

message queues

storm surge simulation tool

Simulation of Emergency Evacuation

Landslide-induced Tsunami Simulation Tool

Typhoon/Extreme Weather Simulation Tool

Tsunami Wave Propagation Simulation Portal (iCOMCOT CPU/GPU)

Data Transmission Service/ Tool

satellite data services



Alerting on sensor events

Online Algorithms

Digital Twin for Controlling Noise Emission



webservers

mobile app framework

Continuum Computing

data portals

data pipelines

simulations

Data Assimilation

Data Analysis Workflows

high-performance computing

machine learning infrastructure

cloud infrastructure

website content management

Federated/Swarm Learning

GAMA Platform

Anomaly detection with AI

often used

IMU
WR1
+X
storm surge simulation tool
Simulation of Emergency Evacuation

settings are kept due to limited time (no GPU, etc.)

Landslide-induced Tsunami Simulation
Plasma Simulations
PELOTRAN

prime HPC applications
gn/ extreme Weather Simulation Tool
GOLEM

Lots of responsibility as scientist

relatively "old" / classic

Simulation portals

not so easy to connect to HPC but needs resources

OpenEO

GAMA Platform

is it easy to install?

Hysplit Portal

portal is now online - good for experience

how adaptable are such portals to actual user wish?

ami Wave Simulation Portal (iCOMCOT CPU/GPU)

Satellite (and other) data services

satellite data services

Copernicus Climate Data Store

NCAR RDA

Storage middleware and file system and file formats

Lustre

NetCDF

PBF

HDF5

ZARR

XML

json

well readable

overhead - not for ss data?

monitoring and alerting tools

ICINGA / Nagios

Prometheus

useful

Gitlab- CI

SPLUNK

expensive

Grafana

buggy

Alerting on sensor events

AI methods tools and frameworks

Anomaly detection with AI

obscure

Federated/ Swarm Learning

can be very useful, needs technicians

need a lot of samples

AI as surrogate for (Hydrology Simulation)

Data Transfer services/tools

Data Transmission Service/ Tool

Aspera

SCP

GridFTP

GLOBUS

Data Portals & REST APIs

PAVICS

STAC

Digital Twins

Digital Twin for Controlling Noise Emission

Infrastructure

machine learning infrastructure

cloud infrastructure

Continuum Computing

HPC

Identity and Access Management

Keycloak

Data assimilation

Data Assimilation

Programming languages ; GIS

R

FORTRAN

Python

QGIS

fast

C

MPI

bug prone

versatile

Infrastructure / Queuing, Workflow and Pipeline Management Systems

message queues

Apache Airflow

Gitlab- CI

Data Analysis Workflows

Data analytics

Geodata filtering

Website tools, CMS and Forum Software

Energy-Efficient in Mobility Systems

mobile app framework

website content management

webservers