



# Mohsen Seyedkazemi Ardebili

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## WORK EXPERIENCE

**University of Bologna, Department of Electrical, Electronic and Information Engineering**

City: Bologna | Country: Italy

[ 13/07/2022 – Current ] **Postdoctoral Research Fellow**

**Sabalan Combined Cycle Power Plant (1000~1440 MW)**

City: Ardabil | Country: Iran

[ 01/04/2009 – 01/08/2015 ] **ICT network administrator**

**ASACO**

City: Ardebil | Country: Iran

[ 01/06/2007 – 01/05/2009 ] **ICT network engineer**

## EDUCATION AND TRAINING

[ 01/11/2018 – 12/07/2022 ] **Ph.D. in Electronics, Telecommunication, and Information Technology**

**University of Bologna** <https://www.unibo.it/sitoweb/mohsen.seyedkazemi/en>

City: Bologna | Country: Italy | | Level in EQF: EQF level 8

[ 2015 – 2018 ] **M.Sc. in Telecommunications Engineering (Grade: 104/110) 2015-2018**

**University of Bologna** <https://www.unibo.it>

City: Bologna | Country: Italy | | Level in EQF: EQF level 7

[ 2002 – 2006 ] **B.Sc. Electrical Engineering**

**Islamic Azad University of Ardabil**

City: Ardebil | Country: Iran | | Level in EQF: EQF level 6

## LANGUAGE SKILLS

**Mother tongue(s):** Turkish , Persian , Azerbaijani

**Other language(s):**

**English**

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

**Italian**

LISTENING B1 READING A2 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## PUBLICATIONS

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### **LLM-Powered Kubernetes Management Agent**

**Authors:** Mohsen Seyedkazemi Ardebili, Andrea Bartolini | **Journal Name:** Submitted to Conference

### **Sustainable High-Performance Computing: Power Consumption Analysis and Carbon Emissions Forecasting**

**Authors:** Mohsen Seyedkazemi Ardebili, Fatemeh Bozorgi, Andrea Bartolini | **Journal Name:** Journal in preparation

### **JANA: Job-Aware Node Availability Framewor**

**Authors:** Martin Molan, Mohsen Seyedkazemi Ardebili, Junaid Ahmed Khan, Andrea Borghesi, and Andrea Bartolini | **Journal Name:** Journal in preparation

### **Elevating Data Center Resilience with ThermADNet: A Comprehensive Thermal Anomaly Detection System**

**Authors:** Mohsen Seyedkazemi Ardebili, Andrea Bartolini, Andrea Acquaviva, and Luca Benini | **Journal Name:** Journal in preparation

### **GRAAFE: GRaph anomaly anticipation framework for exascale HPC systems**

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**Authors:** Martin Molan, Mohsen Seyedkazemi Ardebili, Junaid Ahmed Khan, Francesco Beneventi, Daniele Cesarini, Andrea Borghesi, Andrea Bartolini | **Journal Name:** Future Generation Computer Systems (2024)

### **M100 ExaData: a data collection campaign on the CINECA's Marconi100 Tier-0 supercomputer.**

**Authors:** Andrea Borghesi, Carmine Di Santi, Martin Molan, Mohsen Seyedkazemi Ardebili, Alessio Mauri, Massimiliano Guarrasi, Daniela Galetti, Mirko Cestari, Francesco Barchi, Luca Benini, Francesco Beneventi, Andrea Bartolini | **Journal Name:** Nature Scientific Data 10, no. 1 (2023): 288.

### **A Full-Stack IoT Framework for Room Temperature Modelling on Large-Scale HPC Machines**

**Authors:** Mohsen Seyedkazemi Ardebili, Davide Brunelli, Tommaso Polonelli, Luca Benini, and Andrea Bartolini | **Journal Name:** Journal in preparation

### **Light Weight Scalable DevOps for Cloud Robotics, Automating ROS2 Deployments in Kubernetes with a Vagrant-Based Framework for Efficient Development and Monitoring**

**Authors:** Mohsen Seyedkazemi Ardebili, Andrea Bartolini | **Journal Name:** Submitted to Conference

### **PM100: A Job Power Consumption Dataset of a Large-scale Production HPC System**

**Authors:** Antici, Francesco, Mohsen Seyedkazemi Ardebili, Andrea Bartolini, and Zeynep Kiziltan | **Journal Name:** SC'23 Workshops - Conference on High Performance Computing, Network, Storage, and Analysis

### **Multi-level anomaly prediction in Tier-0 datacenter: a deep learning approach**

**Authors:** Mohsen Seyedkazemi Ardebili, Andrea Bartolini, Luca Benini | **Journal Name:** 2022 Proceedings of the 19th ACM International Conference on Computing Frontiers

### **Rule-based Thermal Anomaly Detection for Tier-0 HPC Systems**

**Authors:** Mohsen Seyedkazemi Ardebili, Andrea Bartolini, Andrea Acquaviva, and Luca Benini | **Journal Name:** 3rd ISC HPC International Workshop on "Monitoring and Operational Data Analytics", June 2, 2022

### **Thermal Characterization of a Tier0 Datacenter Room In Normal and Thermal Emergency Conditions**

**Authors:** Mohsen Seyedkazemi Ardebili, Carlo Cavazzoni, Luca Benini, and Andrea Bartolini | **Journal Name:** High Performance Computing in Science and Engineering 2019, Ostrava, Czech Republic

### **Designing Optimal PID Controller with Genetic Algorithm In View of Controller Location in the Plant**

**Authors:** Mohsen Seyedkazemi Ardebili | **Journal Name:** 7th International Conference on Signal Processing, Robotics and Automation, Cambridge, UK, 2008, | **Publisher:** ISBN ~ ISSN: 1790-5117, 978-960-6766-44-2

### **Genetic Algorithm application to control of STATCOM for damping of sub Synchronous resonance**

**Authors:** Mohsen Seyedkazemi Ardebili, Farzad Sedaghati | **Journal Name:** 7th WSEAS International Conference on POWER SYSTEMS (PE '07) Beijing, China, Sep 2007

### **A Genetically Tuned Optimal PID Controller**

**Authors:** Mohsen Seyedkazemi Ardebili, Adel Akbarimajd, Ali Rahnamaei, Amirreza Baghbanpourasl | **Journal Name:** WSEAS Transaction on System And Control Issue 3, Volume 2, March 2007 ISSN: 1991-8763

[ 2024 ] **HazardNet: A thermal hazard prediction framework for datacenters**

**Authors:** Mohsen Seyedkazemi Ardebili, Andrea Acquaviva, Luca Benini, and Andrea Bartolini | **Journal Name:** Future Generation Computer Systems (2024)

[ 2021 ] **Prediction of Thermal Hazards in a Real Datacenter Room Using Temporal Convolutional Networks**

**Authors:** Mohsen Seyedkazemi Ardebili, Marcello Zanghieri, Alessio Burrello, Francesco Beneventi, Andrea Acquaviva, Luca Benini, Andrea Bartolini | **Journal Name:** Design, Automation and Test in Europe Conference and Exhibition (DATE2021), IEEE. pp. 1256-1259

[ 2012 ] **Floating Entanglement Witness Measure and Genetic Algorithm**

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**Authors:** Baghbanpourasl, A and Najarbashi, G and Seyedkazemi Ardebili, M. | **Journal Name:** International Iran Conference on Quantum Information. Sharif University of Technology, Tehran, Iran

## **PROJECTS**

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### **SEANERGY (Software for Efficient and Energy-Aware Supercomputers)**

Technical contributor and proposal writer.

[ 01/12/2022 – 30/11/2025 ] **HORIZON-CL4-2022-DATA-01 project DECICE (Device-Edge-Cloud Intelligent Collaboration framEwork) - g.a. 101092582.**

Technical contributor.

<https://cordis.europa.eu/project/id/101092582>

[ 01/01/2023 – 31/12/2025 ] **HE EU Graph-Massivizer project(Extreme and Sustainable Graph Processing for Urgent Societal Challenges in Europe) - g.a. 101093202**

Technical contributor

<https://cordis.europa.eu/project/id/101093202>

**EuroHPC JU The European PILOT (Pilot using Independent, Local and Open Technologies) - g.a. 101034126**

Technical contributor

<https://eupilot.eu/> [https://eurohpc-ju.europa.eu/research-innovation/our-projects/european-pilot\\_en](https://eurohpc-ju.europa.eu/research-innovation/our-projects/european-pilot_en)

**EU H2020-JTI-EuroHPC-2019-1 project REGALE (An open architecture to equip next generation HPC applications with exascale capabilities)- g.n. 956560**

Technical contributor

**EPI SGA1 (Specific Grant Agreement 1) OF THE EUROPEAN PROCESSOR INITIATIVE (EPI) - g.a. 826647**

Technical contributor

<https://cordis.europa.eu/project/id/826647/news>

30/05/2025

Mohsen Seyedkazemi Ardebili

