Ermias Andargie Walelgne

CONTACT INFORMATION	Department of Communications and Networking (ComNet)

Aalto University
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RESEARCH INTERESTS
Internet measurements, mobile data analysis, characterizing wireless network performance and data modeling, user experience and QoE modeling

EDUCATION

Aalto University, Espoo, Finland

Doctor of Science in Networking Technologies School of Electrical Engineering, *Since:* June 2014
- Thesis Topic: *Characterizing and predicting the performance of mobile networks.*
- Advisors: Prof. Dr.-Ing. Jörg Ott, Technische Universität München and Jukka Manner, Professor, Ph.D, Aalto University

University of Trento, Trento, Italy

M.S., Masters of Science, Computer Science ,September 2011 - March 26, 2014
- Topic: *Time Series Similarity Query Answering Using iSAX on MapReduce*
- Adisor: Themis Palpanas, Professor of Computer Science

Hawassa University, Hawassa, Ethiopia

B.Sc., Bachelor of Science Degree in Computer Science with Great Distinction (CGPA >3.75/4.0), July, 2008

RESEARCH EXPERIENCE

Aalto University, ComNet Department, Finland   Jun 2014 - present
Doctoral Candidate and Researcher.
- Working on the PhD project #2 of METRICS-ITN project.
- Supervisor: Jukka Manner, Professor, Ph.D and Prof. Dr.-Ing. Jörg Ott

TU München, Germany   September 2017 to November 2017
Visiting PhD student as a Research Intern.
- Performance and Stability Analysis in Cellular Network ,
  Mentor: Vaibhav Bajpai, Postdoctoral Fellow at TUM

TU München, Germany   March 2017 to May 2017
Visiting PhD student as a Research Intern.
- Measuring Factors affecting Latency in Cellular Networks ,
  Mentor: Vaibhav Bajpai, Postdoctoral Fellow at TUM

Elisa Oyj, Helsinki, Finland   October 2016 to Feb 2017
Visiting PhD student as a Research Intern.
- Performance of web flows in cellular networks
  Mentor: Setälä Kim, Analyst at Elisa Oyj

University of Illinois Research Center in Singapore (ADSC), Singapore July - Dec 2012
Junior Researcher, Intern.
- Attacks on GWAS privacy: A Data Mining Approach.
  Mentor: Zhenjie Zhang, Senior Research Scientist and Yin (David) Yang, Adjunct Research Scientist

TEACHING EXPERIENCE	**Aalto University, ComNet Department, Finland**	Jun 2014 - present

Teaching Assistance:
- Internet Traffic Measurements and Analysis   2015/16
- Protocol Design   2015

Bahir Dar University, Institute of Technology, Ethiopia Sep 10 2010 – August 27, 2011

Assistant Lecturer
- Taught full credit hour courses for bachelor students: (courses: Communication and Computer Networking; Fundamentals of Programming with C++; Fundamentals of Database system With SQL)

University of Gondar, Ethiopia   Sep 23, 2008– Sep 9, 2010

Graduate Assistant then promoted to Assistant Lecturer
- 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)
  - Research and Publication committee member
  - Department Assembly Member
  - Graduate Students Project Coordinator

INDUSTRY EXPERIENCE

Ethiopian Telecommunication Corporation (Ethio Telecom), Ethiopia   Jul 16, 2007 to Sep 16, 2008

Junior Programmer as intern student
- Developed an Online Domain Name Registration System to Ethiopian Telecom. Worked with team of 5 members.

CONFERENCE PUBLICATION

1. A.S. Asrese, **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. (To appear)

2. K Apajalahti, **E Walelgne**, J Manner, E Hyvönen "Correlation-Based Feature Mapping of Crowdsourced LTE Data" *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications*

3. **Ermias Andargie Walelgne**, Setälä Kim, Vaibhav Bajpai, Stefan Neumeier, Jukka M J Manner and Jörg Ott: "Factors Affecting Performance of Web Flows in Cellular NetworksErmias Andargie Walelgne, Setälä Kim, Vaibhav Bajpai, Stefan Neumeier, Jukka M J Manner and Jörg Ott." *IFIP Networking* 2018

4. **Ermias A .Walelgne**, Jukka Manner , Vaibhav Bajpai and Jörg Ott: "Analyzing Throughput and Stability in Cellular Networks." *NOMS* 2018

5. 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

1. Measuring Web Latency in Cellular Netowkrs Alemnew Sheferaw Asrese, Ermias Walelgne, Andra Lutu, Ozgu Alay, Jörg Ott *INFOCOM* 2018

THESIS

1. Master thesis: Time Series Similarity Query Answering Using iSAX on MapReduces. University of Trento, Italy. March 2014.

2. Bachelor Thesis: City Residentś 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, MIR3** - 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 Universtiy), 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, MIR3** 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 inCellular Networks"; **RIPE 77** - Amsterdam, the Netherlands from 15-19 October 2018.

2. "On Characterising and Prediction of Cellular Network Performance "; **Connected Mobility Doctoral Seminar** - October 12, 2017 at TUM Munich, Frauenchiemsee, Germany

3. "Factors Affecting DNS and TCP Latency in Cellular Networks"; **Connected Mobility Doctoral Seminar** - April 20, 2017 at TUM Munich, Germany

4. 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:

  - 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
- IMC student travel grant for CoNEXT conference, Heidelberg, Germany.   2015
- 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, Android, C, C++, PHP, JavaScript, Shell
- **Data analysis, Machine Learning and Big Data:** R, python, Mathlab, Haddop,MapReduce.
- **Database:** MySQL, SQL, MongoDb
- **Networking tools:** Mininet, Wireshark
- **Operating Systems:** OS X, Linux, Windows

LANGUAGES

  - English   fluent

  - Amharic   native

  - Italy   basic

  - Finnish   basic

REFERENCES   Jukka Manner
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