

Ermias Andargie Walelgne

CONTACT INFORMATION	Department of Communications and Networking (Comnet) Aalto University Maarintie 8, 02150 Espoo, Finland	http://ermiaswalelgne.github.io ermias.walelgne@aalto.fi ☎+358 451959032
RESEARCH INTERESTS	Internet measurements, mobile data analysis, wireless network performance, user experience and QoE modeling in mobile systems, machine learning.	
EDUCATION	Aalto University , Espoo, Finland Doctoral Candidate in Networking Technologies School of Electrical Engineering <ul style="list-style-type: none">– Thesis Topic: <i>Mobile Network Characteristics and Performance Prediction from the Edge.</i>– Advisors: Prof. Jukka Manner and Prof. Dr.-Ing. Jörg Ott. University of Trento , Trento, Italy Masters of Science in Computer Science <ul style="list-style-type: none">– Topic: <i>Time Series Similarity Query Answering Using iSAX on MapReduce.</i>– Adviser: Prof. Themis Palpanas Hawassa University , Hawassa, Ethiopia Bachelor of Science Degree in Computer Science (with Great Distinction) <ul style="list-style-type: none">– Topic: <i>Residents' Information Management System.</i>	<i>Since:</i> June 2015 Sep 2011 - Mar 2014 Oct 2005 - July 2008
RESEARCH EXPERIENCE	Aalto University, Comnet, Finland Doctoral Candidate and Researcher. <ul style="list-style-type: none">– Working on the PhD project #2 of METRICS-ITN project.– Advisers: Prof. Jukka Manner and Prof. Dr.-Ing. Jörg Ott University of Illinois Research Center, Singapore Junior Researcher <ul style="list-style-type: none">– Topic: <i>Attacks on GWAS privacy: A Data Mining Approach.</i>Mentor: Zhenjie Zhang and Yin (David) Yang	Jun 2014 - present Jul - Dec 2012
RESEARCH VISIT	TU München, Germany - Visiting PhD Researcher. Mentor: Dr. Vaibhav Bajpair Topics: <ul style="list-style-type: none">– <i>Data Usage Pattern and User Behavior in Cellular Networks.</i> Apr 1 - 13, 2019– <i>Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network.</i> May - Jul 2018– <i>Performance and Stability Analysis in Cellular Network.</i> Sep - Nov 2017– <i>Measuring Factors Affecting Latency in Cellular Networks.</i> Mar - May 2017	
TEACHING EXPERIENCE	Aalto University, Comnet, Finland Teaching Assistance: <ul style="list-style-type: none">– Internet Traffic Measurements and Analysis– Protocol Design Bahir Dar University, Ethiopia Assistant Lecturer	Jun 2014 - present 2015/16 2015 Sep 2010 - Aug 2011

	<ul style="list-style-type: none"> - Taught bachelor level courses: (Data Communication and Computer Networking; Fundamentals of Programming with C++; Fundamentals of Database System with SQL) 	
	University of Gondar, Ethiopia	Sep 2008 - Sep 2010
	Graduate Assistant then promoted to Assistant Lecturer	
	<ul style="list-style-type: none"> - Taught bachelor level courses: (Data Structure and Algorithm; Fundamentals of programming with C++; Software Engineering; Object Oriented programming with Java) - Committee services <ul style="list-style-type: none"> * Research and Publication committee member * Department Assembly Member * Graduate Students Project Coordinator 	
INDUSTRY EXPERIENCE	Elisa Oyj, Helsinki, Finland	Oct 2016 - Feb 2017
	PhD Research Intern.	
	<ul style="list-style-type: none"> - Topic: <i>Performance of Web Flows in Cellular Networks</i>. Mentor: Setälä Kim 	
	Ethio Telecom, Ethiopia	Jul 2007 - Sep 2008
	Junior Programmer	
	<ul style="list-style-type: none"> - Developed an Online Domain Name Registration System to Ethio-Telecom. Worked with team of 5 members. 	
TECHNICAL SKILLS	<ul style="list-style-type: none"> - Programming languages & Scripts: Java, Python, C++, PHP, JavaScript, Shell. - Data Analysis & Visualization: Pandas, Numpy, R, Matplotlib, Seaborn. - Machine Learning & Big Data Frameworks: Scikit-learn, Spark, Tensorflow, Apache Hadoop, MapReduce. - Database: MySQL, SQL, MongoDB, PostgreSQL. - Networking Tools: Mininet, Wireshark. - Operating Systems: OS X, Linux, Windows. - Utilities: vim, git, LaTeX 	
CONFERENCE PUBLICATION	<ol style="list-style-type: none"> 1. Stefan Neumeier, <u>Ermias Walelgne</u>, Vaibhav Bajpai, Jrg Ott, Christian Facchi: “Measuring the Feasibility of Teleoperated Driving in Mobile Networks.” Traffic Measurement and Analysis (TMA) conference, 2019 [32.3%, 21/65] 2. Alemnew Asrese, <u>Ermias Walelgne</u>, Vaibhav Bajpai, Andra Lutu, Özgü Alay, Jörg Ott: “Measuring Web Quality of Experience in Cellular Networks.”, Passive Active Measurement Conference, 2019 [26.6%, 20/75] 3. Kasper Apajalahti, <u>Ermias Walelgne</u>, J Manner, E Hyvönen: “Correlation-Based Feature Mapping of Crowdsourced LTE Data”, <i>IEEE International Symposium on Personal, Indoor and Mobile Radio Communications</i>, 2018 [45.2%, 349/772] 4. <u>Ermias Walelgne</u>, Kim Setälä , Vaibhav Bajpai, Stefan Neumeier, Jukka Manner and Jörg Ott: “Factors Affecting Performance of Web Flows in Cellular Networks.” <i>IFIP Networking conference</i>, 2018 [24.4%, 55/225] 5. <u>Ermias Walelgne</u>, Jukka Manner , Vaibhav Bajpai and Jörg Ott: “Analyzing Throughput and Stability in Cellular Networks.” <i>IEEE/IFIP Network Operations and Management Symposium</i> , 2018 [32.2%, 56/174] 6. Jörg Ott, Ljubica Karkkainen, <u>Ermias Walelgne</u>, Ari Keränen, Esa Hyytiä, Jussi Kangasharju: “On the sensitivity of geo-based content sharing to location errors.” <i>IEEE/IFIP Wireless On-demand Network Systems and Services Conference</i>, 2017 [44.9%, 22/49] 	

POSTERS
(PREVIEWED)
PUBLICATION

1. Ermias Walelgne, Alemnew Asrese, Vaibhav Bajpai, Jörg Ott, Jukka Manner: “Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network”, MobiSys, 2018.
2. Alemnew Asrese, Ermias Walelgne, Andra Lutu, Ozgu Alay, Jörg Ott: “Measuring Web Latency in Cellular Networks.” *INFOCOM*, 2018.

THESIS

1. Master thesis: “Time Series Similarity Query Answering Using iSAX on MapReduces”. University of Trento, Italy, Mar 2014.
2. Bachelor Thesis: “City Residents’ Information Management System”, Hawassa University, Ethiopia, Jul 2008.

POSTERS

1. Ermias Walelgne, Vaibhav Bajpai, Jörg Ott: “Using Crowdsourcing Data for Adaptive Video Streaming in Cellular Network.” **Munich Internet Research Retreat, MIR³**, Raitenhaslach, Germany, Nov 2017.
2. Ermias Walelgne, Jukka Manner, Vaibhav Bajpai, Jörg Ott: “Analyzing the Performance and Stability of Cellular Networks.” **ACM Internet Measurement Conference (IMC)**, London, UK, Nov 2017.
3. Stefan Neumeier, Ermias Walelgne, Vaibhav Bajpai Jörg Ott, Christian Facchi: “Ping on the Move.” **ACM Internet Measurement Conference (IMC)**, London, UK, Nov 2017.
4. Ermias Walelgne, Vaibhav Bajpai, Jörg Ott: “Measuring and Predicting The Performance of Cellular Links From Mobile Users Device.” **Munich Internet Research Retreat, MIR³**, Raitenhaslach, Germany, May 2017.
5. Ermias Walelgne: “Understanding the Characteristics of Cellular Network and Its Performance.” METRICS Industrial Workshop at Ericsson, Espoo, Finland, Mar 2016.
6. Ermias Walelgne, Jukka Manner, Jörg Ott: “Understanding Link Stability and Performance in Mobile Network.” **5th International PhD school in Traffic Monitoring and Analysis**, Barcelona, Spain Apr 2015.

TALKS AND
PRESENTATION

1. “Factors Affecting Performance of Web Flows in Cellular Networks”- **RIPE 77**, Amsterdam, Netherlands, Oct 2018.
2. “Factors Affecting Performance of Web Flows in Cellular Networks.” - **RIPE NCC Regional Meeting**, Almaty, Kazakhstan, Sep 2018.
3. “Why Browsing the Internet from Mobile Phone is so Slow?” - **At Elisa Research Team**, Helsinki, Finland, Jun 2017.
4. “On Characterising and Prediction of Cellular Network Performance.” - **Chair of Connected Mobility Doctoral Seminar**, Frauenchiemsee, Germany, Oct 2017.
5. “Factors Affecting DNS and TCP Latency in Cellular Networks.” - **Chair of Connected Mobility Doctoral Seminar**, Munich, Germany, Apr 2017.
6. “Characteristics and Performance of Cellular Network.” - **Chair of Connected Mobility Doctoral Seminar**, Innsbruck, Austria, Oct 2015.

PROJECTS	<ul style="list-style-type: none"> – METRICS: Measurement for Europe: Training and Research for Internet Communications Science. FP7-PEOPLE Contract no. 607728. 2014 - 2017 <ul style="list-style-type: none"> – Worked on WP 1 and contributed for deliverable 1.1, 1.2, 1.3.
TRAINING AND CERTIFICATES	<ul style="list-style-type: none"> – Neural Networks and Deep Learning, Coursera Sep 2018 – 4G Network Essentials, edX May 2018 – Strategic Management Seminar, IE Business schoolIE University, Spain Jun 2016 – ITC0002, Cyber Security, Tallinn University of Technology, Estonia Jun 2015 – CISCO Certified Network Association (CCNA) Exploration Jul 2009
PROFESSIONAL SERVICES	<p>Technical Program Committee:</p> <ul style="list-style-type: none"> – AFRICOMM - Workshop on Internet measurements research in Africa 2018, 2019 <p>External Reviewer:</p> <ul style="list-style-type: none"> – IEEE Wireless Communications and Networking Conference (WCNC) 2018 – ACM SIGCOMM Computer Communication Review (CCR) Artefacts Review 2017 <p>Shadow PC:</p> <ul style="list-style-type: none"> – ACM IMC - Internet Measurement Conference, Boston, USA 2018 – TMA - Network Traffic Measurement and Analysis Conference, Vienna, Austria 2018 – ACM IMC - Internet Measurement Conference, London, UK 2017
GRANTS AND AWARDS	<ul style="list-style-type: none"> – RIPE77 Academic Cooperation Initiative Recipient - Amsterdam, Netherlands 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 Top Performing students in Natural Science faculty , Hawassa University 2007 – Graduated with Great Distinction, faculty 2nd top scorer , Hawassa University 2010
LANGUAGES	<ul style="list-style-type: none"> – English fluent – Amharic native – Italy basic – Finnish basic
REFERENCES	<div> Prof. Jukka Manner Aalto University, Finland jukka.manner@aalto.fi </div> <div> Prof. Jörg Ott Technische Universität München, Germany ott@in.tum.de </div> <div> Dr. Vaibhav Bajpai Technische Universität München, Germany bajpaiv@in.tum.de </div>