

# Alemnew Sheferaw Asrese

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## Education

- 2014 – **Doctoral Candidate in Networking Technology**, *Aalto University, Finland*.  
Dissertation: Quality of Experience (QoE) Inference for Web Applications based upon Active Network Measurement  
Advisors: Prof. Dr.-Ing. Jörg Ott and Dr. Pasi Sarolahti
- 2011 – 2014 **M.Sc. in Computer Science**, *University of Trento, Italy*, GPA – 99/110.  
Thesis: Design and Development of Dynamic Fleet Management System Prototype  
Advisor: Prof. Alberto Montresor
- 2007 – 2010 **B.Sc. in Information Science**, *Adama University, Ethiopia*, GPA: 3.9/4.0.  
Thesis: Online Voting System for National Electoral Board of Ethiopia.  
Advisor: Belayneh Mengistu

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## Work Experience

- 2014 – **Doctoral Candidate & Researcher**, AALTO UNIVERSITY, Finland.  
- Researched factors that affect and measured Web Performance and Quality of Experience.  
- Developed Web Performance and QoE measurement tool.  
- Performed technical presentations at international conferences and seminars.
- 2013 – 2014 **Software Developer –Intern**, NEC LABORATORIES EUROPE, Germany.  
- 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.
- Mar – Jul 2012 **Web Developer & Programmer**, GREENPREFAB, Italy.  
- Designed and implemented a cloud-based solution and web portal for civil engineers and architects to perform green-building rendering and energy efficiency simulation.
- 2010 – 2011 **Graduate Assistant**, ADAMA SCIENCE & TECHNOLOGY UNIVERSITY, Ethiopia.  
- Taught both theoretical and laboratory lessons for bachelor students.  
- Designed and implemented Malaria Expert System.
- 2008 – 2010 **Laboratory Technician, Librarian, & Intern**, ADAMA UNIVERSITY, Ethiopia.  
- Troubleshooting & installing personal computers.  
- Member of Library automation team.  
- Configured the KOHA library integrated management system.  
- Managing the library users and resources.  
- Converted 500K+ e-books to PDF from different formats.

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## Research Visit

- May – Jul 2018 **Visiting PhD Researcher**, TU MUNICH, Germany.  
Mentor: Dr. Vaibhav Bajpai  
Topic: Measuring Web QoE in Cellular Networks
- Jun – Aug 2017 **Visiting PhD Researcher**, TU MUNICH, Germany.  
Mentor: Dr. Vaibhav Bajpai  
Topic: Measuring Web Latency & Rendering Performance
- Mar – May 2017 **Visiting PhD Researcher**, INRIA –PARIS, MUSE RESEARCH GROUP, France.  
Mentor: Dr. Vassilis Christofidis & Dr. Renata Cruz Teixeira  
Topic: Analysis of Quality of Service (QoS) metrics for Web QoE modeling
- Mar – Jul 2016 **Visiting PhD Student**, SIMULA RESEACH LABORATORY, Norway.  
Mentor: Dr. Özgü Alay  
Topic: Measuring and modelling Web performance and QoE on mobile broadband network under different mobility scenario using MONROE platform.

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## Teaching Experience

### Aalto University

- 2015 **Teaching Assistant**, *for the course Network Programming*.  
Responsibility: Instructed and graded the software project.
- 2014 **Teaching Assistant**, *for the course Communication Networks*.  
Responsibility: Instructed and graded the laboratories exercises.

### Adama Science & Technology University

- 2011 **Lecture**, *Introduction to Information Technology*.  
**Teaching Assistant**, *for the course Web programming with HTML, CSS, JavaScript*.
- 2010 **Teaching Assistant**, *for Fundamentals of Programming with C++, and Object Oriented Programming with Java courses*.

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## Technical Skills

- **Programming languages:** Java, Python, Android, C++, PHP, JavaScript, Shell
- **Data analysis & visualization tools:** Python, R
- **Database:** MySQL, SQL
- **Networking tools:** Mininet, Wireshark
- **Operating systems:** OS X, Linux, Windows
- **Utilities:** vim, git, L<sup>A</sup>T<sub>E</sub>X

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## Trainings

- June 2016 **Strategic Management, Leading & Coaching**, IE Business school / IE University, Madrid, Spain.
- July 2015 **Cyber Security**, Tallinn University of Technology, Tallinn, Estonia.

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## Publications

- [1] **A. S. Asrese**, S. J. Eravuchira, V. Bajpai, P. Sarolahti, and J. Ott. “Measuring Web Latency and Rendering Performance: Method, Tools & Longitudinal Dataset”. In: *IEEE TNSM* (2019). [ISI Impact: 3.28]. DOI: 10.1109/TNSM.2019.2896710.
- [2] **A. S. Asrese**, E. A. Walelgne, V. Bajpai, A. Lutu, Ö. Alay, and J. Ott. “Measuring Web Quality of Experience in Cellular Networks”. In: *ACM PAM’19. Puerto Varas, Chile*. [26.6%, 20/75]. Mar. 2019. DOI: 10.1007/978-3-030-15986-3\\_2.
- [3] D. N. da Hora, **A. S. Asrese**, V. Christophides, R. Teixeira, and D. Rossi. “Narrowing the Gap Between QoS Metrics and Web QoE Using Above-the-fold Metrics”. In: *ACM PAM’18. Berlin, Germany*. [40%, 20/50] **Best Dataset Award**. Mar. 2018. DOI: 10.1007/978-3-319-76481-8\\_3.
- [4] **A. S. Asrese**, P. Sarolahti, M. Boye, and J. Ott. “WePR: A Tool for Automated Web Performance Measurement”. In: *IEEE Globecom’16 Workshops. Washington, DC, USA*. Dec. 2016. DOI: 10.1109/GLOCOMW.2016.7849082.
- [5] P. Reichl, S. Egger, S. Möller, K. Kilkki, M. Fiedler, T. Hoßfeld, C. Tsiaras, and **A. Asrese**. “Towards a Comprehensive Framework for QoE and User Behavior Modelling”. In: *IEEE QoMEX’15. Pilos, Messinia, Greece*. May 2015. DOI: 10.1109/QoMEX.2015.7148138.

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## Theses

- [1] A. S. Asrese. “Design and Development of Dynamic Fleet Management System”. Master thesis. University of Trento, Italy, 2014.
- [2] A. S. Asrese. “Online Voting System for National Electoral Board of Ethiopia”. Bachelor thesis. Adama University, Ethiopia, 2010.

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## Posters and Demos

- [1] **A. S. Asrese**, E. A. Walelgne, A. Lutu, Ö. Alay, and J. Ott. “Poster abstract: Measuring Web Latency in Cellular Networks”. In: *IEEE INFOCOM’18. Honolulu, HI, USA*. Apr. 2018. DOI: 10.1109/INFOCOMW.2018.8406855.
- [2] E. A. Walelgne, **A. S. Asrese**, V. Bajpai, J. Ott, and J. Manner. “Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network”. In: *ACM MobiSys’18. Munich, Germany*. June 2018. DOI: 10.1145/3210240.3210804.
- [3] **A. S. Asrese**, P. Sarolahti, and J. Ott. “Web QoE Inference from Large-scale Measurement”. In: *5<sup>th</sup> TMA PhD School. Barcelona, Spain*. Apr. 2015.

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## Talks

- April 2019 Measuring Web QoE in Cellular Networks. *Doctoral Seminar of Connected Mobility Chair at Technical University of Munich*. Salzburg, Austria.
- October 2016 Web QoE and Performance in Mobile Broadband Networks. *Doctoral Seminar of Connected Mobility Chair at Technical University of Munich*. Burghausen, Germany.
- November 2014 Netradar – Measuring mobile networks. *ACM SIGCOMM IMC’14 Conference*. Vancouver, Canada

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## Nonreferenced Publication

- [1] G. Biyane and A. Asrese. "The Impact of Social Media on the Spiritual Life of Orthodox Christians – a survey ". In: *Mahibere Kidusan Europe Center 16<sup>th</sup> General Assembly. Stockholm, Sweden.* (July 2016). *[in Amharic Language]*.

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## Research Projects

- 2014 – 2017 **METRICS**, *Measurement for Europe: Training and Research for Internet Communications Science*, FP7-PEOPLE – Contract no. 607728.  
- Worked on WP 1 and contributed for deliverable 1.1, 1.2, 1.3.
- 2012 – 2015 **LEONE**, *From global measurements to local management*, EU FP7 ICT2011.1.1 – contract no. 317647.  
- Contributed for deliverable 4.3.
- 2010 – 2012 **VENUS-C**, *Virtual multidisciplinary environments using cloud computing*, EU FP7 Research Infrastructure – contract no. 261565.  
- Designed and implemented a cloud-based solution for architects and civil engineers to render green building architecture and energy efficiency simulations.
- 2010 – 2011 **Malaria Expert System**, *Grant from Ethiopian Ministry of ICT*, a collaboration project with Dr. Dereje Yohaness.  
- Designed and implemented a multilingual web based expert system which takes symptoms of malaria as an input and gives information about the situation of the patient.

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## Professional Services

### Technical Program Committee

- 2018 AFRICOMM Workshop on Internet measurements research in Africa

### Shadow TPC

- 2017 – 2018 ACM Internet Measurement Conference  
2018 IFIP Traffic Measurement and Analysis Conference

### Reviewer

- 2019 IEEE Transactions on Network & Service Management (TNSM)  
2019 IEEE/IFIP Symposium on Integrated Network Management  
2018 IFIP Networking Conference

### Organizer

- 2017 – 2018 Ethiopian Church Studies Conference

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## Awards and Grants

- 2016 ACM student travel grant to SIGCOMM conference, Florianopolis, Brazil.  
2015 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.  
2014 Marie-Curie Initial Training Network grant for three years of PhD study.

2011 Opera Universitaria Scholarship for two years of Master study.

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## References

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