# Welcome to
# 1st Korea HEP-FPGA Firmware Developers' Forum 2025
# @강릉원주대

https://indico.sscc.uos.ac.kr/event/981/

# Thank you for making it possible to hold Forum

- Many thanks for support, funding, and help from 김민석 교수님 and 이상훈 교수님

  ➤ Many thanks for students that helped in organizing this event

- Thank you for coming to this Forum

  ➤ Tried to make it as cheap as possible for participants. Goal was to make it free.

- I hope you to help you in learning something new

  ➤ Hope that you can also help others in the future

# Goals

- Focuses on using FPGAs for trigger logic

  ➤ Could focus on DAQ next time, but basics are same.

- Goal: Learn something practical. [Agenda]

- About FPGA
- HDL
- FPGA boards, clocks, programming
- Using Vivado Remotely
- Simulation, resources, IPCores
- Hands-on

- Firmware logic
- AI
- AI with HDL
- Hands-on

- HLS
- ML4HLS
- Hands-on

# Hands-on session

- Have a list of goals for participants

  ➢ Making firmare, Doing HDL simulation, Making Finite State Machines, Making AI with HDL, …

- Do not have material on how to reach the goals

  ➢ Hope you can figure out how to reach goals during session

  ➢ Will help you on how to do things

  ➢ Hope you can upload your work below to show others

    ❖ https://github.com/jaebak/2025_korea_hep_fpga_forum

    ❖ Please write your github username or email in survey on page 8

# 5 groups for hands-on sessions

- There is a wide range of participants (Experienced with FPGAs, Novice with FPGAs, Windows, Mac, …)

- Let's make 5 groups depending on FPGA experience

  ➢ Hope people in each group can help each other.

  ➢ Hope experienced group can help novice group.

- Are you experienced? Are you novice?

# Live survey to divide groups

- Please connect to Kahoot on your phone or laptop

  ➢ www.kahoot.it

  ➢ Enter Game PIN

  ➢ Please enter you name

# 5 Groups (~4 people)

- Experienced

- Less experienced (1) Linux/Mac

- Less experienced (2) Mac/Windows

- Novice (1) Linux/Mac

- Novice (2) Mac/Windows

# Homework

- Please fill out below (pre) survey for the class

  ➢https://forms.gle/PaF862gYxhfhfTVw7

- Please register to AMD

  ➢https://www.amd.com/en/registration/create-account.html

  ➢Could need to download free license

# Group Icebreaking

- Please gather by groups

- Please introduce yourself

  ➢ Name, University, Career stage: Student/Ph.D/Post-doc/Facutly

  ➢ What do you work on

  ➢ What experience you have had with FPGAs

  ➢ Why you came to workshop

  ➢ … …