Pamela Delgado

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https://pamedelgado.org

Scientific interests

- Efficient resource management
- Systems for ML
- Big data
- Reproducibility
- Cloud computing
- Data science

Education

2018. **PhD in Computer Science**
Hybrid, Job-Aware, and Preemptive Datacenter Scheduling
EPFL – Switzerland

2012. **Master in Computer Science**
Specialization: Foundations of Software. GPA 5.36/6
EPFL – Switzerland

2008. **Bachelor in Systems Engineering**
Graduated with honours
UCB – Bolivia

2006. **Exchange student**
Pontificia Universidad Católica de Chile – Chile

Languages

French	●●●●
English	●●●●
Spanish	●●●●
German	●○○○
Italian	●●●○

Current situation

Sept. 2022 – current **Assistant Professor UAS**
Informatique et systèmes de communication - HES-SO Valais Wallis
University of Applied Sciences Western Switzerland

2019 – current **Lecturer – Senior Systems Engineer**
Swiss Data Science Center – EPFL

Professional Experience

2018-2022 **Lecturer – Senior Systems Engineer**
Swiss Data Science Center – EPFL
Renku: Reproducible and Collaborative Data Science Platform
https://renkulab.io

2013-2018 **Doctoral researcher & Teaching assistant**
EPFL, Scheduling in Big Data clusters. Lausanne, Switzerland.

2013 **Research Intern in System & Networking**
Microsoft Research, Fabric computing simulation. Cambridge, UK.

2011 **Summer Intern**
KeyLemon SA, Face recognition App for Android. Martigny, Switzerland.

2009 – 2010 **Software Engineer**
Outsourcing for Enable Consultants, Recess web application for Canadian schools. Toronto, Canada.

2008 – 2009 **Software Engineer**
PirAMide Informatik SRL. Medical imaging and digital dictation modules. Cochabamba, Bolivia. In partnership with Medspazio. Geneva, Switzerland.

2006 – 2008 **Software Engineer**
PirAMide Informatik SRL. EJB Automatic Migration Tool. Information systems development. Cochabamba, Bolivia.

Teaching Experience

2020 – present **Large scale data science**, Lecturer, Master EPFL.

2020 **Critical Data Studies**, Lecturer, Master EPFL.

2019 **Introduction to Operating Systems**, Lecturer, Bachelor EPFL.

2017 **Analysis I**, Teaching assistant, Bachelor EPFL.

2012 – 2017 **Operating Systems**, Teaching assistant, Bachelor EPFL.

2016 **Programming I**, Teaching assistant, Bachelor EPFL.

2016 **Information-communication-computation**, Teaching A., Bachelor EPFL.

2005 **Operating Systems**, Teaching assistant, Bachelor UCB, Bolivia.

Awards & Achievements

2019 Honorable mention. Distinguished disertation award. SPEC.

2019 Thesis nominated for EPFL's Doctoral Program Distinction. EPFL.

2013 - 2018 Microsoft Research Grant. Towards Resource Efficient Datacenters.

2013 Google Anita Borg Memorial Scholarship EMEA. Google Inc.

2012 Master's Final Project maximum score. EPFL.

2010 - 2012 Swiss Federal Scholarship for Foreign Students. Swiss Confederation.

2008 Bachelor's Final Project maximum score. UCB.

2006 Academic Excellence Scholarship. Pontificia Universidad Católica de Chile.

Technical Skills

DevOps: Kubernetes (Openstack, GKE, AKS), Docker, Terraform, Packer, CI/CD
Programming languages: Java, Python, Scala, C++
BigData: Spark, Hadoop, HDFS
Operations: Gitlab, Keycloak, Prometheus, Grafana, Sentry
MLOps: Tensorflow, R Studio, Jupyter
Release management.
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Service

CCGRID 2024 program committee

SoCC 2023 program committee

Eurosys 2023 program committee

JPDC 2023 reviewer

15th/16th UCC/BDCAT 2022/2023 artifact evaluation chair

SC23 artifact reviewer

ICPP 2023 reproducibility committee

14th IEEE/ACM UCC 2021 artifact reviewer

JCC 2021 reviewer

TPDS 2021/2018 reviewer

T-ASE 2016 reviewer

SDSC data science project call reviewer

CHIST-ERA 2023 ORD project call reviewer

Switzerland leading house MENA project call reviewer

Projects, Collaborations & Grants

2023 - present *AI center for SMEs.* Flagship project for HES-SO.

2023 *Energy EmoMaps.* Interdisciplinary project funded by Axe Transformation Numerique. HES-SO Valais-Wallis.

2020 *EasyFAIR.* Swissuniversities. In collaboration with ETHZ, ZHAW, HSLU.

2019 *Renku proposal for GCP research credits.* Google Cloud Platform GCP research credits grant.

2021 *Renku Integration at FSO.* Mandate with the Federal Statistics Office.

2020 *BAG Health Data Science.* Collaboration with the COVID Task Force.

2020 *Deploying Renku in an offline environment.* Collaboration with the Health2030 Genome Center.

2019 *Renku deployment at Openshift.* Mandate and collaboration with Red Hat.

2013 - 2018 *Towards Resource Efficient Datacenters.* Grant from Microsoft Research. Swiss Joint Research Center.

2013 *Research intern in Systems and Networking* Simulation Research for Fabric Computers, Microsoft Research Cambridge. Anthony Rowston.

2012 *Large-scale task scheduling in Hadoop* LABOS, EPFL Prof. Willy Zwaenepoel

2012 *Domain Specific Language for Distributed Algorithms in Scala* Master project LSR, EPFL Prof. André Schiper

2011 *Invariant Verifier for Parallel Programs* Semester project LAMP, EPFL Prof. Martin Odersky

2011 *STAMP in Java: Benchmark for Software Transactional Memory*Semester project LPD, EPFL Prof. Rachid Guerraoui

Publications

Towards reproducible software studies with MAO and Renku. J Spillner, P Gkikopoulos, P Delgado, C Choirat. *SoftwareX. 17(100947).* **(2022)**

Kairos: Preemptive Data Center Scheduler Without Runtime Estimates. P Delgado, D Didona, F Dinu, W Zwaenepoel. *The ACM Symposium on Cloud Computing (SoCC). Carlsbad, CA, USA.* **(2018)**

Job-Aware Scheduling in Eagle: Divide and Stick to Your Probes. P Delgado, D Didona, F Dinu, W Zwaenepoel. *The ACM Symposium on Cloud Computing (SoCC). Santa Clara, CA, USA.* **(2016)**.

Eagle: A Better Hybrid Data Scheduler. P Delgado, D Didona, F Dinu, W Zwaenepoel. *Poster at 11th European Conference on Computer Systems (EuroSys). London, UK.* **(2016)**.

Hawk: Hybrid Datacenter Scheduling. P Delgado, F Dinu, AM Kermarrec, W Zwaenepoel. *The USENIX Annual Technical Conference (ATC). Santa Clara, CA, USA.* **(2015)**.

Distal: A Framework for Implementing Fault-tolerant Distributed Algorithms. M Biely, P Delgado, Z Milosevic, A Schiper. *43rd Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN). Budapest, Hungary.* **(2013)**.

Efficiently Scheduling Data-Parallel Computations on Very Large Clusters. P Delgado, K Elmeleegy, AM Kermarrec, W Zwaenepoel. *Poster at the 8th European Conference on Computer Systems (EuroSys). Prague, Czech Republic.* **(2013)**.

Invited Talks & Events

Organization of AI days hosting at HES-SO Valais-Wallis. **2024**

Organization of Renku & Data Science Talks, with external and internal speakers. **2019-2022**

15th Cloud Control Workshop (Invite only), June 11-13, Sandhamn, Sweden. **2019**.

13th Cloud Control Workshop (Invite only) , June 13-15, Skåvsjöholm, Sweden. **2018**

Kairos: Preemptive Data Center Scheduling Without Runtime Estimates.
Università della Svizzera italiana USI, Lugano, Switzerland**(2019)**

Towards Resource Efficient Datacenters - Closing summary.
Microsoft Swiss JRC workshop 2018. EPFL Lausanne, Switzerland. **(2018)**

Job-aware Scheduling in Eagle: Divide and Stick to Your Probes.
Ecocloud Annual Event. Lausanne, Switzerland. **(2017)**

Towards Resource Efficient Datacenters - Eagle.
Microsoft Swiss JRC Workshop 2017. MSR Cambridge, United Kingdom. **(2017)**

Job-aware Scheduling in Eagle: Divide and Stick to Your Probes.
Eurosys Shadow PC meeting. Google Zurich, Switzerland. **(2017)**

Hawk: Hybrid Datacenter Scheduling.
Annual EPFL INRIA Workshop 2017. Rennes, France. **(2017)**

Job-aware Scheduling in Eagle: Divide and Stick to Your Probes.
ACM Symposium on Cloud Computing (SoCC). Santa Clara, US. **(2016)**

Job-aware Scheduling in Eagle: Divide and Stick to Your Probes.
Microsoft Systems and Networking Group Meeting. Microsoft Research Lab Redmond, US. **(2016)**

Job-aware Scheduling in Eagle: Divide and Stick to Your Probes.
Nutanix. Santa Clara, US. **(2016)**

Towards Resource Efficient Datacenters - Hawk.
Microsoft Swiss JRC workshop 2016. ETHZ Zurich, Switzerland. **(2016)**

Hawk: Hybrid Datacenter Scheduling
Usenix Annual Technical Conference (ATC). Santa Clara, US. **(2015)**

Big Data: au-delà des systèmes distribués.
Presentation to School Students (Présentation aux gymnasiens). EPFL Lausanne - Switzerland. **(2014)**