

**Ermias Andargie Walelgne**

CONTACT INFORMATION	<p>Department of Communications and Networking (ComNet)  Aalto University  Maarintie 8, 02150  Espoo, Finland</p> <p>ermias.walelgne@aalto.fi  +358 451959032</p>
RESEARCH INTERESTS	<p>Internet measurements, mobile data analysis, characterizing wireless network performance, user experience and QoE modeling in mobile systems, machine learning.</p>
EDUCATION	<p><b>Aalto University</b>, Espoo, Finland</p> <p>Doctor of Science in Networking Technologies School of Electrical Engineering, <i>Since:</i> June 2014</p> <ul style="list-style-type: none"> <li>• Thesis Topic: <i>Characterizing and predicting the performance of mobile networks.</i></li> <li>• Advisors: Prof. Dr.-Ing. Jörg Ott, Technische Universität München and Jukka Manner, Professor, Ph.D, Aalto University</li> </ul> <p><b>University of Trento</b>, Trento, Italy</p> <p>M.S., Masters of Science, Computer Science ,September 2011 - March 26, 2014</p> <ul style="list-style-type: none"> <li>• Topic: <i>Time Series Similarity Query Answering Using iSAX on MapReduce</i></li> <li>• Adviser: Themis Palpanas, Professor of Computer Science</li> </ul> <p><b>Hawassa University</b>, Hawassa, Ethiopia</p> <p>B.Sc., Bachelor of Science Degree in Computer Science with Great Distinction (GPA &gt;3.84/4.0), July, 2008</p>
RESEARCH EXPERIENCE	<p><b>Aalto University, ComNet Department, Finland</b> Jun 2014 - present  Doctoral Candidate and Researcher.</p> <ul style="list-style-type: none"> <li>• Working on the PhD project #2 of METRICS-ITN project.</li> <li>• Supervisor: Jukka Manner, Professor, Ph.D and Prof. Dr.-Ing. Jörg Ott</li> </ul> <p><b>TU München, Germany</b> April 1 - 13, 2019  Visiting PhD researcher.</p> <ul style="list-style-type: none"> <li>• Understanding Data Usage Pattern and User Behavior in Cellular Networks  Mentor: Vaibhav Bajpai, Postdoctoral Fellow at TUM</li> </ul> <p><b>TU München, Germany</b> May 2018 to July 2018  Visiting PhD student as a Research Intern.</p> <ul style="list-style-type: none"> <li>• Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network  Mentor: Vaibhav Bajpai, Postdoctoral Fellow at TUM</li> </ul> <p><b>TU München, Germany</b> September 2017 to November 2017  Visiting PhD student as a Research Intern.</p> <ul style="list-style-type: none"> <li>• Performance and Stability Analysis in Cellular Network ,  Mentor: Vaibhav Bajpai, Postdoctoral Fellow at TUM</li> </ul> <p><b>TU München, Germany</b> March 2017 to May 2017  Visiting PhD student as a Research Intern.</p> <ul style="list-style-type: none"> <li>• Measuring Factors affecting Latency in Cellular Networks ,  Mentor: Vaibhav Bajpai, Postdoctoral Fellow at TUM</li> </ul>

TEACHING EXPERIENCE	<b>Aalto University, ComNet Department, Finland</b>	Jun 2014 - present
	Teaching Assistance: <ul style="list-style-type: none"> <li>• Internet Traffic Measurements and Analysis 2015/16</li> <li>• Protocol Design 2015</li> </ul> <b>Bahir Dar University, Institute of Technology, Ethiopia</b> Sep 10 2010 August 27, 2011 Assistant Lecturer <ul style="list-style-type: none"> <li>• Taught full credit hour courses for bachelor students: (courses: Communication and Computer Networking; Fundamentals of Programming with C++; Fundamentals of Database system With SQL)</li> </ul> <b>University of Gondar, Ethiopia</b> Sep 23, 2008 Sep 9, 2010 Graduate Assistant then promoted to Assistant Lecturer <ul style="list-style-type: none"> <li>• Taught full credit hour courses for bachelor students: (Courses: Data Structure and Algorithm; Fundamentals of programming with C++; Software Engineering; Object Oriented programming with Java) <ul style="list-style-type: none"> <li>• Research and Publication committee member</li> <li>• Department Assembly Member</li> <li>• Graduate Students Project Coordinator</li> </ul> </li> </ul>	
INDUSTRY EXPERIENCE	<b>Elisa Oyj, Helsinki, Finland</b>	October 2016 to Feb 2017
	Visiting PhD student as a Research Intern. <ul style="list-style-type: none"> <li>• Performance of web flows in cellular networks</li> </ul> Mentor: Setälä Kim, Analyst at Elisa Oyj <b>University of Illinois Research Center in Singapore (ADSC), Singapore</b> July - Dec 2012 Junior Researcher, Intern. <ul style="list-style-type: none"> <li>• Attacks on GWAS privacy: A Data Mining Approach.</li> </ul> Mentor: Zhenjie Zhang, Senior Research Scientist and Yin (David) Yang, Adjunct Research Scientist <b>Ethiopian Telecommunication Corporation (Ethio Telecom), Ethiopia</b> Jul 16, 2007 to Sep 16, 2008 Junior Programmer as intern student <ul style="list-style-type: none"> <li>• Developed an Online Domain Name Registration System to Ethiopian Telecom. Worked with team of 5 members.</li> </ul>	
CONFERENCE PUBLICATION	1. Stefan Neumeier, <b>Ermias Walelgne</b> , Vaibhav Bajpai, Jrg Ott, Christian Facchi: “Measuring the Feasibility of Teleoperated Driving in Mobile Networks.” in the Proc. of the Traffic Measurement and Analysis (TMA) conference, 2019. (To appear) 2. A.S. Asrese, <b>E. Walelgne</b> , 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. 3. K Apajalahti, <b>E Walelgne</b> , J Manner, E Hyvönen “Correlation-Based Feature Mapping of Crowdsourced LTE Data” <i>IEEE International Symposium on Personal, Indoor and Mobile Radio Communications</i> 4. <b>Ermias Andargie Walelgne</b> , Setälä Kim, Vaibhav Bajpai, Stefan Neumeier, Jukka M J Manner and Jörg Ott: “Factors Affecting Performance of Web Flows in Cellular Networks” <i>Ermias Andargie Walelgne, Setl Kim, Vaibhav Bajpai, Stefan Neumeier, Jukka M J Manner and Jrg Ott.</i> <i>IFIP Networking</i> 2018 5. <b>Ermias A .Walelgne</b> , Jukka Manner , Vaibhav Bajpai and Jörg Ott: “Analyzing Throughput and Stability in Cellular Networks.” <i>NOMS</i> 2018	

6. Jörg Ott, Ljubica Karkkainen, **Ermias A. Walelgne**, Ari Keränen, Esa Hyytiä, Jussi Kangasharju: “On the sensitivity of geo-based content sharing to location errors.” *WONS* 2017: 25-32

POSTER  
ABSTRACT  
PUBLICATION  
  
THESIS

1. Measuring Web Latency in Cellular Networks Alemnew Sheferaw Asrese, Ermias Walelgne, Andra Lutu, Ozgu Alay, Jörg Ott *INFOCOM* 2018
1. Master thesis: Time Series Similarity Query Answering Using iSAX on MapReduces. University of Trento, Italy. March 2014.
2. Bachelor Thesis: City Residents’ Information Management System, July 7 2008, Hawassa University, Ethiopia

POSTERS

1. “Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network“ **Munich Internet Research Retreat, MIR<sup>3</sup>** - 2017, 29/30 Nov 2017, Raitenhaslach, Germany
2. “Analyzing the Performance and Stability of Cellular Networks“ **ACM IMC 2017**, November 1-3, London, UK, Ermias Andargie Walelgne (Aalto University), Jukka Manner (Aalto University), Vaibhav Bajpai and Jörg Ott (Technical University of Munich)
3. “Ping on the Move“ Stefan Neumeier **ACM IMC 2017**, November 1-3, London, UK, (Technische Hochschule Ingolstadt), Ermias Walelgne (Aalto University), Vaibhav Bajpai and Jörg Ott (TU Munich), Christian Facchi (Technische Hochschule Ingolstadt)
4. “Measuring and Predicting The Performance of Cellular Links From Mobile Users Device“ **Munich Internet Research Retreat, MIR<sup>3</sup>** 2017, 23/24 May 2017, Raitenhaslach, Germany
5. “Understanding the Characteristics of Cellular Network and Its Performance“; METRICS Industrial Workshop 9th and 10th March 2016, Ericsson, Finland
6. “Understanding Link Stability and Performance in Mobile Network“; **5th International PhD school in Traffic Monitoring and Analysis**, April 21-22, 2015, Barcelona Spain

INVITED TALK

1. “Why browsing the Internet from mobile phone is so slow? “ - **At Elisa Research Team** - 15th June 2017, Helsinki, Finland

TALKS

1. “Factors Affecting Performance of Web Flows in Cellular Networks“; **RIPE 77** - Amsterdam, the Netherlands from 15-19 October 2018.
2. “Factors Affecting Performance of Web Flows in Cellular Networks“; **RIPE NCC Regional Meeting** - Almaty, 25 September 2018, Almaty, Kazakhstan.
3. “On Characterising and Prediction of Cellular Network Performance “; **Connected Mobility Doctoral Seminar** - October 12, 2017 at TUM Munich, Frauenthiemsee, Germany

4. “Factors Affecting DNS and TCP Latency in Cellular Networks”; **Connected Mobility Doctoral Seminar** - April 20, 2017 at TUM Munich, Germany
5. Characteristics and Performance of Cellular Network; PhD Seminar, October 7-9, 2015; Innsbruck, Austria

PROJECTS

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

SERVICES

- External Reviewer:
  - IEEE Wireless Communications and Networking Conference (WCNC) 2018
  - ACM SIGCOMM Computer Communication Review (CCR) Artefacts Review 2017
- Shadow PC:
  - **ACM IMC** - Internet Measurement Conference - Boston, USA Oct 31- Nov 3 Nov 2018
  - **TMA** - Network Traffic Measurement and Analysis Conference - Vienna, Austria 26-29 Jun 2018
  - **ACM IMC** - Internet Measurement Conference 2017 - London, UK 1-3 Nov 2017

AWARDS

- RIPE Academic Cooperation Initiative (RACI) Recipient, **RIPE77** - Amsterdam, Holland 2018
- FIP/IEEE NOMS 2018 Student Travel Grant for Authors, Taipei, Taiwan 2018
- ACM student travel grant for IMC conference, London, UK. 2017
- ACM student travel grant for CoNEXT conference, Heidelberg, Germany. 2015
- Marie-Curie Initial Training Network grant for three years of PhD study. 2014
- Opera Universitaria Scholarship for Masters in Computer Science, University of Trento, Italy, 2011.
- Academic Award for the 2006/7 Top Performing Male Students, the top two male performing student of Natural Science faculty with CGPA 3.84/4.0 2007,
- Graduated with Great Distinction, and the 2nd top scorer from the whole faculty students. Hawassa University, Ethiopia July 10, 2010.

TRAINING AND CERTIFICATES

- Strategic Management Seminar, IE Business schoolIE University, Madrid Spain Jun 2016
- ITC0002, Cyber Security Summer School, Tallinn University of Technology, Tallinn Estonia Jun 2015
- CISCO Certified Network Association (CCNA) Exploration, University of Gondar, Ethiopia: Jul 2009

TECHNICAL SKILLS

- **Programming languages:** Java, Python, C++, PHP, JavaScript, Shell
- **Data analysis, Machine Learning and Big Data:** python, scikit-learn, R, Mathlab, Hadoop, MapReduce.
- **Database:** MySQL, SQL, MongoDB, PostgreSQL
- **Networking tools:** Mininet, Wireshark
- **Operating Systems:** OS X, Linux, Windows

## LANGUAGES

– English	fluent
– Amharic	native
– Italy	basic
– Finnish	basic

## REFERENCES

Jukka Manner

Professor, Department of Communications and Networking  
Aalto University, Finland  
jukka.manner@aalto.fi

Jörg Ott

Professor, Chair of Connected Mobility, Department of Informatics  
Technische Universität München, Germany  
ott@in.tum.de

Vaibhav Bajpai

Postdoctoral Fellow, Chair of Connected Mobility, Department of Informatics  
Technische Universität München, Germany  
bajpaiv@in.tum.de