

Seismic Design Competition



About the competition

- Balsa Wood Tower
- Seismic simulation
- Hosted every year in a different city
- Architecture proposal
- Sustainability assessment
- Geotechnical assessment

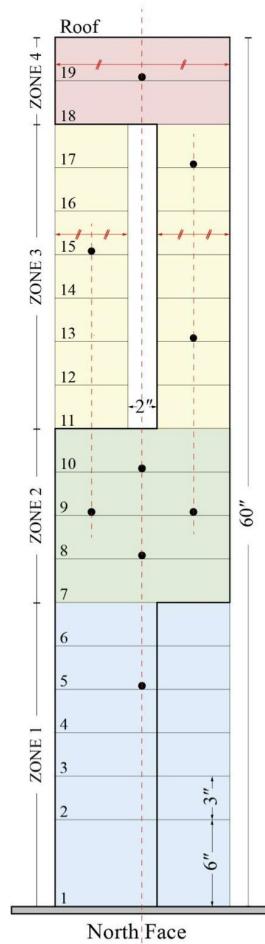
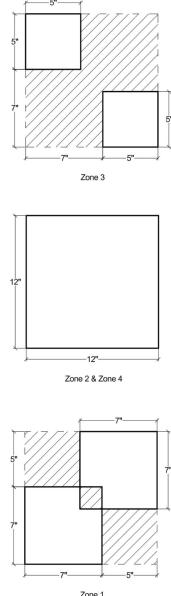
Video competition

Video shake

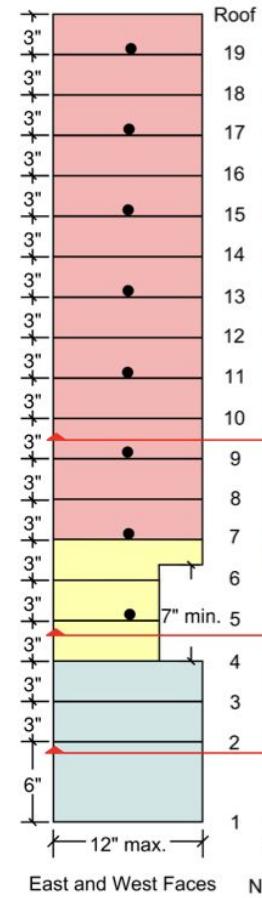
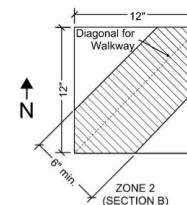
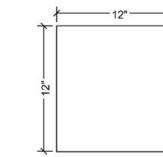


Competition examples

Portland, USA
2026



Kobe, Japan
2025



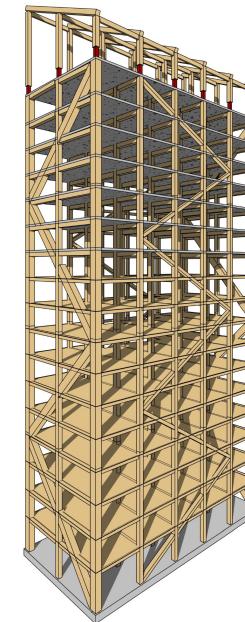
30 Teams Worldwide

- First in Northern Europe
- Mostly US, Mediterranean and Latin America



Importance in Norway

- Most seismically active region in Northern Europe
 - Oslo 1904: 5.4
 - Svalbard 2008: 6.2
- Seismic design for important structures
 - Hospitals, concert halls, military etc.
- Dynamic design
 - Wind
 - Waves
 - Vibrations
- Timber Design



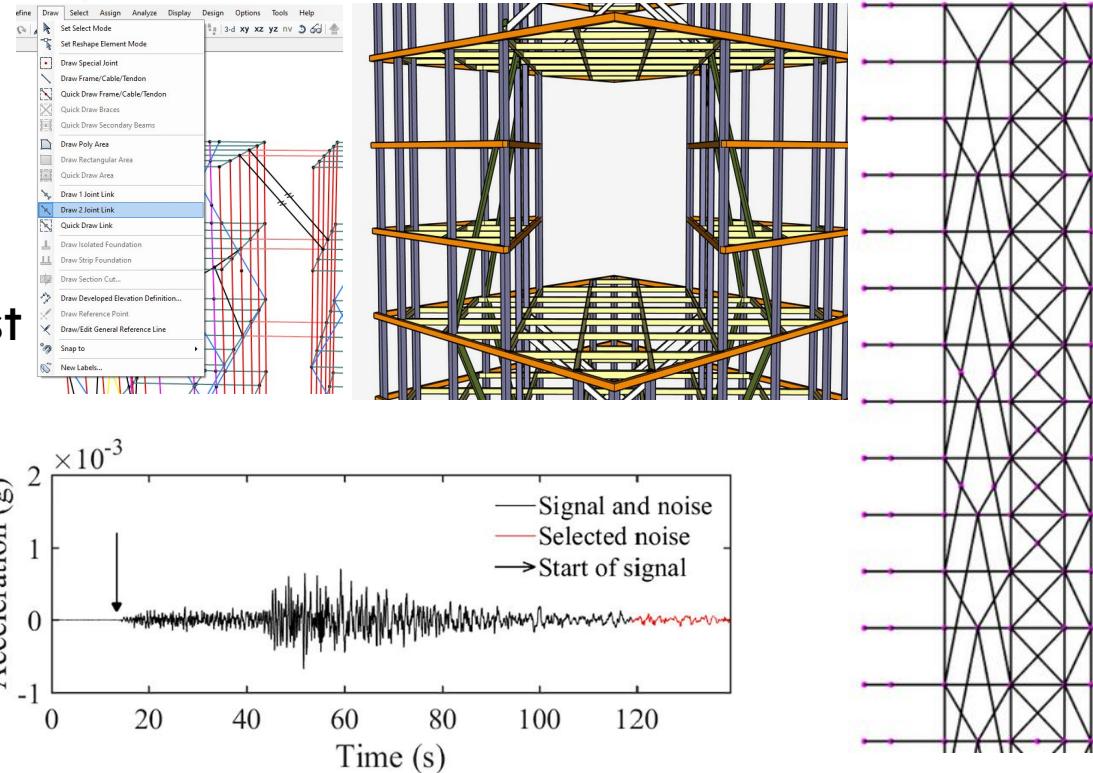
Importance for You

- Practical experience
- CV title
- Connection with industry partners
- Fun
- Travel opportunity

Subteams

Structure

- Formulate concepts for the structural design
- Model the design in structural software
- Test the software against earthquake loads



SAP2000®

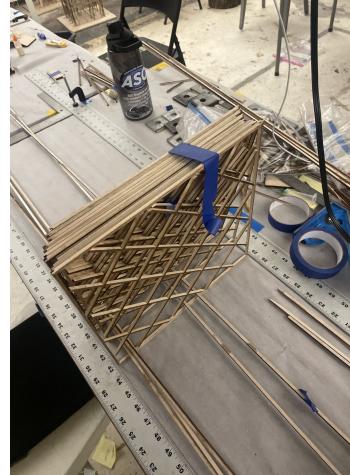
Architecture

- Create an architectural proposal for the tower
 - Architecture
 - Environment
 - Universal design
- Modelling the tower in architectural software
 - Renders
 - Construction guidelines



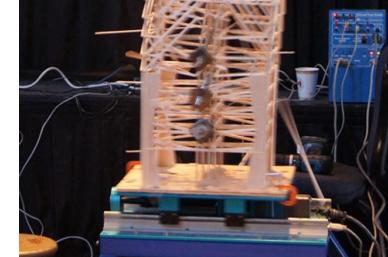
Materials & Construction

- Testing material data at the KT lab
- Laser cutting parts
- Finding materials
- Assembling the tower



Shake Day

- Submissions are tested on a shake table, simulating an earthquake
- Points are awarded for: structural integrity, architecture, environment, acceleration prediction, material use etc.
- Explore the host city: Vancouver, LA, San Francisco etc.



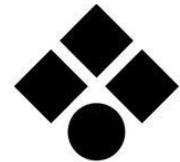
Sponsorships and potentials

In talks:



Potential:

Norconsult

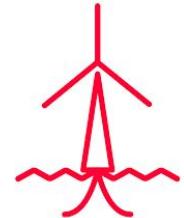


Moelven

SWECO



equinor



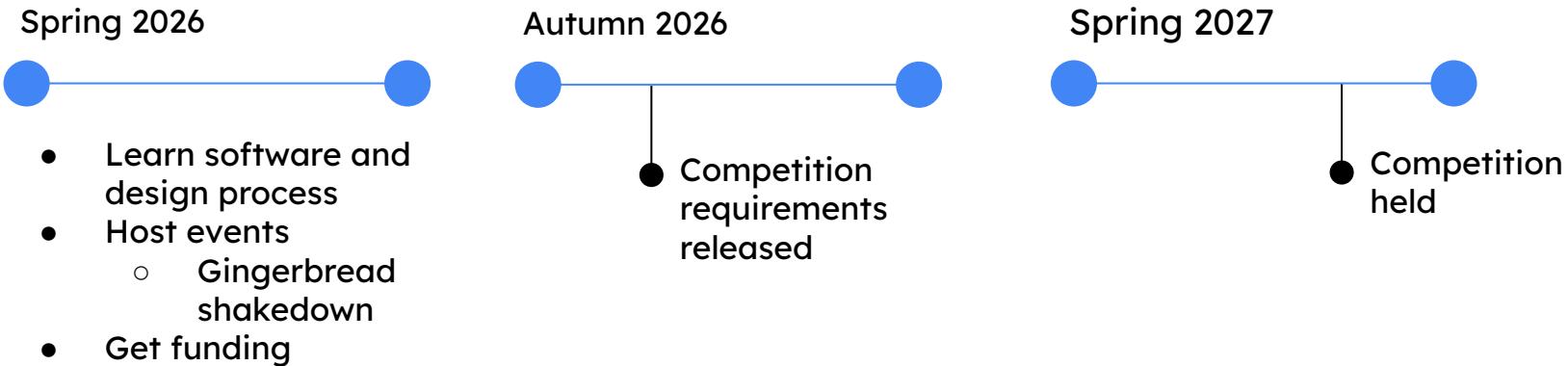
Open Positions:

- **Member:** Architecture team, Structure team etc.
- **Architecture lead**
- **Structural lead**
- **Materials & Construction lead**
- **Deputy Lead**
- **Finance lead**

Open to other positions: Geotechnical Lead, Logistics Lead, International coordinator etc.

Apply by Emailing or texting: ringrosedaniel@gmail.com, visit ntnuseismic.no for phone number

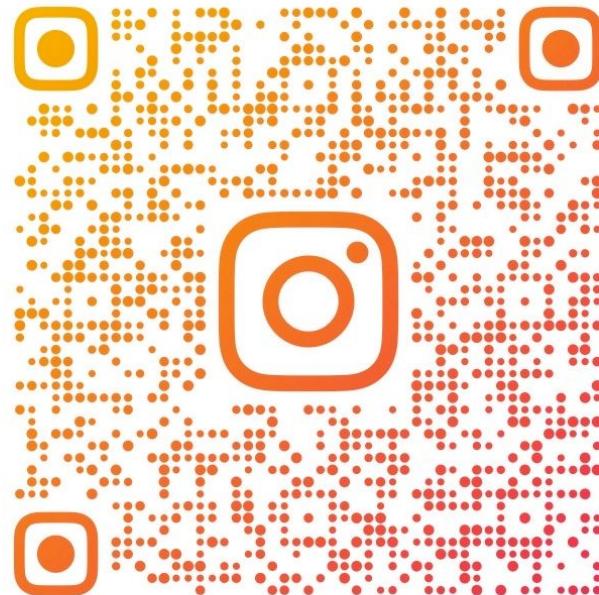
Timeline



Meetings: Most thursdays 16:15-17:15 (Can change)

- Bim-Lab
- Datasal
- Ubåten (Laserskjærer)
- Konstruksjonsteknikk Lab

Information channels



@NTNUSEISMIC