

**Joel Ochieng' Wao, PhD, AVS, ENV SP, MQSi, AM.ASCE**

Tuskegee University  
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**EDUCATION**

<b>Ph.D.</b>	University of Florida	Design, Construction & Planning (Construction Management)	2014
<b>M.Ed.</b>	University of South Florida	Curriculum & Instruction (Measurement and Evaluation)	2008
<b>B.A.</b>	University of Nairobi	Building Economics (Quantity Surveying)	2005
<b>Cert.</b>	East Africa Uongozi Institute	Leadership and Globalization	2002

**PROFESSIONAL EXPERIENCE**

Head of Department of Construction Science	Tuskegee University, Tuskegee, Alabama <i>Responsibilities:</i> Teaching, research, and service to the university and community.	2018-Present
Assistant Professor of Construction Science and Management	Tuskegee University, Tuskegee, Alabama <i>Courses Taught:</i> CSMT 101: Introduction to Construction I      Fall 2015 ARCH/CSMT 344: Structures II      Spring 2016 CSMT 345: Construction Surveying & Layouts      Fall 2015, Spring 2017-Present CSMT 350: Green Building Design & Construction      Fall 2016-Present CSMT 441: Cost & Estimating I      Fall 2015-Present CSMT 442: Cost & Estimating II      Spring 2016-Present ARCH/CSMT 443: Structures III      Fall 2016 ARCH 443: Structures III      Fall 2017-Present CSMT 480: Construction Management Capstone      Spring 2016/17/18 CSMT 500/501/502: Construction Coop      Spring 2019 <i>Responsibilities:</i> Teaching, research, and service to the university and community.	2015-Present
Construction Management & Inspection Assistant	City of Gainesville Public Works, Gainesville, FL <i>Responsibilities:</i> Inspecting construction projects to ensure standards are met; Project management duties including contractor prequalification and organizing projects to ensure owner satisfaction and smooth closeout.	2014- 2015
Graduate Teaching Assistant	M.E. Rinker, Sr. School of Construction Management, University of Florida, Gainesville, FL. <i>Courses Assisted:</i> BCN 4423C: Temporary Structures BCN 1582: International Sustainable Development BCN 6641: Value Engineering <i>Responsibilities:</i> Grading course assignments, term papers and exams; Assisting instructors in teaching selected topics and overall course	2009- 2014

administration; Training, coordinating and supervising teams of graduate students conducting value analysis of building systems.

Graduate Research Assistant	Department of Measurement and Research, College of Education, University of South Florida, Tampa, FL.  <i>Responsibilities:</i> Developing survey research instruments; Data collection, analysis and reporting; Developing and evaluating the development of the Survey Research Methods and Ph.D. Online Statistics courses (graduate level courses).	2006-2009
Assistant Quantity Surveyor	CostekAlma Construction Consultants, Nairobi, Kenya  <i>Responsibilities:</i> Estimating, Preparing and evaluating bids; Change order reviews; Site inspections, Project coordination and administration; Overall construction consultancy duties.	2003-2006
Construction Internship	Ministry of Public Works, Nairobi, Kenya  <i>Responsibilities:</i> Preparing bid documents for residential, commercial and highway projects.	2003
Mathematics Tutor	Kanga High School and Mbita High School, Kenya  <i>Responsibilities:</i> Teacher and tutor for grade 12 (Form Four) students preparing for the Kenya National Examinations.	2001-2006
Drawing & Design Tutor	Kanga High School, Migori, Kenya  <i>Responsibilities:</i> Tutor for grade 12 (Form Four) students preparing for the Kenya National Examinations.	2001-2003
Store Keeper and Physics, Chemistry, Biology & Mathematics Teacher	Lambwe High School, Mbita, Kenya  <i>Responsibilities:</i> Monitoring and keeping inventory of items used in the daily running of school; Teaching Physics (grade 9, 10); Chemistry (grade 9, 10), Biology (grade 11) and Mathematics (grade 9, 10, 11, 12).	2000

**PROFESSIONAL AND HONORARY SOCIETY MEMBERSHIP**

Project Management Institute (PMI): #4012419	Member, 2016 - Present
Associated Schools of Construction (ASC): #1062086220	Member, 2015 - Present
American Institute of Steel Construction (AISC): #3117439	Member, 2015 - Present
Society of American Value Engineers (SAVE) International: #52589	Member, 2012 - Present
Quantity Surveyors International (MQSI): #2954	Member, 2012 - Present
United States Green Building Council (USGBC)	Member, 2011 - Present
American Society of Civil Engineers (AM. ASCE): #9137796	Member, 2010 - Present
Sigma Lambda Chi (SLX): <a href="#">International Construction Honor Society</a>	Member, 2010 - Present
Royal Institution of Chartered Surveyors (APC-RICS): #5040095	Member, 2009 - Present

## HONORS AND AWARDS

Outstanding Faculty Performance Award for Research	Taylor School of Architecture and Construction Science (TSACS), Tuskegee University, Tuskegee, AL.	2017-2018
Procter & Gamble Grant	The P&G Fund of the Greater Cincinnati Foundation	2016-2017
Outstanding Faculty Performance Award for Research	Taylor School of Architecture and Construction Science (TSACS), Tuskegee University, Tuskegee, AL.	2015-2016
Graduate Teaching Assistantship	M.E. Rinker, Sr. School of Construction Management, University of Florida, Gainesville, FL.	2009-2014
Cemex Scholarship	M.E. Rinker, Sr. School of Construction Management, University of Florida, Gainesville, FL.	2010
Grinter Scholarship	Graduate School, University of Florida, Gainesville, FL.	2010
Teaching with Technology	Center for Teaching, University of Florida, Gainesville, FL.	2009
Graduate Fellowship	Department of Measurement and Research, University of South Florida, Tampa, FL.	2008-2009
Graduate Research Assistantship	Department of Measurement and Research, University of South Florida, Tampa, FL.	2006-2009
Student Athletics Award	University of Nairobi, Kenya	2003-2004
Student Performance Recognition and Award	Kanga High School, Migori, Kenya	1995-1997
Student Performance Recognition and Award	Kuja Zone, Migori, Kenya	1994

## ACADEMIC, LEADERSHIP AND VOLUNTEER SERVICES

Faculty Senate	Tuskegee University, Tuskegee, AL	2018 – Present
Board of Reviewers	<i>International Journal of Construction Education and Research</i>	2018 - Present
Research Council	Tuskegee University, Tuskegee, AL	2017 - Present
Board of Reviewers	<i>Journal of Construction Business and Management</i>	2016 - Present
Board of Reviewers	<i>International Conference on Waste Management</i>	2016 - Present
Graduate Faculty	Tuskegee University, Tuskegee, AL.	2016 - Present
Board of Reviewers	<i>International Journal of Construction Management</i>	2016 - Present
Sigma Lambda Chi Students Advisor	Tuskegee University, Tuskegee, AL	2015 - Present
Research and Graduate Studies Committee	Tuskegee University, Tuskegee, AL.	2015 - Present
Board of Reviewers	<i>Associated Schools of Construction (ASC) International</i>	2015-Present

*Conference*

First Aid & CPR Instructor	American Red Cross Volunteer Program, North Central Florida Chapter	2014-2015
GED Tutor	Volunteer Tutoring Program, GCM, Gainesville, FL.	2014-2015
Science Fair Judge	Alachua County Schools Volunteer Program, Gainesville,	2011-2015
Editorial Board Member	<i>Journal of African Studies Quarterly</i> , University of Florida, Gainesville, FL.	2010-2018
Sports Director	African Students Union, University of Florida, FL.	2011-2015
Proposal Evaluation Board	Urban Soccer Initiative, US Soccer Foundation, Washington DC, USA	2010-2014
Graduate Students Senator	Student Government, University of Florida, FL.	2012-2013
Construction Graduate Students Representative	College Council, University of Florida, Gainesville, FL.	2011
Selection and Review Board	East Africa Uongozi Institute, University of Nairobi, Kenya	2003-2004
Academic Secretary	Students of Building and Land Economics (SOBELE), University of Nairobi, Nairobi, Kenya	2001-2003
Soccer Captain	Faculty of Architecture, Design and Development (FADD), University of Nairobi, Nairobi, Kenya	2001-2004

**PROFESSIONAL SKILLS**

<b>Computer Skills</b>	Proficiency with construction project management and organization tools: APPIA & PROCORE; Scheduling software: Primavera (P6) and Microsoft Project; Building Energy Modeling software: eQuest; Building Information Modeling (BIM) software: Autodesk Revit and Navisworks; On-Screen Take off (estimating) software; Bluebeam; RS Means; Building Life Cycle Cost (BLCC) software; e-builder; Statistical analysis software: SAS, MPLUS, and SPSS  Prior experience with Java programming, HTML and ArcGIS.
<b>Language Skills</b>	Proficiency in Luo, Swahili, and English.

**CERTIFICATION**

<a href="#"><u>Envision Sustainability Professional Associate Value Specialist</u></a>	Institute for Sustainable Infrastructure	2016
	SAVE International	2016
OSHA 30 Hour-Construction	US Department of Labor	2015
First Aid/ AED/ CPR	American Red Cross Society	2015

**CONTINUED PROFESSIONAL DEVELOPMENT (CPD)**

Human Subject Research	Institutional Review Board	2017
Risk Management	SAVE International	2017
Sustainable Design & Construction	Institute for Sustainable Infrastructure	2016-18

Estimating (Risk Management)	Kiewit Corporation (Industry-Academia liaison)	2016
Value Management Methods	SAVE International (Module 1)	2016
Project Management Fundamentals	Project Management Institute	2015
Risk, Liability & Insurance in Valuation work	Royal Institution of Chartered Surveyors (RICS)	2015
Ethical Standards	Royal Institution of Chartered Surveyors (RICS)	2015

## **PUBLICATIONS**

### **Doctoral Degree Dissertation**

Wao, J.O. (2014). Value Engineering Methodology to Improve Building Sustainability Outcomes. *Ph.D. Dissertation*, University of Florida, Gainesville, FL.

### **Masters Degree Research Practicum**

Wao, J.O. (2008). Developing the Ph.D. Online Statistics Course: Analysis of Survey Results. *Masters Research Practicum*. University of South Florida, Tampa, FL.

### **Undergraduate Degree Research Thesis**

Wao, J.O. (2004). An Evaluation of Building Materials Performance: Case of Galvanized Corrugated Sheets and Earth Block Walling Materials. A Case Study of West Kamagambo Location in Rongo Division, Migori, Kenya. *Undergraduate Research Thesis*. University of Nairobi, Nairobi, Kenya.

### **Refereed/Peer Reviewed Journal Publications**

Wao, J. (2018). Weighted Product Method in the Value Engineering Process for Construction Project. *International Journal of Scientific Research and Management*, 6(12), EC-2018. <https://doi.org/10.18535/ijstrm/v6i12.ec03>

Wao, J.O. & Flood, I. (2016). The role of quantity surveyors in the international construction arena. *International Journal of Construction Management*, 16 (2), 126-137. <http://dx.doi.org/10.1080/15623599.2016.1142251>

Wao, J.O., Ries, R., Flood, I., Sarel, L. & Ozbek, M. (2016). [Relationship between admission GRE scores and graduation GPA scores of construction management graduate students](#). *International Journal of Construction Education and Research*, 12 (1), 37-53.

Wao, J. O. (2015). [Predicting the future of quantity surveying profession in the construction industry](#). *Journal of Construction Project Management and Innovation*, 5(2), 1211-1223

Wao, H.O., Lee, R.S., Wao, J.O., Odondi, G.O., Tenge, E.A. & Smit, C.A. (2015). [Predicting degree attainment in engineering and biological/life sciences: an exploratory study](#). *Journal of Women and Minorities in Science and Engineering*. 21(4), 347-362.

Wao, J. & Ries, R. (2015). Function analysis approach to improve sustainability outcomes. *SAVE International Value World*, 41(2), 1-16.

Wao, J. & Flood, I. (n.d.d.). Value engineering roles of quantity surveyors in construction projects. *International Journal of Construction Management* (2<sup>nd</sup> Review)

Wao, J., Ries, R., & Ozbek, M. (n.d.d.). Gender performance differential in GRE and Graduation GPA for Construction Management Graduate Students (In preparation).

## National and International Conference Proceedings

- Wao, J.O., Stephanie, J., & Jiles, D. (2018). [Improving student-learning outcomes in the construction surveying course](#). 54<sup>th</sup> Annual ASC International Conference, April 18-21 2018, University of Minnesota, Minneapolis, USA.
- Wao, J.O. (2018). [Improving creativity in the value engineering process for green building construction](#). Construction Research Congress (CRC) 2018, ASCE, April 3-5, New Orleans, Louisiana, USA.
- Wao, J.O. (2017). [Enhancing the function analysis and identification phase of the value engineering methodology](#). SAVE International Value Summit 2017, August 27-30, Philadelphia, Pennsylvania, USA.
- Wao, J.O., Hunt III, R., Lewis, W., Sanders A. & Roberts, E. (2017). Students driven value methodology application in construction project. SAVE International Value Summit 2017, August 27-30, Philadelphia, Pennsylvania, USA
- Wao, J. O. (2017). [Value Engineering Evaluation Method for Sustainable Construction](#). Architecture and Engineering Institute, ASCE International Conference, Oklahoma City, April 11-13, 2017
- Wao, J., Bivins, K., Ries, R., Schattner, S. & Hunt III, R. (2017). [SAT and ACT scores as predictors of undergraduate GPA of construction science and management students](#). 53rd Annual ASC International Conference, April 5-8 2017, University of Washington, Seattle, USA
- Wao, J.O., Hunt III, R., Sanders A. & Roberts, E. (2016). Application of weighted product method in value engineering. SAVE Value Summit 2016, June 5-7 Niagara Falls, ON, Canada.
- Wao, J., Ries, R., Flood, I. & Kibert, C. (2016). Practitioners driven approach to improving the value methodology. SAVE Value Summit 2016, June 5-7 Niagara Falls, ON, Canada.
- Wao, J., Ries, R., Flood, I. & Kibert, C. (2016). [Refocusing value engineering for sustainable construction](#). 52<sup>nd</sup> Annual ASC International Conference, April 13-16 2016, Brigham Young University, Provo, Utah, USA.
- Wao, J., Ries, R., Ozbek, M., Carroll, J., Bivins, K. & Hunt III, R. (2016). [Predicting the performance and success of construction management graduate students using GRE scores](#). 52<sup>nd</sup> Annual ASC International Conference, April 13-16 2016, Brigham Young University, Provo, Utah, USA.
- Wao, J. (2015). [A review of the value engineering methodology: Limitations and solutions for sustainable construction](#). SAVE Value Summit 2015, June 8-10 San Diego, CA, USA.
- Wao, J., Ries, R., Flood, I., Sarel, L. & Ozbek, M. (2015). [Investigating the Predictive Ability of Admission GRE Scores on Graduation GPA Scores of Domestic and International Students in Construction Management Graduate School Programs](#). 51<sup>st</sup> Annual ASC International Conference, April 22-25 2015, Texas A&M, Texas, USA.
- \*Bell-Ellison, B. A., Rendina-Gobioff, G., Hines, C., Hohlfeld, T., Kromrey, J. D., Phan, H., Hess, M., Hibbard, S., Wao, J., & Pride, B. (2007). Transitions in college and beyond: Applying prospect theory to investigate academic decisions and career choices. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL, April 9-13, 2007.
- \*Hohlfeld, T., Bell-Ellison, B., Hess, M., Hines, C., Kromrey, J., Phan, H., Rendina-Gobioff, G., Pride, B., Wao, J. & Hibbard, S. T. (2007, February). Application of prospect theory to academic and employment decision making in science and engineering: A secondary analysis of SESTAT Data. Paper presented at the annual meeting of the Eastern Educational Research Association, Clearwater, Florida, February 14 – 17, 2007.

\*Phan, H. Bell-Ellison, B., Hess, M., Hines, C., Hohlfeld, T., Kromrey, J., Rendina-Gobioff, G., Hibbard, S., Pride, B., and Wao, J. (2006, November). Correlates of decision making: Factors associated with degree completion and employment. *Paper presented at the annual meeting of the Florida Educational Research Association, Jacksonville, Florida, November 15 – 17, 2006.*

### **Presentations at National and International Conferences**

\*Hunt, R., Wao, J., & Bivins, K. (2018). Tuskegee University's Role in Construction Education History as the Oldest US Construction Baccalaureate. Construction History Society of America (CHSA), *6<sup>th</sup> Biennial Meeting on Construction History, May 24-26, 2018, University of Maryland, Maryland, USA*

\*Wao, J.O., Stephanie, J., & Jiles, D. (2018). Improving student-learning outcomes in the construction surveying course. *54<sup>th</sup> Annual ASC International Conference, April 20 2018, University of Minnesota, Minneapolis, USA.*

Wao, J.O. (2018). Improving creativity in the value engineering process for green building construction. *Construction Research Congress (CRC) 2018, ASCE, April 4, New Orleans, Louisiana, USA.*

Wao, J.O. (2017). Enhancing the function analysis and identification phase of the value engineering methodology. *Paper Presented at the SAVE International Value Summit 2017, August 28, Philadelphia, Pennsylvania, USA.*

Wao, J. O. (2017). Value Engineering Evaluation Method for Sustainable Construction. *Paper Presented at the Architecture and Engineering Institute, ASCE International Conference, Oklahoma City, April 12, 2017*

Wao, J., \*Bivins, K., Ries, R., Schattner, S. & Hunt III, R. (2017). SAT and ACT scores as predictors of undergraduate GPA of construction science and management students. *Paper Presented at the 53rd Annual ASC International Conference, April 5-8 2017, University of Washington, Seattle, USA*

\*Wao, J., Ries, R., Flood, I. & Kibert, C. (2016). Refocusing value engineering for sustainable construction. *Paper Presented at the 52<sup>nd</sup> Annual ASC International Conference, April 13-16 2016, Brigham Young University, Provo, Utah, USA.*

\*Wao, J., Ries, R., Ozbek, M., Carroll, J., Bivins, K. & Hunt III, R. (2016). Predicting the performance and success of construction management graduate students using GRE scores. *Paper Presented at the 52<sup>nd</sup> Annual ASC International Conference, April 13-16 2016, Brigham Young University, Provo, Utah, USA.*

Wao, J. (2015). A review of the value engineering methodology: Limitations and solutions for sustainable construction. *Paper Presented at the SAVE Value Summit 2015, June 8-10 San Diego, CA, USA.*

\*Wao, J., Ries, R., Flood, I., Sarel, L. & Ozbek, M. (2015). Investigating the Predictive Ability of Admission GRE Scores on Graduation GPA Scores of Domestic and International Students in Construction Management Graduate School Programs. *Paper Presented at the 51<sup>st</sup> Annual ASC International Conference, April 22-25 2015, Texas A&M, Texas, USA.*

Wao, J. (2011). Appropriate materials selection for sustainable water infrastructure in sub-Saharan Africa. *Poster presented at the College of Design, Construction and Planning (DCP) Show-case, University of Florida, Gainesville, FL.*

\*Wao, J., \*Fay, R., & Ferron, J. (2008, November 19-21). A SAS program for conducting randomization tests of multiple baseline data. *Poster presented at the Florida Educational Research Association, Orlando, FL.*

- \*Bell-Ellison, B. A., Rendina-Gobioff, G., Hines, C., Hohlfeld, T., Kromrey, J. D., Phan, H., Hess, M., Hibbard, S., Wao, J., & Pride, B. (2007). Transitions in college and beyond: Applying prospect theory to investigate academic decisions and career choices. *Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL, April 9-13, 2007.*
- \*Hohlfeld, T., Bell-Ellison, B., Hess, M., Hines, C., Kromrey, J., Phan, H., Rendina-Gobioff, G., Pride, B., Wao, J. & Hibbard, S. T. (2007, February). Application of prospect theory to academic and employment decision making in science and engineering: A secondary analysis of SESTAT Data. *Paper presented at the annual meeting of the Eastern Educational Research Association, Clearwater, Florida, February 14 – 17, 2007.*
- \*Phan, H. Bell-Ellison, B., Hess, M., Hines, C., Hohlfeld, T., Kromrey, J., Rendina-Gobioff, G., Hibbard, S., Pride, B., and Wao, J. (2006, November). Correlates of decision making: Factors associated with degree completion and employment. *Paper presented at the annual meeting of the Florida Educational Research Association, Jacksonville, Florida, November 15 – 17, 2006.*

### **Newsletter Publications**

- Wao, J.O. (2018). Information technology and generation gap in the construction industry, *QS EYE for Quantity Surveyors, UK, winter 2018, pg 21.*
- Wao, J.O. (2017). [Looking at quantity surveying in the coming days](#). *QS EYE for Quantity Surveyors, UK, winter 2017, pg 10.*
- Wao, J. & Bivins, K. (2016). [Women involvement in the construction industry](#). *QS EYE for Quantity Surveyors, UK, autumn 2016, pg 12-13.*
- Wao, J. & Hunt III, R. (2016). Construction industry-academia symbiotic relationship: in view of construction management. *QS EYE for Quantity Surveyors, UK, autumn 2015, pg 12.*
- Wao, J. (2015). Decision support system for green building construction. *QS EYE for Quantity Surveyors, UK, autumn 2015, pg 12.*
- Wao, J. (2015). Analysing the value methodology for sustainable construction. *QS EYE for Quantity Surveyors, UK, summer 2015, pg 11.*
- Wao, J. (2014). Quantity surveying and value analysis: A survey of quantity surveyors in the construction industry. *QS EYE for Quantity Surveyors, UK, autumn 2014, pg 18.*
- Wao, J. (2014). Comparing principal building sustainability rating systems. *QS EYE for Quantity Surveyors, UK, summer 2014, pg 19.*
- Wao, J. (2014). Quantity surveyor as a value engineering team leader and manager. *QS EYE for Quantity Surveyors, UK, spring 2014, pg 6.*
- Wao, J. (2013). Teamwork in construction value engineering. *QS EYE for Quantity Surveyors, UK, autumn 2013, pg 15-16.*
- Wao, J. (2013). Trend analysis of quantity surveying profession, *QS EYE for Quantity Surveyors, UK, summer 2013, pg 12-13*
- Wao, J. (2013). [State of international construction market in Africa](#). *QS EYE for Quantity Surveyors, UK, spring 2013, pg 10-11.*
- Wao, J. (2012). Role of quantity surveyor in international construction: A survey of construction professionals. *QS EYE for Quantity Surveyors, UK, winter 2012, pg 15-16.*



### **Other Invited/Guest Lectures**

- Wao, J.O. (2017). Introduction to Construction Estimating. *Presentation at the National Center for Construction Education and Research (NCCER) Training Center, Birmingham, Alabama, November 20-21, 2017.*
- Wao, J.O. (2016). The research process in architecture and construction science & management. *Presented to the Faculty of Architecture and Construction Science, Tuskegee University, April 5, 2016.*
- Wao, J.O., Hunt III, R., Sanders A. & Roberts, E. (2015). The Carver Center for Sustainability wall partition project. *Presented to the Carver Center for Integrative Sustainability, Tuskegee University, December 14 2015.*
- Wao, J.O. (2015). PPE in construction projects. *Presented to the School of Built Environment at the University of North Florida, Jacksonville, Florida, April 6 2015.*
- Wao, J.O. (2015). Application of value engineering in construction projects. *Presented to Construction Department at North Carolina A&T, Greensboro, North Carolina, February 7, 2015*
- Wao, J.O. (2014). Alternative approaches to improving the value methodology in sustainable construction. *Presented at the University of Florida, Gainesville, Florida, March 2014.*
- Wao, J.O. (2014). Life Cycle Costing and its application in value engineering. *Presented at the University of Florida, Gainesville, Florida, March 2014.*

### **Books**

- Wao, J. O. & Marinda, M. O. (2006). *The King Pin series I*. Heinemann Education Series: Kenya. *Mathematics revision textbook for Kenyan high schools.*
- Marinda, M. O. & Wao, J.O. (2004). *Procedure for Excellence in O-level Mathematics*. Kenya Publishing House: Kenya. *Mathematics revision textbook for Kenyan high schools.*