

# Curriculum Vitae EDWIN KAMALHA

## PERSONAL INFORMATION

Name EDWIN KAMALHA  
Address Busitema University, Uganda, 236 Tororo  
Telephone +256704477025/776911554  
Email [edwinkam11@gmail.com](mailto:edwinkam11@gmail.com)

## PROFESSIONAL PROFILE AND CORES

**PhD in Chemical engineering, PhD in Textile Engineering and PhD in Materials, Energy and Mechanics** under the Erasmus Mundus Joint Doctorate Programme: Sustainable Design and Management for Textiles, 2014-2018. Over 12 years' experience in operations, training and research in the value chain of textiles and allied materials' industries. Experience of foreign working, leadership and intercultural adaptation. Excellent communication and reporting skills.  
**Focal areas:** Textiles and apparel, advanced functional fibers and materials, quality assurance, technical textiles and composites, anthropometry and sizing, cotton and fiber markets, research and data analysis, data mining and soft computing.

## WORK EXPERIENCE

Oct 2009–Present

**Senior Lecturer (2020-Present); Lecturer (Oct 2013-2019); Teaching Assistant (Oct 2009- 2013)**

*Department of Polymer, Textile & Ginning Engineering, Busitema University*

**Duties:** Teaching and research, proposal writing, research supervision, mentoring students, curriculum development, developing training materials, outreach, examining and assessment

**Head of Department: Polymer, Textile & Ginning Engineering, Busitema University (2020-Present)**

- Organizing, developing and directing activities for the proper functioning of the Department.
- Providing academic guidance and leadership to staff in the department.
- Initiating linkages and partnerships between the Department and relevant institutions inside and outside Uganda.
- Coordinating, controlling and managing the process of planning, budgeting and control of the Department funds.
- Presiding over all Department Committees.
- Ensuring and maintaining a cordial relationship with Industrial Training Partners.
- g) Assisting in the operation of the University by serving on Committees.
- Performing such other duties as may be assigned by the Deputy Dean or Dean.

March 2020-Dec2020

**Individual External Evaluator**

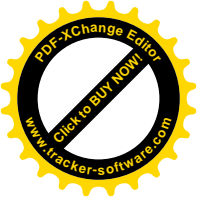
*Skills Development Facility (SDF) at Private Sector Foundation Uganda (PSFU)*

- Conducting Due Diligence assessment (administrative, financial, and technical)
- Conducting M&E on grantees periodically
- Diligent reporting to SDF and PSFU
- Conducting project feasibility analysis
- Peer review for other Evaluators

Aug 2014–Jul 2018

**Doctoral Researcher and Research Associate**

- *Aug 2017-July 2018:* College of Chemistry, Materials Science and Chemical Engineering, Soochow University, China
- *Feb 2016–July 2018:* Department of Applied Sciences and Technology; Politecnico



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di Torino, Italy

- *Sept 2014–Feb 2016*: ENSAIT- Lille 1 University of Science and Technology, France In the Framework of the EU Joint PhD program: Sustainable Management and Design for Textiles, undertaking the research project- Resources Protection, Replacement of Cotton with Polyester. Specific duties and tasks included: project planning, data collection and management, mentoring junior students, and reporting: To also assist senior scholars and my supervisor in laboratory work. Key accomplishments include the successful grafting of hydrophilic monomers on polyester, with UV assistance, and the eventual evaluation of the wettability and moisture management functions of pristine and modified polyester fabrics.

**Aug 2016 – Present**

### **Quality Inspector and Trainer- Freelance**

*AsiaInspection (now QIMA), Hong Kong (<http://www.asiainspection.com/>)*

**Duties:** Due diligence operations including; Process/manufacturing audits, compliance assessments, product inspection and testing (during production inspection, pre-shipment inspection and certification), ethical, environmental and social audits; developing SOPs and training manuals for line inspectors; updating the company e-learning platform; developing and updating report and instruction templates; offering e-learning training support to the Back Office; developing, reviewing and delivering training modules. Key accomplishments include: performing over one hundred inspections and audits in over five countries on textiles, plastics, apparel, food and beverages, electronics, stationary, footwear and accessories.

**May 2009 –Present**

### **Part-time Lecturer**

*Department of Chemistry, Kyambogo University; Department of Allied Health Sciences, International Health Sciences University, Kampala.*

**Duties:** Teaching on part-time basis, research supervision, examining and assessing students. **Subjects:** Research Methods, Engineering Management, Textile Manufacturing, Intellectual Property Rights and Entrepreneurship, Chemical Technology and Processing, Catalysis

**Feb 2011 – Jan 2013**

### **Business Developer**

*Shanghai Prince International (Pipeline Equipment), China (<http://www.princeintel.com/>)*

**Duties:** Identifying and developing new clients (B2B and B2C), supplier sourcing, negotiation, tele and internet sales

**Feb 2009 – Jul 2010**

### **Spinning and Weaving Supervisor**

*Pearl Textiles, Kampala- Uganda*

**Duties:** Monitoring shift attendance, monitoring spinning and weaving operations, compiling quality and production reports, Identifying, planning and implementing training needs, maintenance scheduling

**Aug 2008 – Sept 2010**

### **Teacher of Textiles and Clothing**

*Department of Textiles & Clothing, Mengo Senior School, Kampala- Uganda*

**Duties:** Teaching and mentoring students, leading practical classes, coordinating exhibitions and study trips, examining and assessing performance, monitoring attendance and discipline, coordinator for Scouts and Guides Club

**Jan 2004 – Sept 2004**

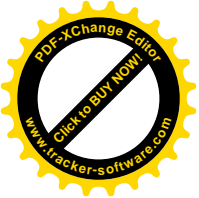
### **Mill Attendant**

*Kasese Cobalt Company Limited, Kasese- Uganda*

**Duties:** Process monitoring, sampling and testing, calibrating instrumentation equipment, operating pumps, boilers, cranes and lifts, electro- winning, cobalt stripping

## PROJECTS

- Feb 2020-Aug 2020: (PI) Design and development of functional garments for children with Locomotor disabilities; Funded under Busitema University research seed grants of the Faculty of Engineering
- 2018- To date (Member): Apparel, Textiles and Footwear Quality Assurance for Uganda Peoples Defence Forces. This project is aimed at establishing a QA system,



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including a testing laboratory, training personnel and a customized sizing standard for military wear

- June 2019- Large Scale Cotton Production and Value Addition (Project member); with Operation Wealth Creation and Cotton Development Organization. The project targets cotton farming on over 6000 acres, cotton ginning and a garment plant at Busitema University
- May 2019- Project Consultant: Innovative textile production; knitting, embroidery, garments: Nyabaghole Development Foundation (under Rwenzururu Kingdom). With financing through OWC, the project focuses on production of market derived textile products
- Nov 2017 to May 2018 (Member)- Profiling of cottage industrial models in China for policy development in Uganda. This project was funded by the Embassy of Uganda in Beijing, China
- July 2021-To date: Think Tank Chair; Beauty & Apparel- Ministry of Science, Technology and Innovation (MoSTI), Office of the President. A prioritized Industrial Value Chain under NDPIII framework. Key roles include the coordination and development of programme actions towards industrialization and value chain development through STI.

### EDUCATION

Sept 2014-Aug 2018

Within the framework of the EU Erasmus Mundus Joint PhD programme- Sustainable Management and Design for Textiles (4 years), I graduated with three distinct PhD awards:

- **PhD- Textile Engineering**, Soochow University Suzhou, China
- **PhD- Chemical Engineering**, Politecnico di Torino, Italy
- **PhD- Materials, Energy and Mechanics**, ENSAIT- Lille 1 University of Science and Technology, France

**Thesis title:** Resources Protection; Replacement of cotton fiber with polyester

- Focal areas: Modification of polyester through chemical technology, monomer grafting, polymer radiation, and plasma technology; sensory analysis and testing; catalysis; colouration and finishing; soft computing; advanced characterization; moisture management; mechanical and physical testing; functional fibers, quality control and measurement

Sept 2010-Mar 2013

**MSc. Textile Science and Engineering;** Donghua University, Shanghai, China

**Thesis title:** A study on the morphology of electrospun Bombyx Mori fibers and the secondary structure of regenerated silk fibroin

- Focal areas: Electrospinning, nano-materials, textile value chain technologies, textile machinery, materials science and engineering, fiber markets, technical textiles, textile chemistry, biomedical textiles, nonwovens, polymer physics and chemistry, advanced characterization, quality control and measurement.

Aug 2004-Dec 2008

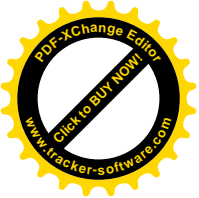
**BSc. Textile and Clothing Technology;** Kyambogo University, Uganda

**Thesis title:** Extraction and application of natural dyes from *Albizia Coriaria* and *Psidium Guajava* on cotton and sisal

- Focal areas: Fiber science and technology, textile and apparel manufacturing, chemical processing, anthropometry, quality control

Feb 2002-Dec 2003

**Advanced Level High School Certificate;** Mbarara High School, Uganda



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Subjects: Physics, Mathematics, Economics, Geography

Feb 2002-Dec 2003

**Ordinary Level High School Certificate;** St Leo's College, Fort Portal

**OTHER SOFT AND HARD SKILLS**

**International languages**

	Listening	Reading	Spoken	Writing
<b>English</b>	Proficient	Proficient	Proficient	Proficient
<b>Chinese</b>	Basic	-	Basic	-
<b>French</b>	Basic	Basic	Basic	-

**Leadership, Organizational roles**

- ♦ Current Institutional Coordinator for EU Erasmus+ Mobility Programme, Busitema University
- ♦ Former Department Examinations and Programmes Coordinator
- ♦ Current Mentor-ship Coordinator at Rwenzori Fraternity Association (membership of over 500)
- ♦ Current Advisor at the Uganda Textile Society
- ♦ Former Department Industrial and Vocational Training Coordinator
- ♦ Former Department Library and Projects Coordinator
- ♦ Current Country Representative for Uganda in the Erasmus Mundus Students and Alumni Association
- ♦ External Supervisor and Examiner at Moi University, Nov 2020-2022
- ♦ External Examiner at NUST, Bulawayo- Zimbabwe; Jan 2021-2022
- ♦ Current Chair Beauty and Apparel Think Tank, Ministry
- ♦ Chairperson Contract Management Committee Busitema University, 2021-2022

**Technical Certifications**

**Training,**

- American Society for Quality, USA**
- ♦ *Certified Calibration Technician (Calibration Technology)*
  - ♦ *Certified Quality Inspector (Quality Inspection)*
  - ♦ *Quality Technician (Quality Technology)*
  - ♦ *Certified Six Sigma Black Belt*
  - ♦ *Quality Improvement Associate (Quality Improvement)*
  - ♦ *Manager of Quality/Organizational Excellence (Quality Management)*

**AsiaInspection (QIMA), Hong Kong**

*Certified Inspector* for children's wear, swimwear, adult garments, fabrics, underwear, footwear and accessories, knitted wear/materials, arts and drawings, foods and beverages,  
*Certified Auditor* for environmental, ethical and manufacturing audits

**EHS Services LLC**

*DOT HAZMAT (49 CFR 172.704) Safety training*

**Shirley Technologies, Switzerland**

*Quality Control and Measurement Technology*

**Southern Range, Nyanza- Textile mill operations**

*Spinning, weaving, knitting, finishing, quality control and garments*

**Nobwe Silk Development**



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Training on sericulture and silk yarn production

## Center For Basic Research, Uganda

Certificate in research and writing skills

### Digital and computer skills

Proficient with MS Office Suite, internet, social media and web portals, specific data analytics such as OriginLab, Excel extensions, Scilab, R, SPSS, and Minitab. Proficiency in multivariate clustering/classification algorithms like PCA, k-means, AHC, CA

## OTHER PROFESSIONAL

### Honours, Awards and Grants

- ♦ 2020-2023: China Road and Belt Initiative for Young Scientists; PI on wearable electronics
- ♦ 2019-2023: Busitema University Textile Complex; large scale cotton growing, and garment production
- ♦ 2019-2023: EU Erasmus+ Mobility Grant for Busitema University
- ♦ 2018: Finalist for Fulbright Visiting Scholar, US Embassy Uganda
- ♦ 2018: International Cotton Advisory Committee; Travel Sponsorship \$1500
- ♦ 2014-2018: EU Erasmus Mundus PhD Fellowship
- ♦ 2014: The Hong Kong Research Grants Fellowship for PhD study- Declined
- ♦ 2014: The Research and Technological Research Council of Turkey PhD grant- Declined
- ♦ 2013: China Excellent/Outstanding Master's Thesis ([link](#))
- ♦ 2012: Donghua University Award for SCI/ISI Publications- RMB 4000
- ♦ 2009-2013: Chinese Government Postgraduate Scholarship
- ♦ 2004-2008: Government of Uganda Undergraduate Scholarship

### Professional Memberships and Outreach

- ♦ March 2017: Association of Textile, Apparel & Materials Professionals (AATCC)- Member
- ♦ May 2015: American Standards for Testing and Materials (ASTM)- TC
- ♦ March 2013: Uganda Textile Society- Member
- ♦ March 2013: Uganda National Bureau of Standards (UNBS)- Member of the TC 301 Chemistry; 305 Leather & related products; 306 Paper & related products; 311 Crafts & related products; 315 Textile & related products

### Featured Journal Reviewer

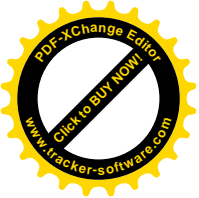
SCIREA Journal of Materials, Journal of Industrial Textiles, Fibers and Polymers, Textile Research Journal, Fibers, Journal Tekstilec Ljubljana- Slovenia, SCREA Journal of Textile Science and Technology, Journal of Natural Products, Journal of Sensory Studies, Journal of Fiber Bioengineering and Informatics

### Other skills, training and experience

- ♦ Driving (National and European Union Driving License)
- ♦ Safety techniques (Industrial safety, hazardous material and chemical safety, fire safety and fighting)
- ♦ Farming (cocoa, tree farming, banana growing, and cattle rearing)
- ♦ Agro-processing

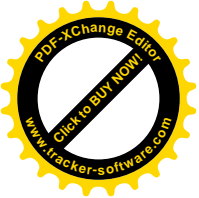
### Publications

1. **Edwin Kamalha**, Zheng Yuansheng, Yongchun Zeng and Fredrick I Mutua. FTIR and WAXD study of *Bombyx Mori* fibroin. *Advanced Material Research*. 677, 2013, 211-215 [Find online](#)



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2. **Edwin Kamalha**, Xiangyang Shi, Josphat I Mwasiagi, and Yongchun Zeng. Nanotechnology and Carbon Nanotubes; a Review of Potential in Drug Delivery. *Macromolecular Research Journal*. 20(9), 2012, 891-898 [Find online](#)
2. **Edwin Kamalha**, Zheng Yuansheng and Yongchun Zeng. Effect of solvent concentration on morphology of electrospun Bombyx Mori silk. *Indian Journal of Fiber and Textile Research*.39, 2014, 201-203 [Find online](#)
3. J.I. Mwasiagi, C. Yu, T. Phologolo, A. Waithaka, **E. Kamalha**, J.R. Ochola. Characterization of the Kenyan Hibiscus Sabdariffa L. (Roselle) bast fiber; *Fibres & Textiles in Eastern Europe*. 22, 3(105), 2014, 31-34. [Find online](#)
4. Kaixuan Liu, Jianping Wang, **Edwin Kamalha**, Victoria Li & Xianyi Zeng (2017): Construction of a prediction model for body dimensions used in garment pattern making based on anthropometric data learning, *The Journal of The Textile Institute*, 108(12):2107-2114. DOI:10.1080/00405000.2017.1315794 [Find online](#)
5. **Edwin Kamalha**, Ludovic Koehl. Christine Campagne. Classification and measure of quantitative difference between polyester and cotton fabrics based on sensory analysis; *Uncertainty Modelling in Knowledge Engineering and Decision Making (FLINS2016)*, PART 9: Soft Computing in Fashion Design and Textile Production, 2016, pp. 1022-1028 [Find online](#)
6. Nicholus Tayari Akankwasa, Wang Jun, Qasim Siddiqui, **Edwin Kamalha**, Loyd Ndlovu. Cotton-elastane ring core spun yarn: Review. *Research & Reviews in Polymer*. 4(4), 2013, 127-137 [Find online](#)
7. Kaixuan Liu, **Edwin Kamalha**, Jianping Wang, Tarun-Kumar. Agrawal. Optimization design of cycling clothes' patterns based on digital clothing pressures. *Fibers and Polymers* Fibers (2016) 17: 1522. [Find online](#)
8. Janani Loum, Henry Kanwezi, **Edwin Kamalha**. Optimization of Photocatalytic Degradation of Reactive Blue Dye Using Zinc Oxide Catalyst. *International Journal of Research and Review* (2015) 2(6); 343-347. [Find online](#)
9. **Edwin Kamalha**, Zheng Yuansheng and Yongchun Zeng. Analysis of the Secondary Crystalline Structure of Regenerated *Bombyx Mori* fibroin. *Research and Reviews in BioSciences*. 7(2), 2013, 76-83 [Find online](#)
10. L Tsongo, J Nakavuma, C Mugasa, **E Kamalha**. Helicobacter pylori among patients with symptoms of gastroduodenal ulcer disease in rural Uganda. *Infection Ecology & Epidemiology* 5, 26785, 2015. [Find online](#)
11. Kaixuan Liu, Jianping Wang, Xuyuan Tao, Xianyi Zeng, Pascal Bruniaux, **Edwin Kamalha**. Fuzzy classification of young women's lower body based on anthropometric measurement. *International Journal of Industrial Ergonomics*, 55, 2016, 60-68. [Find online](#)
12. **Edwin Kamalha**, Yongchun Zeng, Salome Kyatuhairi and Josphat I Mwasiagi. The comfort dimension in clothing; a review of perception in clothing. *Journal of Sensory Studies*. 28, 2013, 423-444 [Find online](#)
13. Liu, Kaixuan; Wang, Jianping; Zhu, Chun; **Kamalha, Edwin**; Hong, Yan; Zhang, Junjie; Dong, Min. A mixed human body modelling method based on 3D body scanning for clothing industry. *International Journal of Clothing Science and Technology*. 2017, 29(5), 673-685. [Find online](#)
14. J.I.Mwasiagi, T.Phologolo, C.W.Yu, **E. Kamalha**, L.Kinuthia, Lusweti Kituyi. Characterization of *Triumfetta Tomentosa B*, a bast fiber growing wildy in Kenya.



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*Materials Science; an Indian Journal* 11(9), 2014, 291-297. [Find online](#)

**15. Edwin Kamalha**, Jovan Kiberu, Ildephonse Nibikora, Josphat Igadwa Mwasiagi and Edison Omollo (2017). Clustering and Classification of Cotton Lint Quality Using Principal Component Analysis, Agglomerative Hierarchical Clustering and k-means Clustering. *Journal of Natural Fibers* 15:3, 425-435 [Find online](#)

**16.** Kaixuan Liu, Xianyi Zeng, Jianping Wang, Xuyuan Tao, Jun Xua, Xiaowen Jiang, Jun Ren, **Edwin Kamalha**, Tarun-Kumar Agrawal, Pascal Bruniaux Parametric design of garment flat based on body dimension. *International Journal of Industrial Ergonomics*, 2018, 65, 46-59. [Find online](#)

**17.** J.I. Mwasiagi, J.R. Ochola, **E. Kamalha**. A Study of the Factors Affecting Yarn Tensile Properties of Cotton Ring Spun Yarn *12th World Textile Conference AUTEX, June 13th to 15th 2012, Zadar, Croatia*

**18.** J.I. Mwasiagi, **E. Kamalha**, B.A. Igadwa, S. Kyatuheire. The Quality of Cotton Ring Spun Yarns Manufactured in Kenya. Cotton, Textile and Apparel Value Chain in Africa; IOTEX 2<sup>nd</sup> conference- Bahir University, Ethiopia- 9-11<sup>th</sup> May 2013

**19.** Fredrick N. Mutua, Edison Omollo, **Edwin Kamalha**, Yimin Wang. HGMS/TPU Composite Foam in Value Addition of Cotton Fiber Sports Gear. IOTEX 2<sup>nd</sup> Conference, May 9-11, 2013. Bahir Dar University- Ethiopia

**20. Edwin Kamalha**, Janani Loum, Josphat I Mwasiagi. A survey on indigenous plants as potential sources of dyes for cotton fabric in Busitema. Cotton, Textile and Apparel Value Chain in Africa, IOTEX 2nd Conference, May 9-11, 2013. Bahir Dar University- Ethiopia

**21. Edwin Kamalha**, Ada Ferri, Periolatto Monica, Roberta Peila and Roberta Bongiovanni. UV Assisted Radical Graft Polymerization on Poly-(ethylene terephthalate) for Hydrophilic Functionality. AATCC International Conference March 28-30, 2017, Hilton Wilmington Riverside Wilmington, NC, USA

**22.** Edwin Kamalha, Ludovic Koehl. Christine Campagne. Classification and Measure of Quantitative Difference between Polyester and Cotton Fabrics Based on Sensory Analysis p1022. In Fuzzy Logic and Intelligent Technologies in Nuclear Science - FLINS'2016- 12th International Conference on Uncertainty Modelling in Knowledge Engineering and Decision Making August 24-26, 2016 - Roubaix, France

**23.** Liu K., Zeng X., Bruniaux P., Tao X., Kamalha E., Wang J. (2018) Garment Fit Evaluation Using Machine Learning Technology. In: Thomassey S., Zeng X. (eds) Artificial Intelligence for Fashion Industry in the Big Data Era. Springer Series in Fashion Business.

**24.** Edison Omollo Oduor, Lucy Wanjiru Ciera, **Edwin Kamalha**. Applications of Silk in Biomedical and Healthcare Textiles. In Textiles for Functional Applications, 2021. Intechopen. DOI: 10.5772/intechopen.96644

**25.** Kenema Christine, Semwogerere Twaibu, Kamalaha Edwin, Alio Deborah, Kawuma Carol. Statistical Model for Predicting Salinity of Water at Doho I Irrigation Scheme in Busia. *East African Journal of Engineering*. 4:1, 2021. DOI: <https://doi.org/10.37284/2707-5397>

### Conferences, Seminars, Presentations and Research Mobility

**1.** A survey on indigenous plants as potential sources of dyes for cotton fabric in Busitema. Cotton, Textile and Apparel Value Chain in Africa, IOTEX 2nd Conference, May 9-11, 2013. Bahir Dar University- Ethiopia. *Oral presenter*



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2. UV Assisted Radical Graft Polymerization on Poly-(ethylene terephthalate) for Hydrophilic Functionality. AATCC International Conference March 28-30, 2017, Hilton Wilmington Riverside Wilmington, NC, USA. *Oral presenter*
3. Fuzzy Logic and Intelligent Technologies in Nuclear Science -FLINS'2016- 12th International Conference on Uncertainty Modelling in Knowledge Engineering and Decision Making August 24-26, 2016 - Roubaix, France. *Oral presenter*
4. 2nd International Conference on Micro Nano Devices, Structure and Computing Systems MNDSCS (2013), Shenzhen, China Jan 23-24
5. 12th World Textile Conference AUTEX, June 13th to 15th 2012, Zadar, Croatia
6. Erasmus+ and Europe Day, Uganda. May 5. Unveiling Opportunities in Education, Training and the Youths. Kampala. *Guest Speaker*
7. After the PhD? Think about your future. International PhD Workshop 2016, Archamps Technopole (France) September 5-6, 2016. Participant
8. The 2<sup>nd</sup> Foreign Experts' Conference- Taian China, 6<sup>th</sup>-10<sup>th</sup> September 2017- Invited Expert on textiles and polymers, special focus on functional textiles. Expert delegate
9. Diaspora Conference of Ugandans in China, 8<sup>th</sup>-10<sup>th</sup> December 2018- Invited Expert on Textiles, Apparel and Technology Transfer
10. Senior Research Scholar under the Africa Center of Excellence for Photochemicals, Textiles and Renewable Energy (ACE-PTRE), Moi University, Eldoret June 10<sup>th</sup> – June 24<sup>th</sup> 2019
11. Erasmus+ Staff Mobility for Teaching and Training; Dec 13-23, 2019, Greece- Athens
12. Training Workshop on Writing Winning Grants Proposals; Jan 28-29, 2020, Busitema University
13. Panelist on Seminar: COVID-19, Opportunity to Thrive- Clothing and Fashion. CASTLE THINK TANK, Kampala July 25, 2020.

**CURRENT POSTGRADUATE RESEARCH SUPERVISION:** Irrigation and Drainage Engineering (2), Computer Forensics (1), Chemistry and Renewable Materials (1), Textiles and Materials Engineering (3)

### REFEREES

Assoc. Prof. Samuel Baker Kucel  
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