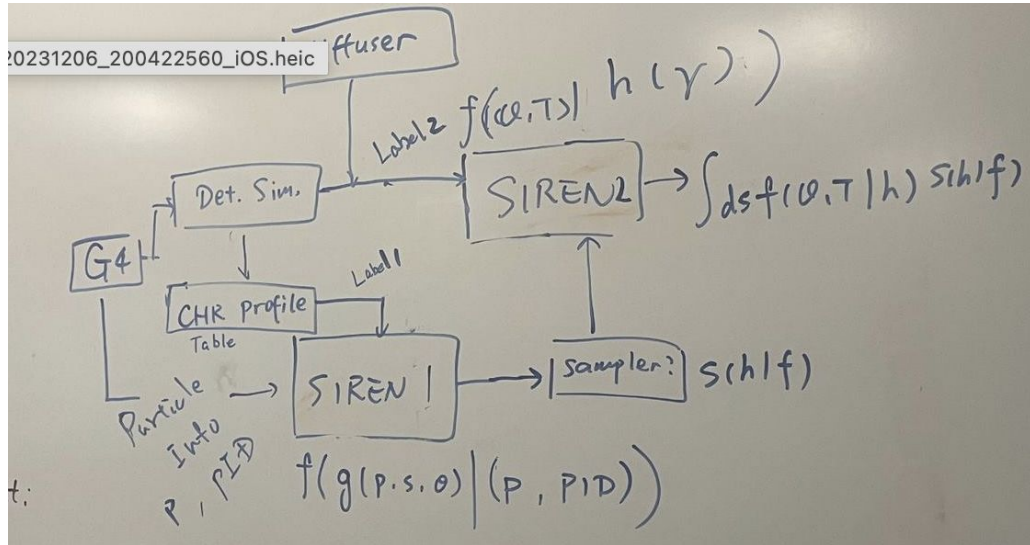


Status report and outlook

Junjie Xia
Jan 11 2023, CIDEr-ML

Summary at the end of the workshop@SLAC



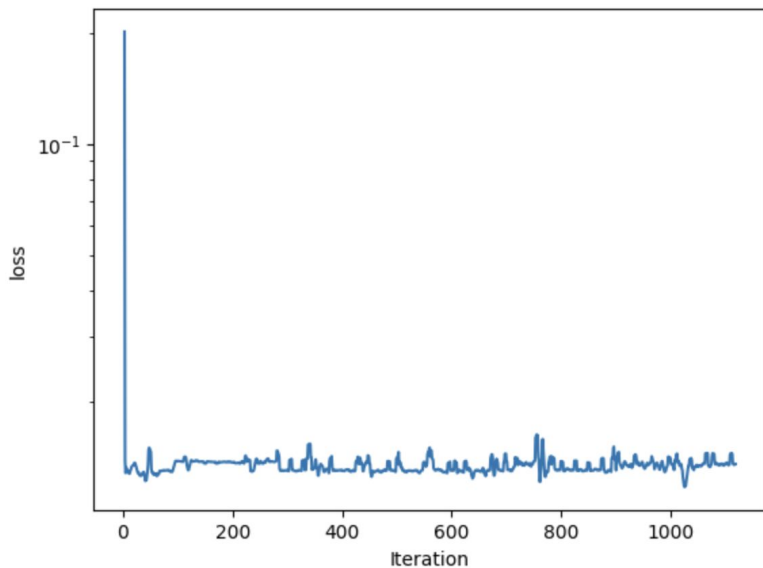
We decided to replace fiTQun with

- 2 networks for the physics (“SIREN1”) and optics (“SIREN2/OpticSiren”)
- SIREN2 takes individual photons as input (position, direction) and outputs PMT responses (Q,T)

A vanilla framework for OpticSiren was constructed, with some memory usage issue.

Current Status

Fixed the memory usage of [OpticSiren](#) v0.0, the framework is now on Github with a README to explain how to use it. *I think* everyone in the workshop has the access to it. (Will make it public later, but please send me a request if you want the access now.)



<- First loss curve trained by Cesar's SimpleSim.

Something went wrong. Need to check.

Plan for JPFY2023

- Understand the performance and improve the training with SimpleSim (samples by Cesar) <- highest priority
- Adapt to WCSim and datatype compartment
 - More than the fixed diffuser ball data, e.g. photon shotgun
- Enable saving and reloading trained states
- Scheduler for learning rate
- ~~● Inverse solver for photon position and direction~~