

Justin Ehrlich  
School of Computer Sciences  
Western Illinois University  
447Q Stipes Hall, 1 University Circle  
Macomb, IL, 61455  
JA-Ehrlich@wiu.edu  
<http://faculty.wiu.edu/JA-Ehrlich/>  
316-461-4033

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#### EDUCATION

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*University of Kansas, Lawrence, KS*

**Ph.D. in Computer Science**

**2010**

Dissertation: "The Effect of Desktop Illumination Realism on Presence and Generalization in a Virtual Learning Environment"

Graduate GPA: 4.0

*Wichita State University, Wichita, KS*

**M.S. in Computer Science**

**2007**

Graduate GPA: 4.0

*Friends University, Wichita, KS*

**B.B.A Accounting and Business Administration**

**2004**

GPA: 3.59

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#### AWARDS

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- WIU's College of Business and Technology Excellence in University/Community Service **2017**
  - WIU's Provost's (University level) Award for Academic Excellence in Teaching with Technology **2015**
  - WIU's College of Business and Technology Excellence in Teaching with Technology **2015**
  - WIU's School of Computer Science's Graduate Teacher of the Year **2013**
  - WIU's School of Computer Science's Graduate Teacher of the Year **2012**
  - WIU's School of Computer Science's Undergraduate Teacher of the Year **2011**
  - WIU's School of Computer Science's Graduate Teacher of the Year **2010**
  - University of Kansas' School of Engineering's Moore Best PhD Dissertation Award for 2010
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#### RELATED EXPERIENCE

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*School of Computer Sciences, Western Illinois University, Macomb, IL*

**Associate Professor**

**2010 - Present**

Specialized in data visualization, visual analytics, computer graphics, server-side development, and virtual reality.

Languages and Technology Taught: R, SQL, JavaScript, D3.js, C++, C#, Java, Python, Tableau, OpenGL, Direct3D, PHP, ASP.net, and x86 assembly.

Service Work:

Chair of the Council for Instructional Technology

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Chair of the IT Governance Executive Committee, where I spearheaded the effort to switch the University to Google Apps for Education

Courses Taught:

Topics of Computer Science: Data Visualization CS 590: Fall 2016

Operating Systems CS 410G: Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014, Spring 2015, Summer 2017, Summer 2018

Basics of Java CS 212: Fall 2010

Graphical User Interface CS 412: Fall 2011

Computer Organization 2 CS 400: Spring 2011

Computer Graphics CS 465G: Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017

Advanced Topics of Computer Graphics CS 567: Spring 2012, Spring 2013, Spring 2014, Spring 2015, Spring 2016, Spring 2017, Spring 2018

Advanced Computer Graphics (alternated between Image Processing, Data Visualization, and Game Development) CS 566: Fall 2012, Fall 2013, Fall 2015, Fall 2016, Fall 2017, Fall 2018

Server-Side Development CS 425: Fall 2014, Fall 2015, Fall 2017, Fall 2018

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*Special Education Department, School of Education, University of Kansas, Lawrence, KS*

**AViSSS Lead Software Developer**

**2007 - 2010**

Collaborated with a team of professors in the creation of an interactive virtual learning environment.

Developed Animated Visual Supports for Social Skills (AViSSS).

Created levels, models, and scripts for game.

Developed different aspects of the software in Java, C#, and C++.

Managed three supporting student workers.

For more info, view our website here: <http://avisss.com/>

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*Nomise Systems, Wichita, KS*

**ASP.net Developer**

**2007**

Worked on medical accounting forms using ASP.net, C#, and SQL Server.

Helped to maintain database servers.

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*HSSportsTV.net, Wichita, KS*

**Lead Developer**

**2006-2007**

Created site to stream videos of high school sports.

Developed all the underlining PHP, ASP, and SQL code for main site to display schedules and aggregate statistics.

Designed the backend site using ASP for coaches and administrators to input games.

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## PUBLICATIONS AND PAPERS

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- J. Boudreau, J. Ehrlich, M. F. Raza, and S. Sanders, "The likelihood of social choice violations in rank sum scoring: algorithms and evidence from NCAA cross country running," *Public Choice*, Dec. 2017.
- S. Sanders, J. Ehrlich, and J. Boudreau, "Strategic Manipulation Games and Cycles in Team Tennis and other Paired-Element, Majority Rule Contests," *Games*, Vol. 8(3), 2017, DOI 10.3390/g8030027
- J.A. Ehrlich and J. Munger, "Utilizing Head Mounted Displays as a Learning Tool for Children with Autism," proceedings of the 2014 E-iED Summit, Vienna, Austria, 2014
- J. Boudreau, J.A. Ehrlich, S. Sanders, and A. Winn "Social Choice Violations in Rank Sum Scoring: A Formalization of Conditions and Corrective Probability Computations," *Mathematical Social Sciences*, vol. 71, 2014, pp. 20-29; DOI 10.1016/j.mathsocsci.2014.03.004
- J.A. Ehrlich, "The Component Entity System for Virtual Environments," proceedings of The 2013 International Conference on Computer Graphics and Virtual Reality, Las Vegas, NV, 2013.
- J.A. Ehrlich, "Standard Evaluation of Interventions for those with Autism Spectrum Disorder," proceedings of The 2012 International Conference on Frontiers in Education: Computer Science and Computer Engineering Conference, Las Vegas, NV, 2012.
- J.A. Ehrlich, "The Effect of Global Illumination on Presence in a Virtual Environment for those with Autism Spectrum Disorder," proceedings of The 2011 International Conference on Computer Graphics and Virtual Reality Conference, Las Vegas, NV, 2011.
- J.A. Ehrlich and J.R. Miller, "A Virtual Environment for Teaching Social Skills: AViSSS," *IEEE Computer Graphics and Applications*, vol. 29, no. 4, 2009, pp. 10-16; DOI 10.1109/MCG.2009.57.
- J. A. Ehrlich, "The effect of desktop illumination realism on a user's sense of presence in a virtual learning environment," Ph.D. dissertation, University of Kansas, Lawrence, KS, 2010.

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## TALKS AND POSTERS

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- S. Sanders and J. Ehrlich, "Winning Cheap in the NBA: An Estimation of Team-Performance Input Costs," presented at the Midwest Sports Analytics Meeting, Central College, Pella, IA, 18-Nov-2017.
- M. Corbett and J. Ehrlich, "*Mobile, Touch Screen Technology as an Aid in Mathematics Education*," presented at the 2017 Illinois State Academy of Science, Palatine, IL, 2017.
- J. Ehrlich, R. Paul, and S. Sanders "Estimating Major League Baseball Team Quality through Simulation: An Analysis of Alternative Pythagorean Expected Win Models" presented at the 54th Academy of Economics and Finance annual conference, Charleston, SC, 2017.
- J. Ehrlich, "Computational/Visual Analysis of How the Scoring Method for Cross-Country Running Competitions Violates Major Social Choice Principles," presented at the Midwest Sports Analytics Meeting, Central College, Pella, IA, 19-Nov-2016.
- J. A. Ehrlich, S. Sanders, and J. Boudreau "Rank Sum Aggregation: Origin, Applications, and Social Choice Characteristics" presented at the 2015 Illinois Economic Association conference, Chicago, IL, 2015.
- M. Singh, T. Westerhold, and J. Ehrlich, "Apps for Academics," presented at the *22nd Annual American Society of Business and Behavioral Sciences*, Las Vegas, NV, 2015.
- S. Sanders, J. A. Ehrlich, and M. Raza, "Likelihood of Social Choice Violations in Rank Sum Scoring: An Empirical Test of Combinatorial Results from NCAA Cross Country," presented at the 2014 Illinois Economic Association conference, Chicago, IL, 2014.
- S. Mohammed and J. Ehrlich, "Measuring Irrational Status Quo Bias in Online Video Games," presented at 107<sup>th</sup> Illinois State Academy of Science, Macomb, IL, 2014.
- S. Sanders and J. A. Ehrlich, "Social Choice Violations in Rank Sum Scoring: A Formalization of Conditions and Corrective Probability Computations," presented at the Western Illinois University Department of Mathematics 2013 Colloquium, Macomb, IL, 2013.
- S. J. Smith and J. A. Ehrlich, "Tips, Tools, and Technologies: Solutions for Individuals with

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Autism," presented at the ATIA 2011, Orlando, FL, 2011.

- S. J. Smith and J. A. Ehrlich, "Tips, Tools, and Technologies: Solutions for Individuals with Autism," presented at the ATIA 2010, Chicago, IL, 2010.
- J. A. Ehrlich, "The effect of desktop illumination realism on a user's sense of presence in a virtual learning environment," presented at the ACM SIGGRAPH 2010 Posters, Los Angeles, California, 2010.

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#### GRANTS

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- Grant: "Correlates of Longevity among Former NCAA Football Players," \$5,000 from Falk College, Syracuse University. 2017
- Grant: "Incidence of and Risk for Early Mortality among National Football League Players, 1922-Present," \$7,500 from Falk College, Syracuse University. 2017
- Grant: "Increasing Access to NGSS with Virtual Reality: Teacher Professional Learning to Support Student Social Competence Development," \$1,499,981 from the National Science Foundation. Pending
- Grant: "U3E Web Development, Human Factors Experiments and Simulations (Experimental Algorithms) for some Techniques in Extreme Participatory Democracy," \$32,768 from the U3E. 2014.
- Subaward Grant: "Phase II – Animated Visual Supports for Social Skills (AViSSS): An Interactive Virtual Experience for Social Skill Development (CFDA 84.327A)," \$115,791 from the U.S. Department of Education. 2012.