MULAT ALUBEL ABTEW, PH.D.

Assistant Professor, Department of Textile and Apparel Management
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EDUCATION

Ph.D., Automation and Production, Lille Université, Lille, France, 2020
Ph.D., Engineering (Textiles), Soochow University, Suzhou, China, 2020
Ph.D., Industrial Engineering, GA Technical University of Iasi, Iasi, Romania, 2020
MSc., Fashion Technology(Apparel production), NIFT, Bangalore, India, 2010
BSc., Textile Engineering, Bahir Dar University, Bahir Dar, Ethiopia, 2005
Diploma, Auto mechanics, W/o Siheen Tech. & Voc. School, Dessie, Ethiopia, 2000

ACADEMIC POSITIONS

Assistant Professor, Textile and Apparel Management, University of Missouri, 9/2025 to date.

- Develop and deliver courses in functional textile and apparel product development areas
- Supervised undergraduate and graduate student research projects and theses.
- Research on the development of novel textile materials that balance cost, performance, and sustainability, with a focus on user-centered design for functional and technical applications, particularly in defense, medical, and sports sectors.
- Contributed to departmental, college university and national level committees.
- Participated in outreach and community engagement activities related to textiles and apparel.

Post Doctoral Fellow - University of Missouri, Textile and Apparel Management (TAM), 09/ 2023 – 08/2025

Responsibilities:

- Developments of textile materials and novel experimental methods for enhanced ballistic and stab resistance protective clothing.
- Research on understanding the needs and experience of adaptive and/or functional clothing by individuals with disabilities, and the elderly for developing enhanced products using user-centric design and engineered functional textiles.
- Developing a new course syllabus and teaching the course '*Advanced Textiles-TAM4001*'
- Graduate faculty status awarded, C-level, 2024
- Doctoral faculty status – Awarded – A-level, 2025
- Certificate of Mentorship at Mizzou, October 2024 (Candidate for Doctoral faculty status)

Temporary Teaching and Research Associate (ATER)- Lille Université, School of Engineering (ENSAIT) - GEMTEX Lab., Roubaix, France, Sept. 2021 – July 2023

Responsibilities:

- Teaching different courses and supervising UG and PG Textile and Fashion engineering students (Textile for fashion and technical products, Apparel 3D design, Fashion innovation, SCM, E-commerce, Algorithm and programming, technical textiles)
- Research on digital clothing, mathematical computation for clothing ease allowance, human-body-clothing interaction, and product development.

Assistant Professor, EiTEX, Bahir Dar University, Bahir Dar, ETHIOPIA, July. 2020 – Aug. 2023

Responsibility:

- Teaching UG and PG Design and Technology students (ONLINE)
- Supervising MSc and co-supervising PhD student (2) on textile numerical modeling, Apparel product design and development, and clothing fit and comfort.
- Working on research for Scientific paper production and technology transfer

Research Assistant, Soochow University, Suzhou, China

Responsibility:

- Worked on 'Fracture and damage analysis of textile materials submitted to quasi-static and dynamic impact investigations, Impact performance and energy absorption of textile materials for protective clothing, and numerical modeling of textiles for producing fit, comfortable, and protective clothing'.

PhD researcher, Gheorghe Asachi Technical University of Iasi, Romania

Responsibility:

- Worked on the engineering and manufacturing of appropriate textiles for industrial (protective armor), Experimental testing, mechanical characterization, and optimizations of the developed textiles structure against comfort, fit and mechanical behavior, and molding behavior and its damage mechanisms of the woven fabrics (3D) for shaping seamless frontal armor panel patterns.

PhD Research Assistant, Lille Université, ENSAIT - GEMTEX Lab., Roubaix, France

Responsibility:

- Worked on 'Developing adaptive bust on women virtual mannequin for corsetry(bra) design, design, and pattern development for multi-layer layer functional products (women's body armor) through reverse engineering and automatic pattern generation system and validation using 3D (CAD) computer design process and constructing the 3D shape of women's body armor through molding techniques using 3D warp interlock fabric'.

Lecturer, Bahir Dar University, Bahir Dar, Ethiopia

Responsibility:

- Teaching courses for UG Fashion Design and Garment engineering students include the supervision and evaluation of field-based internship placements and the supervision of BSc and MSc theses in textiles, apparel design, and development.
- Organizing conferences and seminars for industry and institution networking.
- Engaged in different extracurricular activities (chair in different curriculum assessments and development, provide training as community service for local small- and large-scale textile & garment industries, staff affairs committee, etc.)
- Conducting scientific research independently as well as in collaboration in apparel design, anthropometric & sizing, and product developments.

Assistant Lecturer: Bahir Dar University, Engineering Faculty, Ethiopia
Responsibilities:

- Delivering Laboratory classes for students on physical, chemical, and mechanical textile testing, analysis, and optimization, assisting graduate students and researchers in their research, practical/experimental work, and final-year fashion collection projects, and testing and analysis of fibers, yarns, fabrics, and apparel for various textiles and apparel-producing companies

ADMINISTRATIVE AND LEADERSHIP EXPERIENCES

Founder and CEO (till 2022) Tibeka protections, Tourcoing-Lille, France
Responsibilities:

- Define and execute the company's strategic roadmap, aligning innovation goals with sustainable growth.
- Coordinate with the CTO and R&D team to guide development of patented 3D interlock fabrics with high energy absorption
- Champion ongoing innovation through collaborations (e.g., ENSAIT's GEMTEX, Un Cube Axel incubator).
- Lead commercial strategy for deployment into defense, sports, professional PPE, aerospace, and automotive sectors.

Director, Apparel Research & Innovation Centre, Ethiopian Institute of Textile and Fashion Technology, Ethiopia
Responsibilities:

- Managing staff members in the Center
- Establishing research collaborations and joint research projects
- Identifying and developing research thematic areas & Writing research projects for grants in collaboration with the research team for funding.
- System design for effective laboratory utilization

Deputy Chair and Chair for Apparel and Design Centre of Competences, Ethiopian Institute of Textile and Fashion Technology, Ethiopia
Responsibilities:

- Developing the staff's academic and scientific profile.
- Set up research teams for special research and technology transfer.
- Initiate a new applied research project every semester.
- Establish research collaborations with different Industries and Institutions.
- Coordinate research, publication, and technology transfer in the Center.
- Initiate and support grant proposals for funding.

- Develop a database for research and generate income through research, technology transfer, and consultancy.
- Responsible for Staff, Curriculum development, and budget management

Textile and Garment (TVET) Program Coordinator, Ethiopian Institute of Textile and Fashion Technology, Ethiopia
Responsibilities:

- Strategic planning and monitoring of the department
- Develop new scientific techniques and protocols for the lab.
- Assign academic timetable schedules for lectures and laboratory classes
- Responsible for staff and assessing and developing up-to-date curriculums

Secretary, MU Black Postdoctoral Association (MUPA), University of Missouri, CoMo, USA
Responsibilities:

- Schedule meetings, prepare agendas, take minutes, and distribute them to members.
- Serve as the primary point of contact for internal and external correspondence, and send official updates and announcements
- Assist in planning events, coordinating logistics, and maintaining timelines for initiatives.
- Prepare and submit reports in line with university policies and maintain organized archives.

INDUSTRY EXPERIENCES

Chief Technology Officer (CTO) - Sep. 2022 to to current), Tibeka protections, Tourcoing-Lille, France
Responsibilities:

- Oversee the design and development of advanced 3D-interlock impact-absorbing textile technologies.
- Develop prototypes to scalable production for protective gear tailored to defense, sports, and industrial needs.
- Define the company's long-term technology roadmap, integrating emerging materials and sustainable solutions.

Company's focal person/Manager, Narga Textile and Garment Company, Bahir Dar, Ethiopia.
Responsibilities:

- Organized and managed a team to establish the factory & Commissioning machinery.
- Design a system for effective utilization of factory and production schedules.
- Assessing project and resource requirements and determining quality control standards.
- Managed product development, sourcing, and production activities of different ordered apparel for local companies with annual sales of up to $70,000

HONORS, AWARDS, AND NOMINATIONS

Awarded or Recognized: International

Postdoctoral Research Award (2024-2025) - University of Missouri, USA – A 1st place honor across all field of postdoctoral at MU to recognizes the exceptional contributions and demonstrates excellence in innovative research, scholarship and UG/PG student mentorship and its broader impact on scholarship and society. (*Received $1000*).

International Research PhD Dissertation Award – 2021 – A 1st place honor in Science and Technology for the scientific excellence of a young doctor and the dissertation, given quality scientific published work and the associated promotion (patent, license, etc.) who trained in North France among 6 doctoral schools graduated between Jan 1, 2019 – Dec. 31, 2020, by the University of Lille (*Received €2500*).

Innovative and outstanding research papers (2018-2020), of five different innovative and outstanding research papers with other 2nd and 3rd co-authors from the Romanian government (received around 12,000 €).

Silver Award, for paper 'Dimensional(2D) p-aramid dry multilayer woven fabrics deformational behaviors for technical applications' by Euro Invent conference and Exhibition

Promising project for start-up award, to incubate and scale up the product on a 'Comfortable and protective women bulletproof vest.' by 'Euramaterials' of France (Received a 10,000 € fund and technical support)

Full scholarship project award- to work on the PhD project '*3D designing process of clothing for women applied in Corsetry and ballistic protection using 3D warp interlock fabrics' funded by the* European Commission under the Erasmus Mundus Project in Sustainable Management and Design for Textiles (SMDTex) program from Sep. 2016 to June 2020.

*2020 one of the Top three downloaded paper '*Mulat Alubel Abtew, François Boussu, Pascal Bruniaux, Carmen Loghin, Irina Cristian, Ballistic impact mechanisms – A review on textiles and fiber-reinforced composites impact responses, Composite Structures, Volume 223, 2019, 110966, https://doi.org/10.1016/j.compstruct.2019.110966

RESEARCH: SCHOLARSHIP AND CREATIVE ACTIVITIES *(OVER $8,540 FUNDED)*

GRANTS/FUNDING (FUNDED)

$750.00 Mulat alubel abtew (PI) (2023-2024). building an interactive database to survey the experience and needs of functional apparel by individuals with disabilities, by *UM postdoctoral research grant award.* (100%).

$7,790.00 Mulat Alubel Abtew (PI) (2024). Exploring and understanding the properties and potential uses of cotton fibers and cotton-dominating materials in technical textiles and products, by *2024 Cotton in the Curriculum Educational Sponsorship Program, Cotton Incorporated*. (100%).

EXTERNAL/INTERNAL GRANTS (NOT FUNDED)

$20,000.00 Mulat Alubel Abtew and Mohamed Medhat Salem (2023/24). Textile-based lower limb transfemoral prosthetic sockets – Sustainable, lighter, and cost-effective approach, *Albertine Foundation, Transatlantic Research Partnership 2024*, New York, USA

$75,975.00 Mulat Alubel Abtew (2024/25). Recycled cotton fabric-reinforced 3D composites with thermos-sensor for smart ceiling board applications. by *2025 Product Development and Implementation Division, Cotton Incorporated*. (100%).

CONFERENCE/WORKSHOP ORGANIZATION

- Committee Member – Light Weight Armour Group for Defence & Security (LWAG) - October 8-9, 2019, Roubaix, France in
- Chair, Fashion Show Committee- 2nd International Conference on Cotton, Textile, and Apparel Value Chain in Africa, May 2-3, 2013, Bahir Dar University, EITEX, Ethiopia.
- Chair, Fashion show, and fundraising Committee- 3rd International Conference on Cotton, Textile, and Apparel Value Chain in Africa, May 4-5,2014 Bahir Dar University, EITEX, Ethiopia.
- Chair, Fashion Show and Publication Committee - 4th International Conference on Cotton, Textile, and Apparel Value Chain in Africa, May 2-3, 2015, Bahir Dar University, EITEX, Ethiopia.
- Chair, Fashion show, and fundraising Committee- 5th International Conference on Cotton, Textile, and Apparel Value Chain in Africa, May 3-4, 2016, Bahir Dar University, EITEX, Ethiopia.

EDITORSHIP

Guest Editor with Francois Boussu (2023/24) for Special Collection on 3D Woven Fabrics: Engineering, Characterization, and Applications: Journal of Engineered Fibers and Fabrics: Sage Journals. (Ongoing)

Guest Editor with Francois Boussu (2023/24) for special issues 'Materials | Special Issue: Advanced Fabrics, Textiles and Fiber Reinforced Composites: Progress and Challenges (mdpi.com) (Ongoing)

Guest Editor with Francois Boussu for special issues ((2022/23)) 'Advancements of 3D woven structure: Design, development and its application in technical textile', Materials (MDPI) journal (Expired)

Topic Editor - *Materials (MDPI) journal* since March 2021
Editorial board member as *Review Editor in Frontiers in Polymetric and Composite Materials*, since Dec 13, 2023.

PEER-REVIEWED RESEARCH PUBLICATIONS

1. **Mulat A. Abtew***, Boussu F, Cristian I, Nauman S. (**2025**). Refined structural design and classification of 3D warp interlock woven fabrics for technical textiles and advanced composite solutions, *Composite Structures*,2025, 119393, https://doi.org/10.1016/j.compstruct.2025.119393

2. **Mulat A. Abtew***, Atalie D, Dejene BK (**2025**). Recycling cotton textile waste: Technological process, applications, and sustainability within a circular economy. *Journal of Industrial Textiles*. 2025;55. doi:10.1177/15280837251348663

3. **Mulat A. Abtew***, Ahmmed AS, Tadesse MG, Zaman S uz.(**2025**). Sensor-embedded and electronics textiles: A review on advanced materials, manufacturing, and applications. *Textile Research Journal*. 2025;0(0). doi:10.1177/00405175251338152

4. **Mulat A. Abtew***, Desalegn A. Bekinew KD and Kerri McBee-Black (**2025**). Intelligent and electronic textile materials for adaptive apparel: Innovations, functional design, and future directions. Journal of Industrial Textiles. First published online May 30,2025 https://doi.org/10.1177/15280837251346

5. Tamjid, M.I, **Mulat A. Abtew***, Kopot, C. (**2025**). Lightweight Textile and Fiber-Reinforced Composites for Soft Body Armor (SBA): Advances in Panel Design, Materials, and Testing Standards. *J. Compos. Sci.* **2025**, *9*, 337. https://doi.org/10.3390/jcs9070337

6. Bekinew KD and **Mulat A. Abtew***. (**2025**). Chitosan/zinc oxide (ZnO) nanocomposites: A critical review of emerging multifunctional applications in food preservation and biomedical systems. International Journal of Biological Macromolecules. Volume 316, Part 1, June 2025, 144773. https://doi.org/10.1016/j.ijbiomac.2025.144773.

7. Bekinew Kitaw*, **Mulat A. Abtew***, and Mihret P (**2025**). Eco-friendly flame retardant and antibacterial finishing solutions for cotton textiles: A comprehensive review. Journal of Industrial Textiles. Volume 55: 1–90. https://doi.org/10.1177/1528083725132577

8. **Abtew MA*,** Sitotaw DB, Bajya M (**2025**). Comprehensive Review of Endogenous and Exogenous Parameters Influencing Dynamic Stab Impact Performance in Protective Textiles and Fibrous Composite Materials. *Journal of Composites Science*. 2025; 9(3):138.

9. **Mulat A. Abtew***, François Boussu, Irina Cristian and Bekinew Kitaw Dejene (***2025***) 'Experimental investigation on dynamic stab resistance of high-performance multi-layer textile materials', *Defense Technology* ***(IF-5.0),*** https://doi.org/10.1016/j.dt.2025.01.010, published online 19 Jan. 2025.

10. Andualem A. Abeje, **Mulat A. Abtew***, Fentahun M. Kasie, Bahredin A.Seid (***2025***). Optimized model formulation through product mix scheduling for profit maximization in the apparel industry, AUTEX Research Journal ***(IF-1.94),*** vol. 25, no. 1, 2025, pp. 20240027. https://doi.org/10.1515/aut-2024-0027.

11. Bekinew K. Dejene, **Mulat A. Abtew**, Alehegn A. Birilie, and Misganaw E. (2024) Three-dimensional (3D) knitted spacer textile materials for advanced healthcare solutions: A comprehensive review, *Journal of Industrial Textiles* (***IF=2.2***), Volume 54: 1–57. DOI: 10.1177/15280837241290169

12. **Mulat Alubel Abtew** (**2024**) Innovations, Advancements, and applications of 3D warp interlock fabrics and its composite materials, *Composites Part B: Engineering* ***(IF-12.7)***, Volume 278, 111395. DOI: 10.1016/j.compositesb.2024.111395

13. **Mulat Alubel ABTEW**, François BOUSSU, Irina CRISTIAN (**2024**) Exploring the Effects of angle of incidence on stabbing resistance in advanced protective textiles: Novel experimental framework and analysis, *Defense Technology* ***(IF-5.0),*** https://doi.org/10.1016/j.dt.2024.08.003

14. Bekinew Dejene, Adane Gudayu, **Mulat Alubel Abtew** (**2024**), Development and optimization of sustainable and functional food packaging using false banana (Enset) fiber and zinc-oxide (ZnO) nanoparticle-reinforced polylactic acid (PLA) biocomposites: A case of Injera preservation, *International Journal of Biological Macromolecules* (***IF-7.7***), Volume 279, Part 1, 135092. https://doi.org/10.1016/j.ijbiomac.2024.135092

15. Desalegn Beshaw Aychilie, Yordan Kyosev, **Mulat Alubel Abtew** (2022): Automatic Modeller of Textile Yarns at Fibre Level, *Materials* ***(IF-3.1),***15(24),8887. DOI:10.3390/ma15248887

16. Mishra, M.K., **Mulat A. Abtew** * & Bruniaux, P(**2022**). Customization of shoe last based on 3D design process with adjustable 3D ease allowance for better comfort and design. *Int J Adv Manuf Technol* ***(IF-2.9)*** 123, 3131–3146 https://doi.org/10.1007/s00170-022-10427-5.

17. M. Kulińska, **Mulat A. Abtew** *, X. Zeng and P. Bruniaux (**2022**) 'Block pattern design system using 3D zoning method on the digital environment for fitted garment'' *Textile Research Journal****(IF-1.9)***. https://doi.org/10.1177/00405175221114164

18. Boussu, F., **Mulat A. Abtew*** & Bruniaux P. **(2022**). 3D Warp Interlock Fabric Structure and their Applications in Soft and Hard Armour Protections. *Appl Compos Mater(**IF-3.1**)* 29, 65–82. https://doi.org/10.1007/s10443-021-09955-2

19. **Mulat A. Abtew ***, M. Kulińska, X. Zeng and P. Bruniaux (**2021**). Determinations of 3D ease allowance in a virtual environment for customized garment design using fuzzy modelling. *Computers in Industry (**IF-8.2**)*, Volume 133, 103552. https://doi.org/10.1016/j.compind.2021.103552

20. Tibifez H. N.*, T., Kyosev, Y., **Mulat A. Abtew**, & Krzywinski, S. (**2021**). Investigation of the visual appearance of different skirt styles and materials during the fitting simulation with Lectra Modaris". *Communications in Development and Assembling of Textile Products*, 2(2), 141-150. https://doi.org/10.25367/cdatp.2021.2.p141-150.

21. Mosleh S., **Mulat A. Abtew** *, P. Bruniaux, G. Tartare, and Y. Xu. (**2021**). Developments of Adapted Clothing for Physically Disabled People with Scoliosis Using 3D Geometrical Model. *Applied Sciences (**IF-2.5**),* 11(22),10655. https://doi.org/10.3390/app112210655.

22. Mosleh S., **Mulat A. Abtew** *, P. Bruniaux, G. Tartare, E. Loghin, and I. Dulgheriu (**2021**). Modelling and Simulation of Human Body Heat Transfer System Based on Air Space Values in 3D Clothing Model. *Materials(**IF-3.1**)* 14(21),6675. https://doi.org/10.3390/ma14216675.

23. Mosleh S., Mulat A. Abtew *, P. Bruniaux, G. Tartare, Y. Xu**,** Chen Y. (***2021***). 3D Digital Adaptive Thorax Modelling of Peoples with Spinal Disabilities: Applications for Performance Clothing Design. *Appl. Sci. (**IF-2.5**),* 11(10), 4545. doi.org/ 10.3390/app11104545.

24. Mosleh S., **Mulat A. Abtew** *, Bruniaux, P.; Tartare, G.; Chen, Y. (***2021***). Developing an Adaptive 3D Vertebrae Model of Scoliosis Patients for Customize Garment Design. *Appl. Sci. (**IF-2.5**),* 11(7), 3171. https://doi.org/10.3390/app11073171.

25. **Mulat A. Abtew** *, Francois B., Pascal B., (***2021***): Dynamic impact protective body armour: A comprehensive appraisal on panel engineering design and its prospective materials. *Defense Technology (**IF-5.1**),*17, 6, 2027-2049. https://doi.org/10.1016/j.dt.2021.03.016.

26. **Mulat A. Abtew***; Boussu, F.; Bruniaux, P.; Hong, Y. (***2021***). Dynamic Impact Surface Damage Analysis of 3D Woven Para-Aramid Armour Panels Using NDI Technique. *Polymers (**IF-4.7**),*13, 877. https://doi.org/10.3390/polym13060877

27. **Mulat A. Abtew***, Francois Boussu, Pascal Bruniaux, and Han Liu* (***2020***). Fabrication and characterizations of dry 3D warp interlock para-aramid fabric structures: Towards applications in composite reinforcement and ballistic applications. ***Materials (IF-3.1),*** 13(4233),1-20. DOI: 10.3390/ma13194233.

28. **Mulat Alubel Abtew***, P. Bruniaux, F. Boussu, C. Loghin and I. Cristian (***2020***): Effect of Structural Parameters on the deformational Behaviors of Multiply 3D Layer-by-Layer Angle-

Interlock Para-aramid fabric for Fiber-reinforcement composite. *Journal of Composites Science(**IF-3.0**),* 2020, 4(4),145. DOI:10.3390/jcs4040145.

29. **Mulat A. Abtew*,** Francois B., Pascal B., Carmen L., Irina C., Yan C. and Lichuan W **(*2020*)**: Yarn degradation during weaving process and its effect on the mechanical behaviors of 3D woven p-aramid fabrics for industrial applications. *Journal of Industrial Textile (**IF-2.2**),* Volume 51, Issue 5, 9047S-9070S. https://doi.org/10.1177/1528083720937288.

30. **Mulat A. Abtew** *, Francois B., Pascal B., Carmen L., and Irina C. **(*2020*)**. Enhancing the Ballistic Performances of 3D Warp Interlock Fabric Through Internal Structure as New Material for Seamless Female Soft Body Armor Development. *Appl. Sci.(**IF-3.1,** 10*, 4873, https://doi.org/10.3390/app10144873.

31. **Mulat A. Abtew *,** Francois B., Pascal B., Carmen L., and Irina C. **(*2019*)**: Ballistic impact mechanisms - A review on textiles and fiber-reinforced composites impact responses. *Composite structure (**IF-6.3**), 223, 110966.* https://doi.org/10.1016/j.compstruct.2019.110966

32. **Mulat A. Abtew *,** Francois B., Pascal B., Carmen L., and Irina C. **(*2019*)**: Engineering of 3D warp interlock p-aramid fabric structure and its energy absorption capabilities against ballistic impact for *body armour applications. Composite structure(**IF-6.3**), 225 (***2019***)*, 111179. https://doi.org/10.1016/j.compstruct.2019.111179

33. **Mulat A. Abtew*,** Francois B., Pascal B., Carmen L., Irina C., Yan C. and Lichuan W **(*2019*)**: Ballistic impact performance and surface failure mechanisms of 2D and 3D woven p-aramid multi-layer fabrics for lightweight women ballistic vest applications. *Journal of Industrial Textile(**IF-2.2**),* 50(9); 1351-1383. Issue published (April 1, 2021) https://doi.org/10.1177/1528083719862883.

34. **Mulat A. Abtew*,** Carmen L., Irina C., Francois B., Pascal B., Yan C. and Lichuan W. **(*2019*)**: Mouldability and its recovery properties of plain-woven p-aramid fabric for soft body armour applications. *Fibres & textiles in Eastern Europe (**IF-1.12**)*, 27, 6(138): 54-62. DOI:10.5604/01.3001.0013.4468.

35. **Mulat A. Abtew***, Annu K., Ambika M., and Yan H.* (2019): Statistical analysis of standard allowed minute (sam) on sewing efficiency in apparel industry. *Autex Research Journal(**IF-1.944**)*, 20 (4), 359-365. https://doi.org/10.2478/aut-2019-0045

36. **Mulat A. Abtew***, Francois B., Pascal B., Carmen L., Irina C., Yan C. and Lichuan W **(*2018*)**: Forming characteristics and surface damages of stitched multi-layered para-aramid fabrics with various stitching parameters for soft body armour design. *Composites Part A: Applied Science and Manufacturing(**IF-8.1**)*, 109(2018), 517–537. https://doi.org/10.1016/j.compositesa.2018.02.037

37. **Mulat A. Abtew***, Francois B., Pascal B., Carmen L., Irina C., Yan C. and Lichuan W. **(*2018*)**: Influences of fabric density on mechanical and moulding behaviors of 3D warp

interlock para-aramid fabrics for soft body armour application. *Composite Structure* ***(IF-6.3),*** 204, 402–418. https://doi.org/10.1016/j.compstruct.2018.07.101

38. **Mulat A. Abtew***, Pascal B., Francois B., Carmen L., Irina C., Yan C. and Lichuan W. **(*2018*)**: A systematic pattern generation system for manufacturing customized seamless multi-layer female soft body armour through dome-formation (molding) techniques using 3D warp interlock fabrics. *Journal of Manufacturing Systems* ***(IF-12.3),*** 49, 61–74. https://doi.org/10.1016/j.jmsy.2018.09.001

39. **Mulat A. Abtew***, Pascal B., Francois B., Carmen L., Irina C., and Yan C **(*2018*)**: Development of comfortable and well-fitted bra pattern for customized female soft body armor through 3D design process of adaptive bust on virtual mannequin. *Computers in Industry* ***(IF-8.2)***, 100, 7–20. https://doi.org/10.1016/j.compind.2018.04.004

40. **Mulat A. Abtew***, Pascal B., Francois B., Carmen L., Irina C., Yan C. and Lichuan W. **(*2018*)**: Female seamless soft body armor pattern design system with innovative reverse engineering approaches. *International Journal of Advanced Manufacturing Technology* ***(IF-2.9),*** 98, 2271–2285. https://doi.org/10.1007/s00170-018-2386-y.

41. **Mulat A. Abtew***, Subhalakshmi K., Hong Y., Linzi P.**(*2018*)**: Implementation of Statistical Process Control (SPC) in the Sewing Section of Garment Industry for Quality Improvement. *Autex Research Journal* ***(IF-1.944),*** 8(2):160-172. DOI: 10.1515/aut-2017-0034.

42. Linzi P., Hong Y., Melissa W., Peiguo W.* and **Mulat A. Abtew** **(*2018*)**: Raincoat design for children for age group 7–8 years: A design development case study. *Industria textile* ***(IF-1)***, 69(4):394–399. https://doi.org/10.35530/IT.069.05.1471

43. **Mulat A. Abtew***, F. Boussu, P. Bruniaux, C. Loghin, I.Cristian, Y. Chen and L. Wang (**2022**). Pattern Engineering for Customized Women Seamless Ballistic Protection Vest on 3D Virtual Mannequin. *Journal of Fibre Bioengineering and Informatics* (JFBI), 15, pp. 17-25.

44. **Mulat A. Abtew**, Manisha Y. and Nagender S.*.(2017): Anthropometric Size Chart for Ethiopian Girls for Better Garment Design. *J Fashion Technol Textile Eng 5(2),2-11.*

45. **Mulat A. Abtew *** and Duncan K. Ndwiga. (2017). A Study on Export Competitiveness and Comparative Advantage of Textile-Based Goods: A Case of African Growth Opportunity Act (AGOA) & Latin America Integration Association (LAIA) Countries. *International Research Journal of Business and Management, 10, 1-12.*

46. **Mulat A. Abtew ***. (2017). Revealed Comparative Advantage of Footwear Industry: An Empirical Analysis for Selected African Countries. *International Research Journal of Business and Management, 13, 57-73.*

47. **Mulat A. Abtew**, Annu K, Srinivasa M (2017). Export Performance and Revealed Comparative Advantage of Developing and Developed Economies for Textile Fibers or Fabrics. *J Glob Econ 5: 256. doi:10.4172/2375-4389.1000256.*

48. Ambika Mehtre*, **Mulat Alubel Abtew**, Tesfu Berhane (2016). Establishing a rating scale for the knitted garment industry based on the man-machine ratio for Ethiopia. *Journal of Textile and Apparel, Technology and Management 10(1).*

PEER-REVIEWED RESEARCH PUBLICATIONS (IN REVIEW)

1. Mulat Alubel Abtew, Desalegn Atalie Wollelaw, and Bekinew Kitaw Dejene (2024), Cotton and cotton product waste recycling and management: A review of processes, technologies, and applications for biobased materials, Journal of Material Cycles and Waste Management (*2024 , under 1st review*).

2. Mulat ABTEW, Francois Boussu*, Irina Cristian, and Saad Nauman (2024) Optimized architectural design and classification of 3D warp interlock woven reinforcements for high-performance composite applications, *Composite communications*, (2024, *under 1st review*).

3. Mulat Alubel Abtew* Abdella Ahmmed, Melkie Tadesse and Shahood uz Zaman, Sensor-Embedded Textiles and Wearable Electronics: Advanced Materials, Manufacturing, and Applications; *Journal of Materials Science: Materials in Electronics* (2024, *under 1st review*).

PEER-REVIEWED PAPER IN CONFERENCE PROCEEDINGS

1. Putra, A. R., Abtew, M. A. & Kopot, C., (2025) "A Cross-Cultural Study: Understanding Dressing Attitudes and Motives of Gen-Z Female College Students in France and the USA", *International Textile and Apparel Association Annual Conference Proceedings* 81(1). doi: https://doi.org/10.31274/itaa.18805

2. Putra, A. R., Abtew, M. A. & Kopot, C., (2025) "Export Competitive Analysis Among Southeast Asian Nations on Apparel and Footwear Product Categories", *International Textile and Apparel Association Annual Conference Proceedings* 81(1). doi: https://doi.org/10.31274/itaa.18810

3. Abtew, M. A., Boussu, F. & BRUNIAUX, p., (2025) "Enhancing Stab Testing Standards: Investigating the Influence of Angle of Incidence on Stabbing Performances of different Protective Textiles", *International Textile and Apparel Association Annual Conference Proceedings* 81(1). doi: https://doi.org/10.31274/itaa.18929

4. Mulat Alubel Abtew, F Boussu*†, P.Bruniaux (2024) An Innovative Solution for Female Body Armor, Proceedings of the 4th World Conference on Advanced Materials for Defense.

5. Mulat Alubel Abtew*, C Loghin, I Cristian, F Boussu, P Bruniaux, Y Chen and L Wang (2019): 3D warp interlocks p-aramid fabrics for composite reinforcement and ballistic vest applications: Effect of yarn density on its formability characteristics. *IOP Conf. Series: Materials Science and Engg*, 572, 012078 (1-8).

6. Mulat Alubel Abtew *, Pascal Bruniaux and François Boussu (2019): Customizations of women's bullet-proof jacket through 3D design process. *Text Leat Rev* 2 (1), 23-31.

7. Mulat Alubel Abtew*, Pascal Bruniaux, Francois Boussu, Carmen Loghin, Irina Cristian, Yan Chen and Lichuan Wang (2018): Experimental investigation of effects of stitching orientation on forming behaviors of 2D P-aramid multilayer woven preform. *AIP Conference Proceedings of the International Conference on Material Forming* (ESAFORM) 23 - 25 April 2018, 020001(1-8).

8. Mulat Alubel Abtew*, C Loghin, I Cristian, F Boussu, P Bruniaux, Y Chen and L Wang (2018): Two-Dimensional (2D) P-Aramid Dry Multi-Layered Woven Fabrics Deformational Behaviour for Technical Applications. *IOP Conference Series: Materials Science and Engineering* 374 012055 (1-11).

9. Mulat Alubel Abtew*, P Bruniaux, and F Boussu (2017): Development of adaptive bust for female soft body armor using 3D warp interlock fabrics: 3D design process. *IOP Conf. Series: Materials Science and Engineering* 2017, 254, 052001 (1-7).

10. Mulat Alubel Abtew*, F Boussu, P Bruniaux, Carmen Loghin, Irina Christian, Yan Chen and Lichuan Wang (2021): Effect of Woven fabric structure on the ballistic impact performance for seamless women soft body armor design. Sciencesconf.org.

PEER-REVIEWED PAPER ABSTRACTS AND PRESENTATIONS (* = Indicates the corresponding author/s and † = Indicates presenter)

1. Mulat Alubel Abtew*†, François BOUSSU, Pascal BRUNIAUX and Irina Christian (2024) Novel Experimental Framework and Analysis on the Effects of Angle of Incidence on Stabbing Performances of Protective Textiles, 2024 ITAA conference, California, Long Beach, Nov 20-23.

2. Angga Ranggana Putra*†, Caroline Kopot, and Mulat Alubel Abtew (2024) Cross-Cultural Study: Understanding Dressing Attitudes and Motives of Gen-Z Female College Students in France and the USA, 2024 ITAA conference, California, Long Beach, Nov 20-23.

3. Angga Ranggana Putra*†, Caroline Kopot, and Mulat Alubel Abtew (2024) Export Competitive Analysis Among Southeast Asian Nations on Apparel and Footwear Product Categories, 2024 ITAA conference, California, Long Beach, Nov 20-23.

4. Mulat Alubel Abtew, F Boussu*†, P.Bruniaux (2024) An Innovative Solution for Female Body Armor, Auxdefense 4th World Conference on Advanced Materials for Defense, Braga, Portugal | 20 - 22 June 2024.

5. Mulat Alubel Abtew, F Boussu*†, I Cristian and Bekinew Kitaw Dejen (2024) Ballistic and stabbing performance of female body armor, will be presented at AUTEX World Conference 2025, Dresden, Germany.

6. Mulat Alubel Abtew*†, C Loghin, I Cristian, F Boussu, P Bruniaux, Y Chen and L Wang (2021): Pattern Engineering for Customized Women Seamless Ballistic Protection Vest on 3D Virtual Mannequin. *TBIS 2021 is a peer-reviewed conference, ENSAIT, Roubaix, France, 7 – 8th July 2021*(Oral presentation - Online).

7. Mulat Alubel Abtew*†, F Boussu, and P Bruniaux. (2021): 3D adaptive modeling of women body for fitted and protective soft body armor design. *Clothing-Body Interaction Conference*, TU Dresden, Dresden, Germany, 2-3 June 2021. (Oral presentation - Online).

8. Mulat Alubel Abtew*†, C Loghin, I Cristian, F Boussu, P Bruniaux, Y Chen and L Wang. (2019): Three-dimensional (3D) warp interlock p-aramid fabrics for the development of seamless female soft boy armour with better flexibility and ballistic impact performance. *Proceeding of Advanced Materials Conference (AAAFM-UCLA)*, Los Angeles, USA, 19-22 August 2019. (Oral presentation).

9. Mulat Alubel Abtew*†, C Loghin, I Cristian, F Boussu, P Bruniaux, Y Chen and L Wang. (2019): Effects of woven fabric types on ballistic impact performance for seamless women soft body armour design. *Proceeding of the Lightweight Armour for Defence and security (LWAG)*, Roubaix, France, 8-9 October 2019, 1-9. (Oral presentation).

10. Mulat Alubel Abtew*, F. Boussu†, P. Bruniaux, C. Loghin, and I. Cristian (2019): 3D warp interlock fabric structure as a new material for women ballistic protective vest design. *Proceedings of the 19th world textile conference (AUTEX),* Belgium, Ghent, 11-15 June 2019. (Oral presentation).

11. Mulat Alubel Abtew*†, P. Bruniaux, F. Boussu, C. Loghin, I. Cristian, Y. Chen, and L. Wang. (2019): 3D design process with reverse engineering approach for seamless women soft body armour pattern generation and its development using 3D warp interlock fabrics. *Proceeding of Mechanics of Living Materials and Composites, M2VC-2019*, Roubaix, France-ENSAIT, March 29, 2019. (Oral presentation).

12. Mulat Alubel Abtew*†, P. Bruniaux, and François Boussu, 'Customizations of women bullet-proof jacket through 3D design process', Textile Science & Economy-19, Zagreb, Croatia.) (Oral presentation).

13. Mulat Alubel Abtew*, P. Bruniaux, F. Boussu†, C. Loghin, I. Cristian, Y. Chen, and L. Wang. (2018): Investigating the mechanical Behaviors of 3D Warp Interlock Fabrics for Soft Body Armour Design. *Proceedings of the 1st World Conference on Advanced Materials for Defence (AuxDefense)* at Lisbon, Portugal, 4 -5 Sept 2018. (Oral presentation).

14. Mulat Alubel Abtew*†, F. Boussu, P. Bruniaux, C. Loghin, I. Cristian, Y. Chen, and L. Wang. (2018): Effects of fabric density on bending behavior of 3D warp interlock fabrics for composite and body armour. *Proceedings of World Textile Conference (AUTEX)* at Istanbul, Turkey, 20-22 June 2018. (Oral presentation).

15. Mulat Alubel Abtew*, P. Bruniaux, F. Boussu†, C. Loghin, I. Cristian, Y. Chen, and L. Wang (2018): Formability behaviour of 3D warp interlocks P-aramid Fabric for soft body armor design. *Proceedings of International Conference on Textile Composites (TEXCOMP)* at Milan, Italy, 20-21 Sept 2018. (Oral presentation)

16. Mulat Alubel Abtew*†, P. Bruniaux, F. Boussu, C. Loghin, I. Cristian, Y. Chen, and L. Wang. (2018): 3D warp interlock p-aramid fabrics and its mouldability property for female ballistic vest design. *Proceeding of the 17th Romanian Textiles and Leather Conference (CORTEP)* at Iasi, Romania, 7-9 November 2018. (Poster presentation).

17. Mulat Alubel Abtew *†, P. Bruniaux and F. Boussu (2017): Experimental investigation on 2D/3D aramid fabric forming capabilities. *Proceeding of 12th Joint International Conference on Innovative Materials & Technologies in Made-up Textile Articles, Protective Clothing and Footwear (CLOTECH)* at Lodz, Poland, 11-14 October 2017. (Oral presentation).

CHAPTERS IN THE BOOK

1. Mulat A. Abtew*, F. Boussu, and P. Bruniaux. (2022). 3D woven fabrics- A promising structure for Women body armor development, In Kyesov, Y. and Boussu, F. (eds) '*Advanced weaving Technology*. Springer, Cham. https://doi.org/10.1007/978-3-030-91515_18.

2. Mengru Li, Mulat Alubel Abtew, Xiaogang Chen, Francois Boussu* (2024) Stabbing and ballistic resistances of the preformed multiply three-dimensional interlock fabrics, in the book *Advanced Structural Textile Composites Forming*, In Woodhead Publishing Series in Composites Science and Engineering, Pages 495-526, ISBN 9780443215780, https://doi.org/10.1016/B978-0-443-21578-0.00020-2.

PATENT FILED

1. Mulat A. Abtew, Francois Boussu, and Pascal Bruniaux (2023/24), Tissu tridimensionnel à fils de chaîne entrelacés adapté pour résister aux impacts et gilet pare-balles pour torse féminin et son procédé de fabrication (Three-dimensional fabric with interwoven warp threads suitable for impact resistance and bulletproof vest for female torso and its manufacturing process)*' Reg. No: FR2307440, Filed date: 11/07/2023, Reference: 0443BR001FR: Patent Type: EU (French) patent. (Under revision)*

RESEARCH WORK FEATURED AND COVERED IN THE MEDIA AND NEWS

1. [Tibeka Protections : weaving the feminine security of tomorrow], *Hauts-de-France Innovation Development webpage*, June 2024. [Https://www.hautsdefrance-id.fr/tibeka-protections-tisser-la-securite-feminine-de-demain/ - The article discusses the start-up company born from my PhD research studies, called 'Tibeka Protections'. It is a groundbreaking startup, that plans to revolutionize the design of ballistic protective gear with a focus on innovation, inclusivity, and local manufacturing.

TEACHING

NEW COURSE DEVELOPED

Developed new syllabus, projects, exams, and grading rubrics.

1. *Advance pattern making - Bahir Dar University*
2. *Embroidery Technology - Bahir Dar University*
3. *Product Development - Bahir Dar University*
4. *Textile Innovations – Lille University (ENSAIT)*
5. *Advanced Textiles (TAM 4001) – University of Missouri*

COURSES TAUGHT:

University of Missouri, *Department of Textile and Apparel Management*

Name of the course	Nature of the course				Course Level	Learning methods
	Lecture in hours	Tutorial class in hours	Practical work in hours	Total ECTS		
Advanced Textiles	3		0	Spring 25	UG	Face to face

Lille University *- ENSAIT (École nationale supérieure des arts et industries textiles)*

Name of the course	Nature of the course				Course level	Learning methods
	Lecture in hours	Tutorial class in hours	Practical work in hours	Total ECTS		
Technical Textiles	0		6	2 sem	UG	Face to face
Supply Chain management	12	-	-	1 semester	PG	Face to face
connecting e-commerce	4		12	1 semester	UG	Face to face
System Information	4			1 semester	UG	Face to face
Algorithm and Programming			24	1 semester	UG	Face to face
Textile Innovations			18	2 semesters	UG	Face to face

Bahir Dar University: *EiTEX (Ethiopian Institute of Textile and Fashion Technology)*

Name of the course	Nature of the course				Course level	Learning methods
	Lecture in hours	Tutorial class in hours	Practical work in hours	Total ECTS		
Weaving Technology	2		6	7 (2 sem)	UG	Face to face
Advanced Weaving II	2		3	7 (2 sem)	UG	Face to face
CAD in Fashion Design and pattern	2		3	5 (4 sem)	UG	Face to face
Flat Pattern Making	2		3	5 (3 Semester)	UG	Face to face
Advanced pattern making	1		3	5 (2 semester)	PG	Face to face
Product engineering	2		3	6 (3 semester)	PG	Face to face
Apparel design, sewing & construction	2		3	6 (3 semester)	UG	Face to face

apparel study and appreciation	3			3 (1 semester)	UG	Face to face
Textile and apparel ornamentation	2		3	5 (1 semester)	UG	Face to face
Fundamentals of Design	2	3		3 (3 Sem)	UG	Face to face
Embroidery Technology	2		3	5 (2 Sem.)	PG	Face to face
Retail Management and Technology	2	3		5 (2 Sem.))	PG	Online
Computer integrated Manufacturing	2	3		5 (1 Sem.))	PG	Online
History of World Costumes	2	3		5 (1 Sem.))	PG	Online

GUEST LECTURING

1. Guest Lecture on Global consumer behavior in class TAM 2400 for 75 students at TAM, MU- Oct 10, 2024
2. Guest Lecture on Technical Textiles in class TAM 1200 for 70 students at TAM, MU – Sept 2024
3. Guest Lecture on Patten making for 30 students at Wolkite University, Wolkite, Ethiopia- April -May 2014
4. Guest Lecture on a course 'Principle of design' for 30 Fashion Design UG students at Wolkite University, Wolkite, Ethiopia- April -May 2014

UNDERGRADUATE AND GRADUATE STUDENT ADVISING

Ph.D. Co-advising with Prof. Dr.-Ing. habil. Yordan Kyosev

- Desalegn Beshaw (2020-2024). *Modeling yarn at the fiber level for textile material production'* Degree awarded August 2022 TU Dresden, and Bahir Dar University, Ethiopia. Tenure-track Assistant Professor at Bahir Dar University (2024- date)
- Tibifez Hailu (2021- 2022). *3D Modelling and Patternmaking for Women Lower Torso Garments*. Between TU Dresden, Germany and Bahir Dar University, Ethiopia. Lecturer at Bahir Dar University.

Committee member – Ph.D.

- Desalegn Beshaw (2020-2024). *Modeling yarn at the fiber level for textile material production'* Degree awarded August 2022 TU Dresden, and Bahir Dar University, Ethiopia.
- Mackenzie Miller (2024 – Current). Creating an Adaptive Alterations Service within an Academic Occupational Therapy Program, University of Missouri.

Advising and Chair– M.S. and BSc students

- Advising and chairing more than 50 BSc students in their final projects and internship projects at Bahir Dar University, Ethiopia
- Advising and chairing more than 25 MSc student projects at Bahir Dar University, Ethiopia.
- Co-advising 4 MSc student project at ENSAIT, Lille University, France.
- Advising more than 85 BSc students, at Bahir Dar University, Ethiopia.

- Advising one UG student project 'Developing 3D fashion design for Cotton Forward competition' as an independent study (TT_A_M-3939-01), spring 2024, at TAM, University of Missouri.

SERVICE

UNIVERSITY SERVICE

- Chair, Curriculum Review and Academic Standards Committee (2013-2016)
- Strategic Plan development committee for EITEX, BDU, Ethiopia.
- Ethiopian standard agency technical committee on textiles, ESA, Addis Ababa.
- Ethiopia National Standardization Committee for Textile and Garment category, Bahir Dar University
- Organizing member of International Conference (CTA 201, 2013, 2014, 2015, and 2016), EITEX, Bahir Dar University (BDU), Ethiopia.
- Secretary of MU Black Postdoctoral Association, MU
- Student fellowships and awards committee for the International Textile and Apparel Association (ITAA) (2023- Current)

COMMUNITY SERVICE

- *Ethiopian SMEs coaching project* – Funded by MSM, The Netherlands to support apparel small and medium enterprises on new product design and development, Testing quality product manufacturing methods through TQM, and Safety on the production floor and process.
- *Sustainable textile value chains Project* – Funded by the GIZ-German, to develop an innovative & social business concept for sustainable job opportunities in the Ethiopian apparel sector (from textile waste materials)
- *Apparel Production improvement project* – Funded by Bahir Dar textile share company, Bahir Dar Ethiopia, to develop the strategic plant layout and deliver sewing machine operation and repair training.
- *Technology transfer Project* – Funded by EiTEX to train the Ethiopian Center Development (ECFD) students on enhancing design, pattern making, Garment sewing, and marketing skills.
- *Bahir Dar University Project* – Funded by Bahir Dar project to design, pattern making, cutting, and garment making of special uniforms for the executive secretaries of the office of the president and other vice presidents.

PROFESSIONAL SERVICE

Clothing and Textiles Research Journal and ITAA

CTRJ Reviewer, (Reviewed 7 manuscripts) 2023-present
ITAA Student scholarship and award committee, 2014- Current
ITAA Conference Abstract reviewer, Textile Science Track, 2023- Current

Other Journal Review Service

Certified reviewer for the following research journals (reviewed OVER 74 scientific peer-review records of 60+ manuscripts). (https://publons.com/dashboard/records/review/)

Advances in materials science and engineering (1)
Composites science and technology (2),
Defense technology (1),
High-performance polymers (3),
Industria textilă. (1)
International Journal of Damage Mechanics (4),
Journal of Engineered Fibers and Fabrics (6),
Journal of Materials Science (5),
Materials (5),
Polymers and polymer composites (3),
Scientific reports (1),
Textile & leather review (1),
Journal of Engineering Research (1),
Composites (1),
Fibers and polymers (1),
IEEE Access (3),
IJCST (1),
Journal of Composite Materials (1),
Journal of Industrial Textiles (1),
Materials Today Communications (1),
Polymer Composites (1),
Polymers (8),
Sustainable materials and technologies (1),
Textile research journal (5), etc.

Industry Award reviewer

Expert judge committee for '*Talented Young Designers support project'* with African Mosaique Annual fashion Gala of 2015/2016, Addis Ababa, Ethiopia.

Conference Abstract Review Service

Autex World Conference, 2018-2020
International Textile and Apparel Association Conference, 2024-2025

Ad-hoc external grant proposal reviewer

Reviewed 4 National grant projects for the *Research Grant Council* (Hong Kong), 2018-2023

External Examiner for PhD thesis Review

Reviewed one Ph.D. thesis on 'Design and development of assistive devices to operate industrial sewing machine suitable for persons with locomotor disabilities' from *Faculty of Technology, Anna University,* Chennai, INDIA, *July 2022*

External Reviewer for Books

Reviewed one full book of the new edition of *J.J. Pizzuto's Fabric Science, published by* Fairchild Books, *August 7, 2024*

Member of Professional Organizations

- International Textile & Apparel Association (ITAA)
- American Society for Composites (ASC)
- The Fiber Society
- National Postdoc Associations
- National Black Postdoc Association
- MU Black Postdoc Association

PROFESSIONAL DEVELOPMENT (TRAINING AND CERTIFICATIONS)

- 'Education of Educators June 16-19, 2025, by Cotton Incorporated, Carry NC USA
- Training on 'Realization's techniques of 19th century corsetry' by Haute Ecole Francisco Ferrer catégorie des arts appliqués (35 hours), Brussels, Belgium.
- Entrepreneurial Education training by Ethio-German Capacity Building Program (ECBP) The social affairs committee, Ethiopia.
- Improving to Teach": Pedagogy + Didactics, Communication + Rhetoric and Microteaching by Ethio-German Engineering Capacity Building Program (ECCBP), 2010 (32 Hours), Bahir Dar, Ethiopia.
- Installation, Operation, and maintenance of 3D Body Scanning system (TC2 – TYPE: 19M 3D Full Body Scanner' by TC2 expert at Ethiopian Institute of Technology for Textile, Garment and Fashion Design**'.**
- Light and Heavy-duty Sewing Machine Maintenance Training (30 Hours) at **the** Institute of Technology for Textile, Garment, and Fashion Design**.**
- Training in Standout Graphics for a Standout Grant Proposal' at the University of Missouri.
- 'Types and Uses of Generative AI workshop' at the University of Missouri.
- 'Teaching and Learning in the Era of Generative AI' at the University of Missouri.
- Workshop on 'Principal Investigation (PI) Leadership Training 'Memorial Union, University of Missouri.
- Technical training on 'Grant Writing and PI role' University of Missouri.
- Qualification to teach in higher education in the Ethiopian Higher education in the field of Mechanical Engineering, Textile material, and Apparel Production.
- Qualification Teaching as **'Maître de conference- Lecturer'** under France National Higher Education in Section 60 – Mechanics, Mechanical Engineering, Civil Engineering, and Section 61 – Computer Engineering, Automatics and Signal Processing Section/Domain to teach in Higher Education (2021-2023)
- Improving to Teach": Pedagogy + Didactics, Communication + Rhetoric and Microteaching by Ethio-German Engineering Capacity Building Program (ECBP), 2010 (32 Hours), Bahir Dar, Ethiopia.
- Pedagogical skills on 'Learner-centered Methods of Instruction and Evaluations of Students' Learning' by Bahir Dar University, Academic Development, and Resource Center.
- Mentoring g at Mizzou, a CIMER Training, October 2024, MU.
- 'Standout Graphics for a Standout Grant Proposal' Sept. 22, MU.
- 'Types and Uses of Generative AI' Sept. 2023, MU
- 'Teaching and Learning in the Era of Generative AI', Oct.11, 2023, MU.
- 'NSF Success Strategies' Oct 31, 2023, MU.
- 'Applying for NIH Supplements: Why, When and How' Oct 20, 2023, MU.
- 'MaxAbility Lunch and Learn: comfortable with being Uncomfortable, Feb 21, 2024. MU.

- ‘Advancement with a specific focus on external funding from corporations and foundations’ Feb 27, 2024, MU.

(Updated June 2025)