# ALEMNEW SHEFERAW ASRESE

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Aalto University, Department of Communications and Networking (ComNet)
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**RESEARCH INTEREST**

Internet Measurement, Quality of Experience (QoE), QoE Modeling, Web Performance, Networked and Systems and Applications, Web based Real-Time Communication, Machine Learning for Networking.

**EDUCATION**

**Aalto University, Finland** Sep 2014 - present
Doctor of Science (Tech.) in Networking Technologies
Dissertation topic: Quality of Experience inference based upon Active Network Measurement
Advisers: Prof. Dr.-Ing. Jörg Ott and Dr. Pasi Sarolahti

**University of Trento, Italy** Sep 2011 - Mar 2014
Master of Science in Computer Science
Specialization in Internet Technologies
Thesis: Design and Development of Dynamic Fleet Management System Prototype
Adviser: Prof. Alberto Montresor

**Adama Science and Technology University, Ethiopia** Nov 2007 - Jul 2010
Bachelor of Science in Information Science (with Very Great Distinction)
Thesis: Online Voting System for National Electoral Board of Ethiopia
Adviser: Belayneh Mengistu

**EXPERIENCE**

**Aalto University, Comnet Department, Finland** Jun 2014 - present
Doctoral Candidate and Researcher. Advisers : Prof. Dr.-Ing. Jörg Ott and Dr. Pasi Sarolahti
– Working on the PhD project #1 of METRICS-ITN project. http://metrics-itn.eu/positions/.
– Developed a web performance measurement tool.

**TU Munich, Chair of Connected Mobility, Germany** Jun - Aug 2018
Visiting PhD Researcher. Jul - Aug 2017
Mentor: Dr. Vaibhav Bajpai
– Measuring Web Latency and Rendering Performance

**INRIA – Paris, MUSE Research Group, France** Mar 2017 - May 2017
Visiting PhD researcher. Mentors: Dr. Vassils Vassilis Christofidis and Dr. Renata Cruz Teixeira
– Analysis of Quality of Service (QoS) metrics for modeling the Quality of Experience (QoE) of web browsing.

**Simula Reseach Laboratory, Oslo, Norway** March 2016 - July 2016
Visiting PhD student. Mentor: Dr. Özgu Alay
– Measuring and modelling Web performance and QoE on mobile broadband network under different mobility scenario using MONROE platform.

**NEC Labs Europe, Heidelberg, Germany**                    Feb 2013 - Jan 2014

Internship student. Mentors: Dr. Nitin Maslekar and Maria Goleva
- Designed and implemented a dynamic fleet management system prototype by using the Vehicle Routing Problem algorithms
- Designed and implemented a communication platform for electric vehicles by extending the C2X-sdk functionality for car to car and car to infrastructure communication.

**GreenPrefab Italia s.r.l, Rovereto, Italy**                    Mar 2012 - Jul 2012

Web Developer and Programmer.
- Designed and implemented a web portal for civil engineers and architects to do a simulation and rendering on a cloud.
- Designed and implemented a cloud solution for rendering and simulation of green building prefab elements.

**Adama Science & Technology University, Ethiopia**          Sep 2010 - Aug 2011

Graduate Assistant.
- Taught theoretical lessons for bachelor students (course: Introduction to Information Technology)
- Taught laboratory lessons for bachelor students (Courses: Programming with C++, object oriented programming with Java, and Web programming with HTML, CSS, JavaScript and PHP)
- Designed and implemented a Malaria Expert System in bilingual local languages
- Developed a laboratory manual

**Adama Science & Technology University, Ethiopia**          Dec 2008 - Jun 2010

Laboratory Technician, Librarian, Intern student.
- Troubleshooting personal computers (both Hardware & software)
- Installing new personal computers (both Hardware & Software)
- Member of Library automation team
- Configured the KOHA library integrated management system of the library
- Managing the library users and resources

**TEACHING**     **Aalto University**                                    2014 - present
**EXPERIENCE**
Teaching Assistance:
- Instructed and graded the software project for the course Network Programming (2015).
- Instructed and graded the laboratories exercises for the course Communication Networks (2014).

**Adama Science & Technology University**                    Sep 2010 - Aug 2011

Lecturer:
- Introduction to Information Technology

Laboratories lessons:
- Programming with C++
- Object Oriented Programming with Java
- Web programming with HTML, CSS, JavaScript and PHP

**TECHNICAL**   **Programming languages:** Java, Python, Android, C, C++, PHP, JavaScript, Shell
**SKILLS**      **Data analysis & visualization tools:** Python, R
**Database:** MySQL, SQL
**Networking tools:**  Mininet, Wireshark

**Operating systems:** OS X, Linux, Windows
**Utilities:** vim, git, LaTeX

**PUBLICATIONS**

1. <u>A. S. Asrese</u>, S. J. Eravuchira, V. Bajpai, P. Sarolahti, J. Ott. Measuring Web Latency and Beyond: Methods, Tools & Longitudinal Dataset. *IEEE Transactions on Network and Service Management (TNSM), XXX 2019* [ISI Impact: 3.28]

2. <u>A.S. Asrese</u>, E. Walelgne, V. Bajpai, A. Lutu, O. Alay, J. Ott. Measuring Web Quality of Experience in Cellular Networks. *in Proc. of the 2019 Passive Active Measurement Conference. March 2019. Puerto Varas, Chile.* [26.6%, 20/75]

3. D. N. da Hora, <u>A. S. Asrese</u>, et. al. Narrowing the gap between QoE and QoS metrics for Web applications. *in Proc. of the 2018 Passive Active Measurement Conference. March 2018. Berlin, Germany.* [40%, 20/50] Best Dataset Award.

4. <u>A. S. Asrese</u>, P. Sarolahti, M. Boye, J. Ott. WePR: A Tool for Automated Web Performance Measurement. *Fifth IEEE International Workshop on Quality of Experience for Multimedia Communications – IEEE GLOBECOM 2016.* December 2016. Washington DC, USA.

5. P. Reichl, S. Egger, S. Móller, K. Kilkki, M. Fiedler, T. Hossfeld, C. Tsiaras and <u>A. S. Asrese</u>. Towards a comprehensive framework for QoE and user behavior modeling. *7th International Workshop on Quality of Multimedia Experience.* May 2015. Costa Navarino, Messinia, Greece.

**THESES**

1. Master thesis: Design and development of Dynamic Fleet Management Prototype. *University of Trento, Italy.* March 2014.

2. Bachelor Thesis: Online Voting System for National Electoral Board of Ethiopia. *Adama Science and Technology University, Ethiopia.* July 2010.

**POSTERS**

1. E. Walelgne, <u>A.S. Asrese</u>, V. Bajpai, J. Ott, J. Manner.Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network. *ACM MobiSys Conference.* June 2018. Munich, Germany.

2. <u>A.S. Asrese</u>, E. Walelgne, A. Lutu, O. Alay, J. Ott. Measuring Web Latency in Cellular Networks. $37^{th}$ *IEEE International Conference on Computer Communications.* April 2018. Honolulu, HI, USA.

3. <u>A. S. Asrese</u>, P. Sarolahti, J. Ott. Web QoE inference from large scale measurement. $5^{th}$ *International PhD school in Traffic Monitoring and Analysis.* April 2015. Barcelona, Spain.

**TALKS**

1. Measuring Web QoE in Cellular Networks. *Doctoral Seminar of Connected Mobility Chair at Technical University of Munich.* April 2-3, 2019. Salzburg, Austria.

2. Web QoE and Performance in Mobile Broadband Networks. *Doctoral Seminar of Connected Mobility Chair at Technical University of Munich.* October 11-12, 2016. Burghausen, Germany.

3. Netradar- Measuring mobile networks. *ACM SIGCOMM Internet Measurement Conference 2014.* November 5-7, 2014. Vancouver, Canada.

**NON-REFERENCED ARTICLES**

1. G. Biyane, A.S. Asrese. The Impact of Social Media on the Spiritual Life of Orthodox Christians – a survey. *Mahibere Kidusan Europe Center 16th General Assembly.* July 2016. Stockholm, Sweden. *[in Amharic Language]*

**PROJECTS**

1. **METRICS:** Measurement for Europe: Training and Research for Internet Communications Science. FP7-PEOPLE – Contract no. 607728. http://metrics-itn.eu      2014 - 2017
   – Worked on WP 1 and contributed for deliverable 1.1, 1.2, 1.3.

2. **LEONE:** From global measurements to local management. EU FP7 ICT-2011.1.1 – contract no. 317647. http://www.leone-project.eu    2012 - 2015
   – Contributed for deliverable 4.3.

3. **VENUS-C:** Virtual multidisciplinary environments using cloud computing. EU FP7 Research Infrastructure – contract no. 261565. http://www.venus-c.eu      2010 - 2012
   – Designed and developed a could solution for architects and civil engineers that enables them to design and render different architectural and energy efficiency simulations.

4. **Malaria Expert System.** Grant from Ethiopian Ministry of ICT.     2010 - 2011
   – Designed and developed a multilingual web based expert system which takes symptoms of malaria as an input and gives information about the situation of the patient.

**PROFESSIONAL ACTIVITIES**

**Technical Program Committee:**
– AFRICOMM Workshop on Internet measurements research in Africa    2018

**Shadow Technical Program Committee:**
– Internet Measurement Conference      2017, 2018
– Traffic Measurement and Analysis Conference      2018

**External Reviewer:**
– IEEE Transactions on Network & Service Management (TNSM)    2019
– IEEE/IFIP Symposium on Integrated Network Management    2019
– IFIP Networking Conference      2018

**HONORS AND AWARDS**

– ACM student travel grant to SIGCOMM conference, Florianopolis, Brazil. 2016
– ACM student travel grant for CoNEXT conference, Heidelberg, Germany. 2015
– ACM travel grant for Internet Measurement Conference, Tokyo, Japan.   2015
– Award of Excellence for the year 2014 from University of Trento, Italy.   2015
– Marie-Curie Initial Training Network grant for three years of PhD study. 2014

**EXTRA CURRICULAR & VOLUNTEER WORK**

**Mahibre Kidusan**

1. Member of the Executive Committee and Head of Technology, Research & Training Department at Mahibere Kidusan Europa a.V, Germany. 2014 - 2017

2. Member      Since 2007

**REFERENCES**

1. **Jörg Ott**
   Professor, Chair of Connected Mobility, Department of Informatics,
   Technical University of Munich, Germany
   Email: ott@in.tum.de

2. **Pasi Sarolahti**
   University Lecturer, Department of Communications and Networking,
   Aalto University, Finland
   Email: pasi.sarolahti@aalto.fi

3. **Vaibhav Bajpai**
   Senior Researcher, Chair of Connected Mobility, Department of Informatics,
   Technical University of Munich
   Email: bajpaiv@in.tum.de

4. **Alberto Montresor**
   Associate Professor, Faculty of Science
   University of Trento, Italy
   Email: alberto.montresor@unitn.it