

CONTACT INFORMATION	Actuarial Science Program Department of Mathematics University of Wisconsin, Eau Claire Eau Claire, WI, 54701 USA	<i>Phone office:</i> (715) 836-3721 <i>E-mail:</i> koissiml@uwec.edu http://people.uwec.edu/koissiml
RESEARCH INTERESTS	Actuarial Science: Mortality / Longevity Risk, Fuzzy Logic Applications to Risk Assessment. Numerical Methods. Subject Classifications: (JEL) C6, (AMS) 91B30, 03B52, 65K10, 68N17, 90C20, 90C70.	
EDUCATION	<p><i>Åbo Akademi University, Turku, Finland</i></p> <ul style="list-style-type: none"> • Ph.D. in Mathematics (Thesis in Applied Mathematics), June 2006 http://web.abo.fi/fak/mnf/mate/gradschool “Modeling Mortality Rates: Improvement, Uncertainty and Effect on Life Annuities” Advisors: Pr. Arnold Shapiro (Penn State, Actuarial Sciences and Risk Management) and Pr. Göran Högnäs (Åbo Akademi, Applied Mathematics - Stochastics Processes) • Ph. Licentiate, Mathematics (Thesis in Applied Mathematics), Dec 2003 <p><i>Université de Cocody - Abidjan, UFR de Mathématique, Cote d'Ivoire,</i> B.Sc. (Licence-Maitrise) in Mathematics, June 1999</p>	
APPOINTMENT	<p>Department of Mathematics, University of Wisconsin, Eau Claire</p> <ul style="list-style-type: none"> – <i>Professor</i> Aug. 2018 - Present – <i>Tenure-Track Associate Professor</i> Aug. 2014 - June 2018 <p>Department of Mathematics, Western Illinois University, Macomb</p> <ul style="list-style-type: none"> – <i>Associate Professor of Mathematics with Tenure,</i> Jun. 2012 – June 2014 – <i>Tenure-Track Assistant Professor of Mathematics</i> Aug. 2007 – Jun. 2012 <p>The Pennsylvania State University, Mont Alto campus, PA</p> <ul style="list-style-type: none"> – <i>Instructor of Mathematics</i> Sep. 2006 – May 2007 <p>Åbo Akademi University, The Finnish Graduate School in Stochastics, Finland.</p> <ul style="list-style-type: none"> – <i>Research Scientist in Applied Mathematics</i> Oct. 2002 – Jul 2006 <p>Max Planck Institute, Laboratory of Longevity, Rostock, Germany</p> <ul style="list-style-type: none"> – <i>Visiting Scholar in Mathematical Modelling</i> 2001 - 2002 	
PUBLICATIONS [PEER-REVIEWED]	<ol style="list-style-type: none"> 1. <u>Koissi</u>, Day, and Whitledge, 2019, “Emerging Data Analytics Techniques with Actuarial Applications”, Society of Actuaries. 2. Shapiro and Koissi, 2017, “Fuzzy Logic modifications of the Analytic Hierarchy Process” <i>Insurance: Mathematics and Economics</i>, 75, 189 – 202. 3. Shapiro and Koissi, 2015, “Risk Assessment Applications of Fuzzy Logic”, Society of Actuaries, Canadian Society of Actuaries, Joint Risk Management. 4. Berry-Stölzle, <u>Koissi</u>, Shapiro. 2010. “Detecting Fuzzy Predictor Variables: the Case of Insurer Solvency Surveillance in Germany.” <i>Insurance: Mathematics and Economics</i> 46, 554-567 5. <u>Koissi</u>. 2006. “Longevity and adjustment in pension annuities, with application to Finland.” <i>Scandinavian Actuarial Journal</i> 4, 226-242. 6. <u>Koissi</u>, Shapiro, Högnäs. 2006. “Evaluating and extending the Lee-Carter model for mortality forecasting: Bootstrap confidence interval.” <i>Insurance:</i> 	

Mathematics and Economics 38, 1-20. [In Sep. 2011, this article was ranked in the Top 10 citations for the last five years (2006-2011) in IME]

7. Koissi and Shapiro. 2006. "Fuzzy formulation of the Lee-Carter model." *Insurance: Mathematics and Economics* 39, 287-309.
8. Koissi and Högnäs. 2006. "Effects of family frailty on child mortality: Ivory Coast experience." *World Health & Population*, 1-9.
9. Koissi and Högnäs. 2005. "Using WinBUGS to Study Family Frailty in Child Mortality, with an Application to Child Survival in Ivory Coast." *African Population Studies* 20 (1), 1-17.

OTHER PUBLICATIONS

1. Koissi and Stodola*, "Cluster Analysis of stock index: case of the S&P 500". *In preparation. Manuscript with undergraduate student from UWEC.*
2. Koissi and Shapiro, 2015, "Using Fuzzy Logic to Model Risk: Case Studies", *Actuarial Research Clearing House (ARCH) – SOA*
3. Koissi and Shapiro, 2014. "Applying Fuzzy Optimization to Risk Assessment", *Actuarial Research Clearing House ARCH.*
4. Koissi and Shapiro. 2013-1. "Credibility Theory in a Fuzzy Environment" ARCH Risk Theory. 6pp.
5. Shapiro, Berry-Stölzle, Koissi. 2010. "The Fuzziness in Regression Models" ARCH 2010-1, Statistical Method (3), 6pp.
6. Shapiro and Koissi. 2009. "Fuzzy Regression, Diamond Distance, and the Term Structure of Interest Rates." ARCH 2009-1, Finance (5), 28 pp.

PREVIOUS PROJECTS WITH UNDERGRADUATE

ORSP SPONSORED PROJECTS

PREVIOUS UNDERGRADUATE PROJECTS AT UWEC

- **Kola Loh, 2018-2019, "Investigating Change in the Swiss Re bond index"**

Related Presentations

- UWEC Math Retreat, talk,
- UWEC CERCA, poster

- **Jordan Koski, Kee Shen Yim, 2017, "Analysis of Variation in Price of mortality-linked securities"**

Related Presentations

- Joint Math Meeting, Poster, San Diego, Jan 2018
- Math Retreat, talk, UWEC, 2017
- CERCA, 2017, UWEC, poster

- **Jordan Koski and Austin Angell, Fall 2016, Research Preparation for Midwest Undergraduate Data Analytics Competition, MN. [not ORSP grant]**

Related Presentations

- Fall 2016, Midwest Undergraduate Data Analytics Competition, Optum in Eden Prairie, MN, Nov. 5, 2016 (Students received honorable mention)

- **Ryan Stodola, Summer 2016, "Predictive Modeling of Big Data with Application to S&P 500".**

- **Alex Brown, 2015-2016, "Longevity Risk in Solvency Framework"**

Related Presentations

- 30th NCUR, North Carolina, April 2016.
- Math Retreat, talk, 2016
- CERCA, 2016, poster

[ORSP GRANTS UNLESS SPECIFIED]

PREVIOUS
UNDERGRADUATE
PROJECTS

- Andrew Smeed 2014-2015, “Understanding and Modeling Longevity Risk” [Blugold]
Related Presentations
 - Math Retreat, talk, 2015.
 - CERCA, 2015, Poster

OTHER GRANTS
AND AWARDS

- Actuarial Research Award, 2018-2019,
Project sponsored by the *Society of Actuaries*, USA.
Koissi M.-C. (project director), Day H., and Whitledge V.,
Title: “Emerging Data Analytics Techniques with Actuarial Applications”.
- Actuarial Research Award, 2013-2014,
Shapiro A.F. (project director) and Koissi, M.-C.,
Project sponsored by the Society of Actuaries, the Canadian Actuarial Society, and the Joint Risk Management Section.
Title of project “Risk Assessment Applications of Fuzzy Logic”.
- Professional Achievement Awards (areas: teaching, research, and services) 2013, Western Illinois University, Macomb, IL.
- Magnus Ehrnrooths Stiftelse Research Grant, Finland (2005 and 2003)
- Åbo Akademi Foundation Research Grant, Finland (2005).
- Åbo Akademi Foundation Student Grant, Finland (2003/ 2004, 2001/2002).
- Max Planck Institute, Young Researcher Grant, Germany (2001 / 2002)