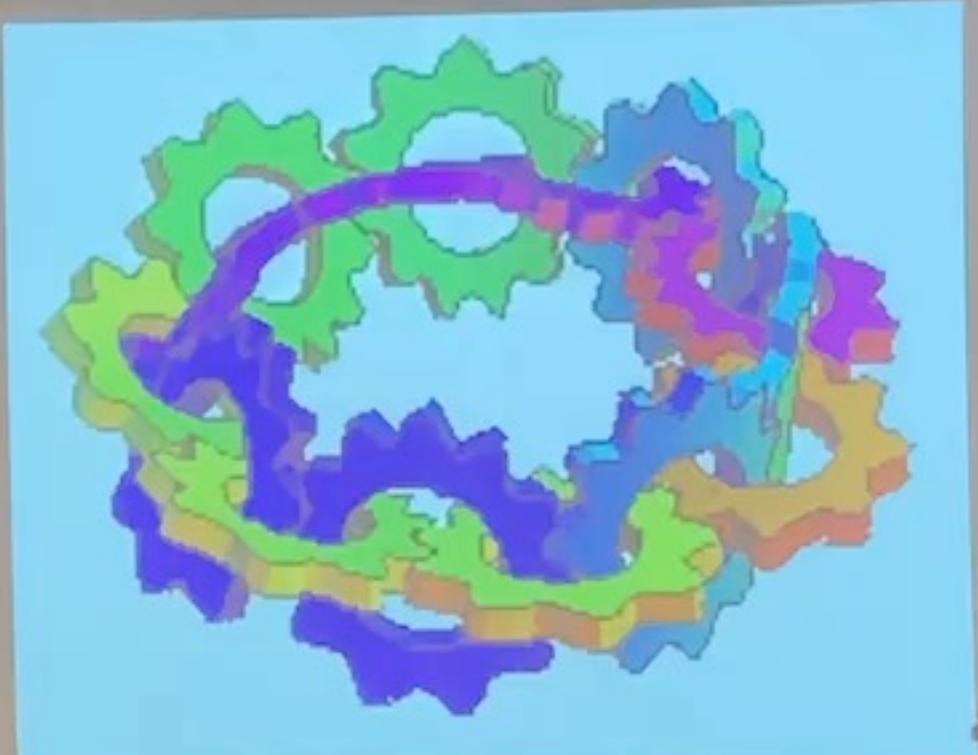
THERE ARE TWO WAYS TO MAKE EACH OF FOUR SHAPES.



ALEXANDROV PUZZLE

Keller Schenck and Company

ANSWER!

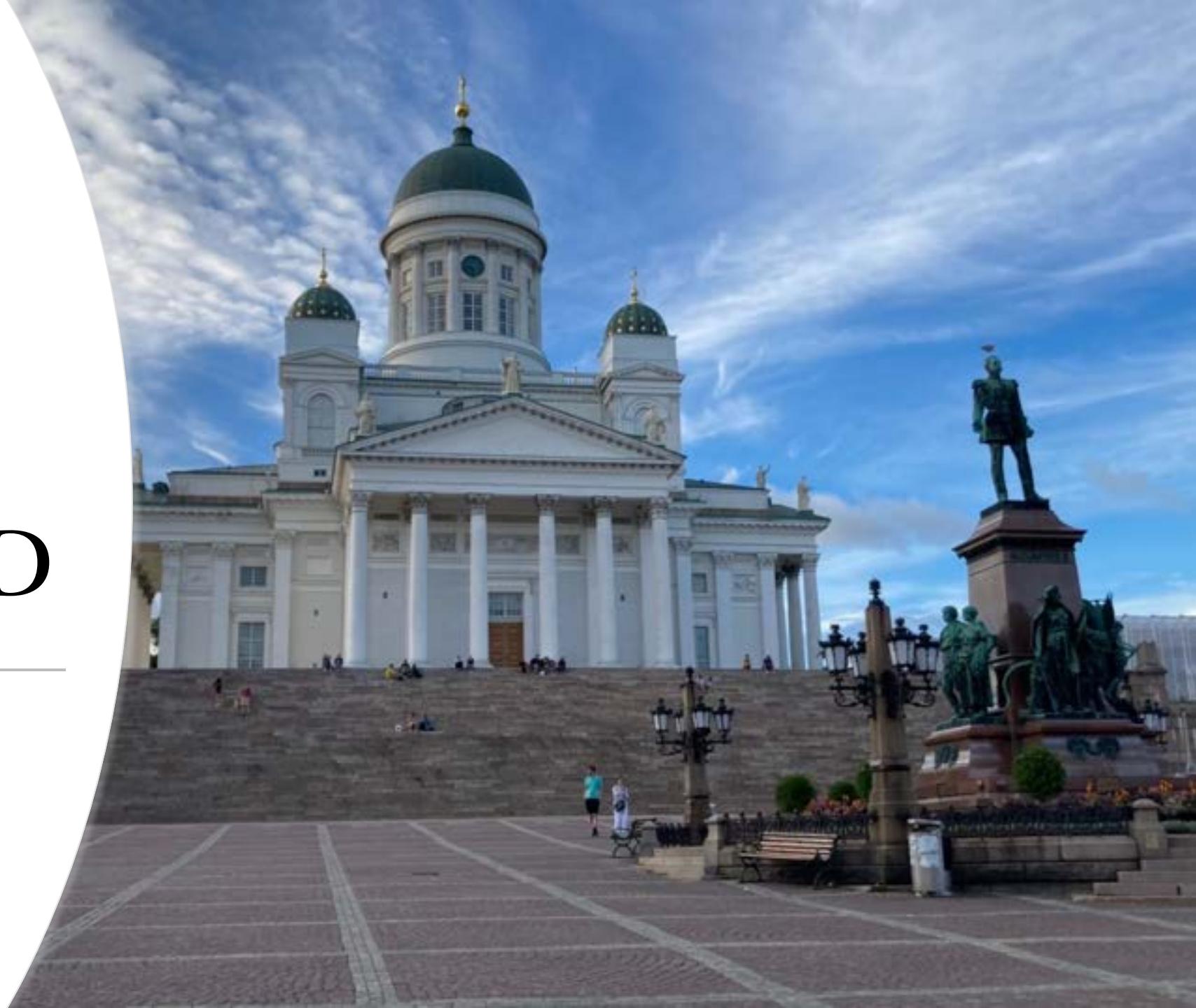


A man stands at a podium in front of a large projection screen, gesturing with his right hand towards the displayed molecular model. He is wearing a dark long-sleeved shirt. The audience is seated in rows of wooden chairs, facing the stage. In the background, there is a chalkboard and a set of vertical blinds covering a window.





3. FINLAND





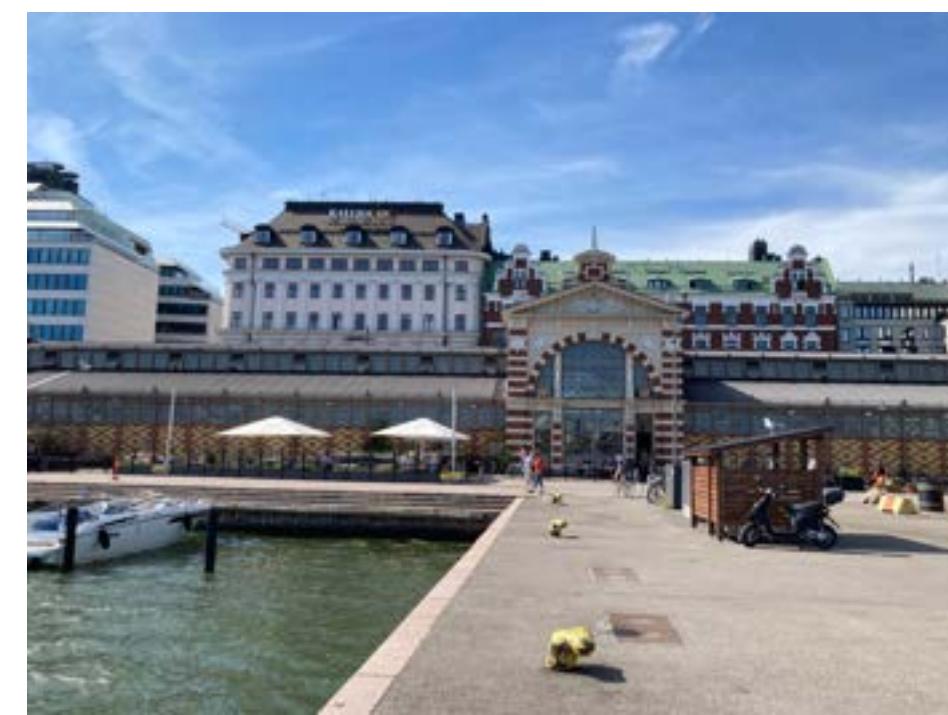
FOR
RE

Differences
create
movement.
JOHANNA GULMICHSEN





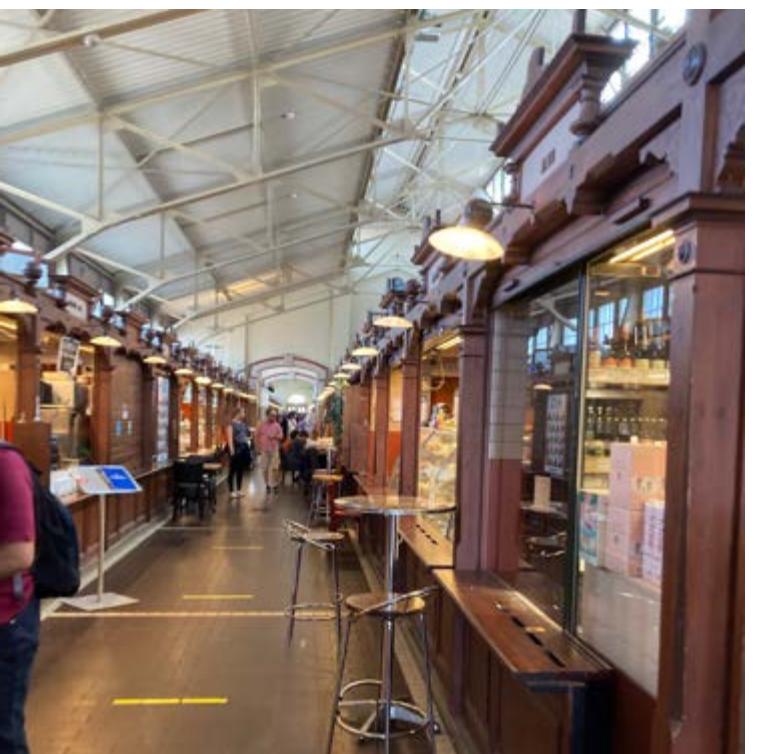












SUOMENLINNA SVEABORG

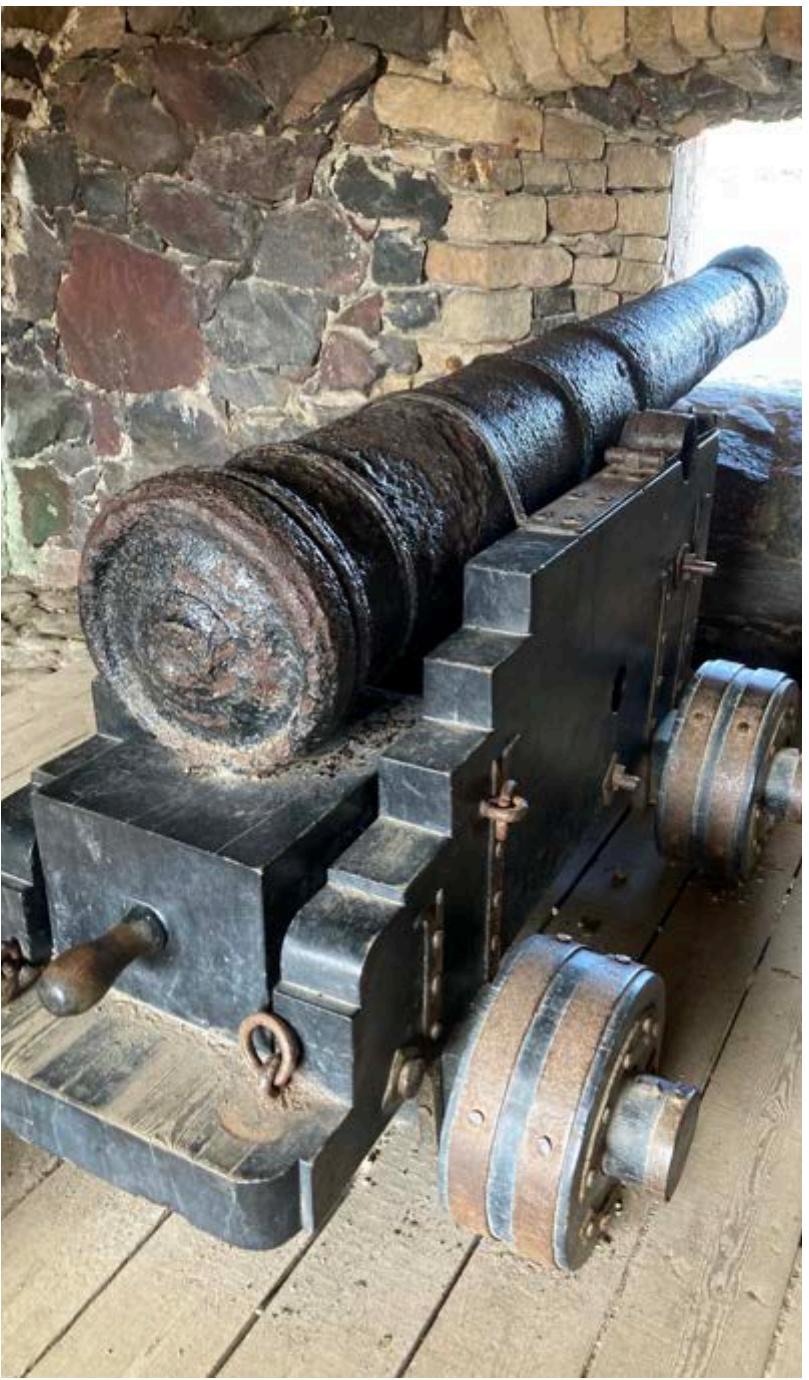












4. From FIN to JPN



