

Welcome to Cineca

2018 European IXPUG Meeting

- Consortium of Universities and Research Institutions
- Founded in 1969 by Ministry of Public Education now under the control of Ministry Education, University and Research
- 70 Universities
- 4 Institutions
 - The Ministry of Education University and research
 - The National Research Council
 - OGS
 - INFN
- Main premises in Bologna, point of presence in Milan and Rome



- Provide **High Performance Computing and Data resources and support to public and private users**
- Largest HPC infrastructure in Italy and one of the largest in Europe



Top500 List - November 2017



	Performance Computing Japan	M1, Intel Xeon Phi 7250 68C 1.4GHz, Intel Omni-Path Fujitsu				
10	RIKEN Advanced Institute for Computational Science (AICS) Japan	K computer, SPARC64 VIIIfx 2.0GHz, Tofu interconnect Fujitsu	705,024	10,510.0	11,280	
11	DOE/SC/Argonne National Laboratory United States	Mira - BlueGene/Q, Power BQC 16C 1.60GHz, Custom IBM	786,432	8,586.6	10,066.3	3,945
12	Texas Advanced Computing Center/Univ. of Texas United States	Stampede2 - PowerEdge C6320P/C6420, Intel Xeon Phi 7250 68C 1.4GHz/Platinum 8160, Intel Omni-Path Dell EMC	368,928	8,317.7	18,215.8	
13	GSIC Center, Tokyo Institute of Technology Japan	TSUBAME3.0 - SGI ICE XA, IP139- SXM2, Xeon E5-2680v4 14C 2.4GHz, Intel Omni-Path, NVIDIA Tesla P100 SXM2 HPE	135,828	8,125.0	12,127.1	792
14	CINECA Italy	Marconi Intel Xeon Phi - CINECA Cluster, Lenovo SD530, Intel Xeon Phi 7250 68C 1.4GHz/Platinum 8160, Intel Omni-Path Lenovo	314,384	7,471.1	15,372.0	
15	United Kingdom Meteorological Office United Kingdom	Cray XC40, Xeon E5-2695v4 18C 2.1GHz, Aries interconnect Cray Inc.	241,920	7,038.9	8,128.5	
16	Barcelona Supercomputing Center Spain	MareNostrum - Lenovo SD530, Xeon Platinum 8160 24C 2.1GHz, Intel Omni-Path Lenovo	153,216	6,470.8	10,296.1	1,632

MARCONI Infrastructure



A1

A2

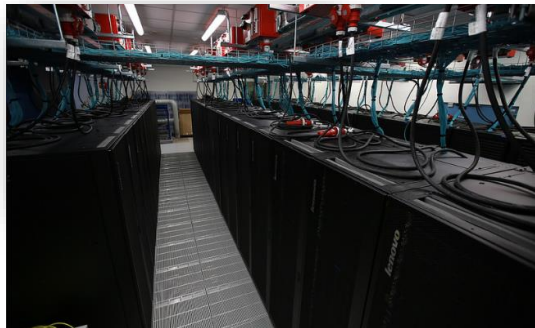
A3

A4

- **1512 INTEL Broadwell**
- 2 sockets Intel(R) Xeon(R) CPU E5-2697 v4 @2.30 GHz, 18 cores
- 128GB RAM per node
- TPP: 2 PFlop/s

- **3600 INTEL Knights Landing**
- Intel Xeon Phi 7250 (68 cores) @1.40 GHz
- 120GB RAM per node
- Default configuration: Cache/Quadrant
- TPP: 11 PFlop/s

- **1512 + 792 INTEL Skylake**
- Processors: 2 x 24-cores Intel Xeon 8160 CPU at 2.10 GHz
- Cores: 48 cores/node
- 72.576 + 38.016 cores in total
- RAM: 192 GB/node of DDR4
- TPP: 8 PFlop/s

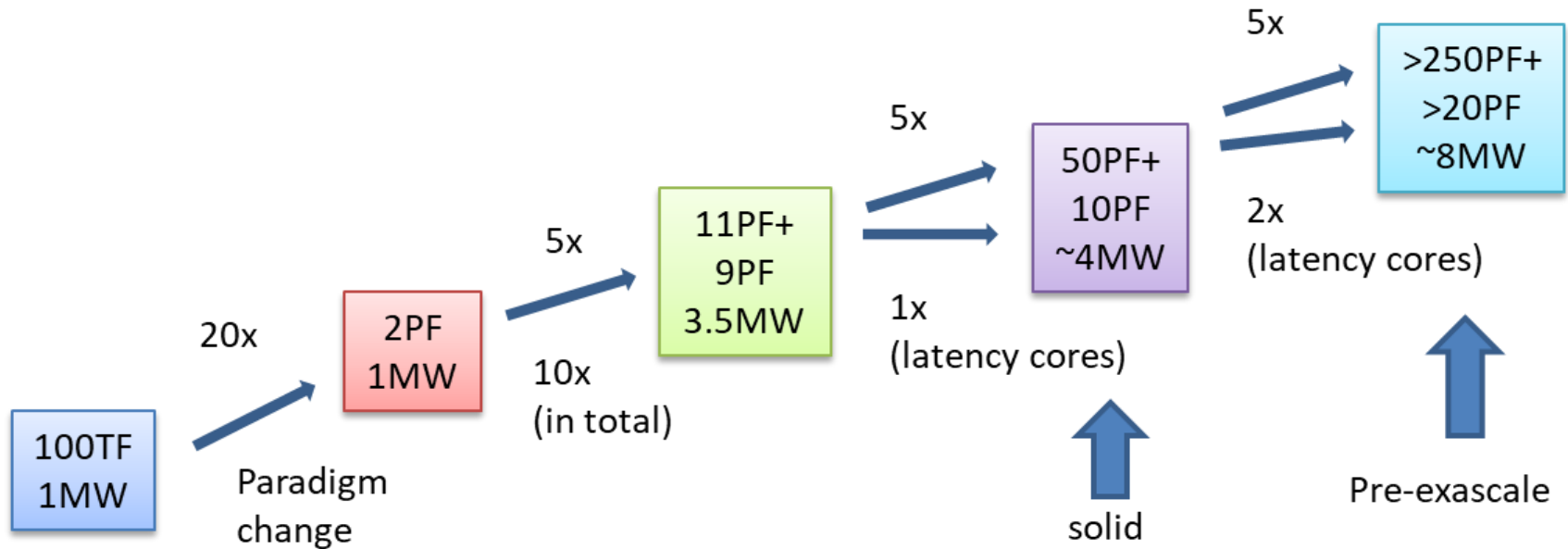


How to access resources?



- **Peer review based on scientific merit**
- **Partnership:** INFN, OGS, IIT, SISSA, INAF, ICTP, Polimi, Bicocca, MI Statale, University of Bologna
- **Open Innovation for Industries and SME**
 - Co-founding Fortissimo, PRACE SHAPE, Lisa for innovation.

Cineca “sustainable” roadmap towards exascale



2009	2012/2013	2016/2017	2019/2020	2021/2022
IBM SP6 Power6	Fermi IBM BGQ PowerA2	Marconi Lenovo Xeon+KNL	Marconi + PPI4HPC	EuroHPC

Logistics information



The networking event will be held in the Caffè Zanarini, in the historical centre of Bologna.

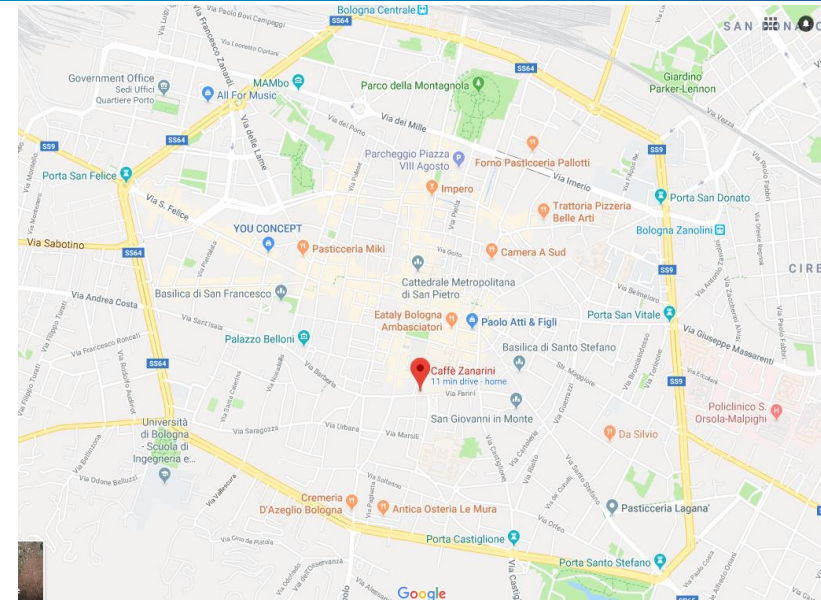
A shuttle bus will bring the attendants from Cineca to Bologna shortly after the end of today's session (at 5pm).

There are no planned transfers from the event back to Cineca.

You can connect to the internet using the credentials provided at the registration desk or using EduRoam.

Please, always wear your badge and stay close to the conference room.

Remember that Cineca is a smoking free zone.



THANK YOU!

