

PERSONAL  
INFORMATION

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## EDUCATION

Sep. 2012 –  
Feb. 2017

Joint PhD under Erasmus Mundus European Program

- EUV X-ray Training in Advanced Technologies for Interdisciplinary Cooperation (EXTATIC) (<https://www.ucd.ie/speclab/news/>) from University College Dublin, Ireland and RWTH-Aachen University, Germany. Overall result: **MAGNA CUM LAUDE**

Sep. 2007 –  
Aug. 2009

Joint MSc under Erasmus Mundus European Program

- Fusion Plasma Science & Engineering Physics: Universities of Nancy, France, Royal Institute of Technology (KTH), Sweden, and University of Stuttgart (Research Centre Juelich), Germany. Thesis result: **Great Distinction**

Sep. 2001 –  
Aug. 2005

Bachelor Degree in Physics

- Mekelle University, Ethiopia. Overall result: **Great Distinction**

## WORK EXPERIENCE

Nov., 2024 – Present

Postdoc Fellow of MSCA- P4F

- Institute of Physics of the Czech Academy of Sciences (FZU), HiLASE, Scientific Laser Applications, Prague.

May 2021 – Oct.,  
2024

Researcher and Lecturer: Space Plasma Physics.

- Deputy Director at Institute of Geophysics Space Science and Astronomy (IGSSA).
- Researcher and Lecturer: Space Plasma Physics.

Sep. 2018 - Mar.  
2021

Staff @ Mekelle University – Mekelle, Ethiopia

- Staff at Department of Physics at Mekelle University, Ethiopia. Nov. 2019 – Mar. 2021.

Mar. 2017 - Jun. 2018

Research Scientist @ SiriusXT (<https://siriusxt.com/>) innovation company – Dublin, Ireland

- SiriusXT, a spinout from University College Dublin-School of Physics Spectroscopy Group, develops a Laboratory Soft X-ray Microscope, the only commercial lab-based solution for whole intact cell imaging.

Sep. - Dec. 2012 &  
Sep. - Dec. 2013

- Two semester undergrad tutoring & demonstration at University College Dublin, School of Physics, Ireland

## SKILLS

Communication skills

- Excellent oral and written communication skills in English
- Good communication skills gained through post graduate training on “Presentation Skills” at UCD innovation academy and giving trainings on science research communication skills

Organisational/

- Leadership (deputy director at research institute-AAU)

**Managerial skills** ➤ Representative of PhD Students for EU Erasmus Mundus EXTATIC-PhD program

## RESEARCH ACTIVITIES

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- Publications**
- **Girum A Beyene** et al., ‘Laser-assisted vacuum arc extreme ultraviolet source: a comparison of picosecond and nanosecond laser triggering’, JPhys D Appl Phys, 2016
  - **Girum A Beyene** et al., ‘Investigation of EUV intensity and spatial pulse-to-pulse stability of laser assisted discharge source for metrology applications”, Under Preparation
  - R. Lokasani, E. Long, **G. Beyene**, P. Hayden, F. O'Reilly, P. Sheridan, P. Dunne, J. Limpouch and G. O'Sullivan. ‘Investigation of Laser-Produced Plasmas of rhodium (Z=45) and palladium (Z=46) in the 2 nm to 13 nm Spectral Region’, Proceedings of EUV & Soft X-ray sources, Dublin, Ireland, Nov., 2014
  - B. Schweer, **G. Beyene**, S. Brezinsek, N. Gierse, A. Huber, F. Irrek, V. Kotov, V. Philipps, U. Samm and M. Zlobinski, ‘Laser techniques implementation for wall surface characterization and conditioning’ *Physica Scripta 2009 T138, 014008, (2009)*
  - B. Schweer, **G. Beyene**, S. Brezinsek, N. Gierse, A. Huber, V. Philipps, M. Zlobinski, U. Samm, ‘First wall surface characterisation with laser based methods’, 36th EPS Conference on Plasma Physics ECA Vol.33E, P-1.188, (2009).
- Projects**
- Co-developed **EU-Erasmus+ inter-institutional mobility projects** focusing on interdisciplinary and intercultural collaboration, with consortium of East African Universities and Thomas More University of Applied Science, Belgium, 2022-2025.
  - Hybrid gas-discharge and **laser heated plasma techniques**, for high brightness extreme ultraviolet (EUV) light sources. Involvement as research team member (Jul., 2014 – Feb., 2016), Research Centre Jülich, <https://www.euv.rwth-aachen.de/cms/EUV/Forschung/~gwfn/Quellen/lidx/1/>.
- Trainings & Workshops/Conferences**
- Initiated and organized a competition on “Thesis in 3 minutes for non-experts” for AAU PhD students for the first time, May 12-18, 2023.
  - Co-delivered training on Innovation Challenge for Undergraduates, International Days at Thomas More University of Applied Science, Belgium, March 12-18, 2023.
  - Delivered training on science research communication skills for AAU natural science early career academic staff, May 5, 2022.
  - Co-facilitated (together with Prof. Frans Stel) training on product innovation at CEWE Company Oldenburg, Germany through University-Industry partnership under EU-Erasmus+ project, Nov. 25, 2019.
  - International Symposium on EUV Lithography, Maastricht, the Netherlands, Oct. 5- 7, 2015.
  - Training on “Advanced School in **Plasma Spectroscopy** (March 16-20, 2015)” and poster presentation on “**Modern Methods in Plasma Spectroscopy**” (March 23-27, 2015), workshop organized jointly by IAEA and ICTP, Trieste, Italy.
  - Poster presentation, International Symposium on EUV Lithography, Washington DC, USA, Oct. 2014.
  - ICOPS/BEAMS 2014 Conference and **Atomic and Radiation Physics** Mini-course, Washington DC, May 25-29, 2014: <http://ece-events.unm.edu/icops-beams2014/atomic.html>.
  - Attended Professional Skills: Knowledge Transfer, Creative Thinking, Quality Management, Technical Communication and Project Management, training module, UCD innovation academy, Ireland. Jan.- Apr. 2014.
  - Short Course/training in fundamental Principles of Optical Lithography & Introduction to EUV Lithography, by Dr. Chris Mack & Dr. Vivek Bakshi, UCD, Dublin, Oct. 2012.

## ADDITIONAL

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### Lectured Courses

- At Addis Ababa University, July 2021 - October 2023:
  - Postgraduate **Space Physics Course** (for MSc)
  - Postgraduate Space Flight Dynamics Course (for MSc)
  - Professional Development Course (for PhD)
  - Undergraduate Physics Course
- At Mekelle University, Nov. 2019 – March 2021:
  - Post grad (MSc) courses: **Modern Optics** (light-matter interaction, radiation absorption & scattering, laser-applications, etc.), optical spectroscopic techniques (laser-spectroscopy, optical imaging, microscopy, other spectroscopic methods e.g. fluorescence, LIBS, etc.), atomic physics
  - Senior undergraduate courses: Wave & Optics, **Experimental Physics**
- At University College Dublin, School of Physics, Ireland:
  - Two semester undergraduate **Physics tutoring & demonstration** (Sep. - Dec. 2012 & Sep. - Dec. 2013)

### Awards

- **Two** times winner of the **EU Erasmus Mundus Mobility** based **scholarships** for joint degrees: MSc-2008 and PhD-2012.
- Student scholarship for the 2014 EUVL Symposium in Washington DC, organized by SEMATECH, (international forum for industry experts and researchers).

### Memberships

- IEEE
- Erasmus Mundus Association

### References

- Prof. Dr. Larissa Juschkin, Program Manager, Next Generation of Wafer Inspection Tools using Broadband Plasma Radiation, KLA-Tencor Corporation, Milpitas CA 95035, USA, [Larissa.Juschkin@kla.com](mailto:Larissa.Juschkin@kla.com).
- Dr. Fergal O'Reilly, Adjunct Professor, Research and Innovation Officer, School of Physics, University College Dublin, Dublin, Ireland, [f.orielly@ucd.ie](mailto:f.orielly@ucd.ie), +35317162321.
- Dr. Paul Sheridan, CTO, SiriusXT, Stillorgan Industrial Estate, Dublin, Ireland, [paul.sheridan@siriusxt.com](mailto:paul.sheridan@siriusxt.com), +353 86 1060776, or +353 1 9056341.
- Prof. Gerry O'Sullivan, University College Dublin, Dublin, Ireland, [gerry.osullivan@ucd.ie](mailto:gerry.osullivan@ucd.ie), Tel +3531 716 2211.