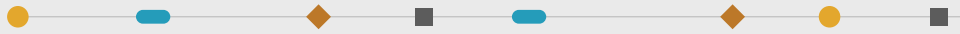




An Optimization and Co-design Framework for Sparse Computation

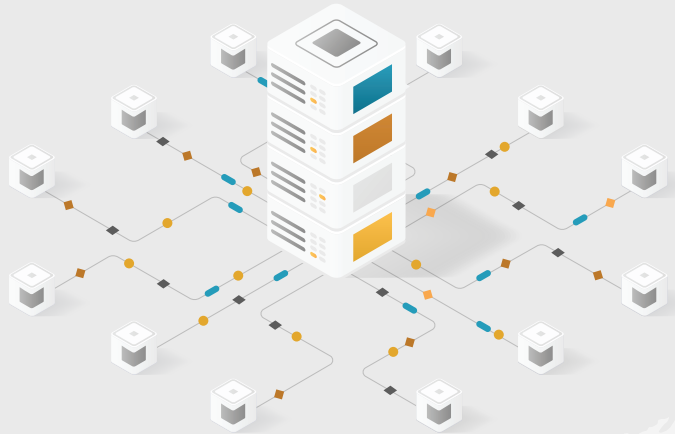


SparCity aims to create a supercomputing framework to provide efficient algorithms and coherent tools to maximize the performance and energy efficiency of sparse computations on emerging HPC systems.

It also opens up new usage areas for sparse computations in data analytics and deep learning.



From April 2021,
until March 2024



6 Partners

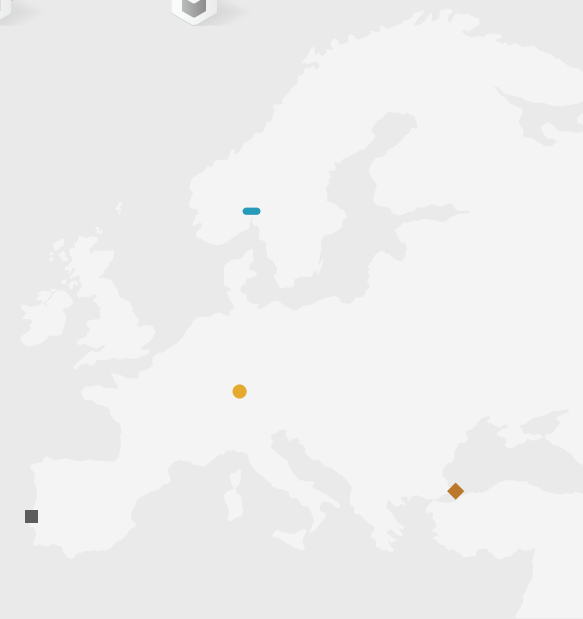
- ◆ Koç University
- ◆ Sabancı University
- Simula Research Laboratory
- INESC-ID
- LMU
- Graphcore*

4 Countries

- ◆ Turkey
- Norway
- Portugal
- Germany

3 Workshops

- ◆ ML methods at HIPEAC23
- Performance tools at EuroPar23
- Future is Sparse at Supercomputing23



Outcomes

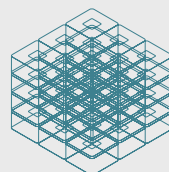
Because we know collaboration is at the heart of progress, outcomes of this project are a series of open-source tools, benefiting the scientific community.

You are free to use:



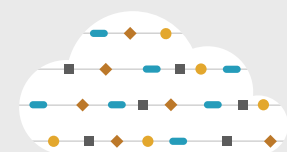
SparseBase

A pre-processing library for sparse computation



SuperTwin

A Digital Twin of a supercomputer

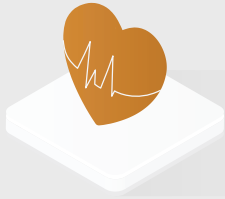


Codebase

Where you can access codes for various tools and frameworks.

*until Month21

Use Cases



Cardiac Modelling



High-order Epistasis Detection



Detection of Digital Wildfires



Autonomous Driving



14+ publications



2.6M€ funding



40 team members



3 of code videos



4 of meet the team videos



1 Workshop on Machine Learning Techniques



1 Workshop on Future is Sparse



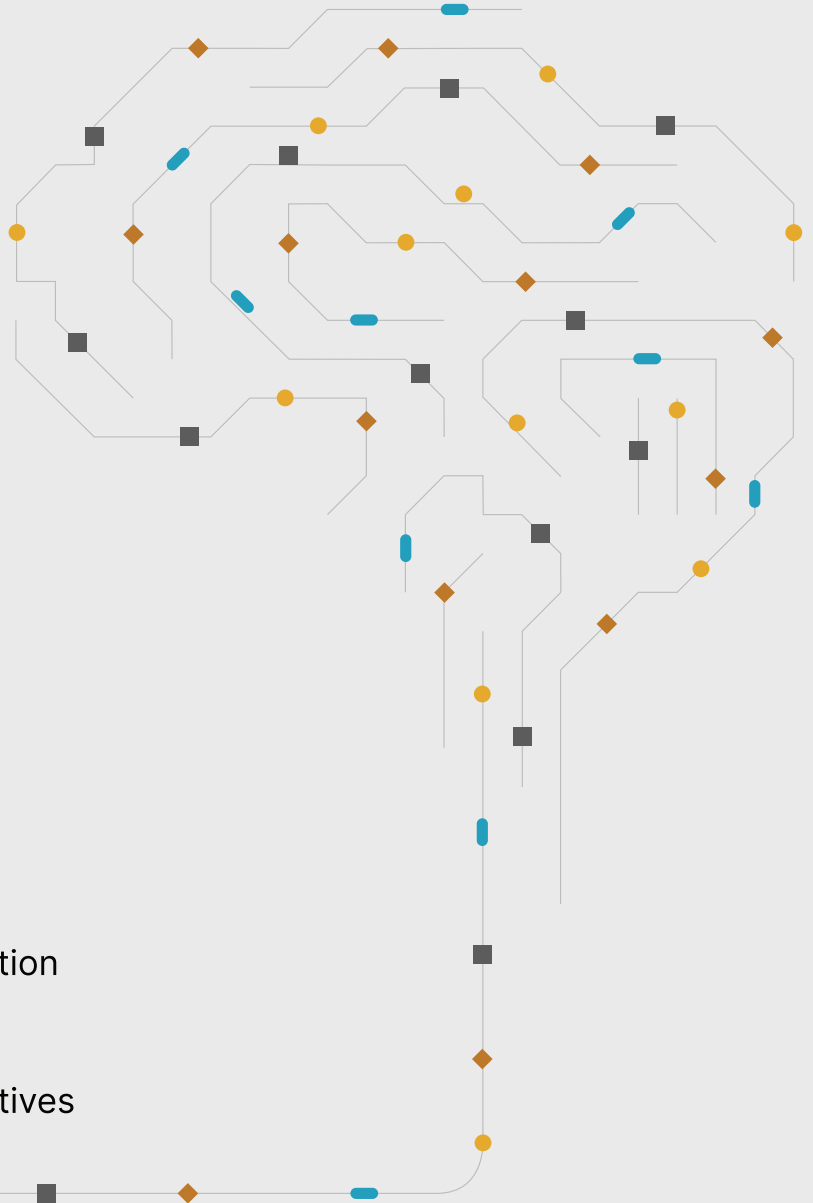
15+ code repositories



25 attended events,
14 with SparCity representation



24 joint activities with other projects, communities, initiatives



Visit our website, take a look at our social media and subscribe to our newsletter to learn about this project that will change Europe!

 github.com/sparcityeu

 @sparcity_eu

 /sparcity-project-944b4320a/



EuroHPC
Joint Undertaking

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