

# Denton Bobeldyk

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## Employment History

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- 2008 – Present    **Associate Professor** Computer Science Department, College of Technology, Davenport University, Grand Rapids, MI
  
- 1993 – Present    **Principal Consultant** DJB Consulting L.L.C.
  
- 2002 – 2003    **Principal Consultant** SARCOM. Infrastructure and Infrastructure Security Practice Lead.
  
- 1999 – 2002    **Senior Instructor** Global Knowledge and Computer Data. Instructed certified Cisco training courses located in various locations across the country (i.e., New York, San Francisco, Chicago)
  
- 1997 – 1999    **Senior Project Manager/Network Engineer** Kentwood Public Schools, Kentwood, Michigan.
  
- 1995 – 1997    **System Administrator/Services Coordinator** Calvin College, Grand Rapids, Michigan.

## Education

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- 2013 – 2019    **Ph.D., Michigan State University** in Computer Science, East Lansing, Michigan.  
Thesis title: *Attribute Prediction from Near Infrared Iris and Ocular Images*
  
- 1996 – 2004    **M.Sc. Computer Information Systems, Grand Valley State University, Allendale, Michigan**
  
- 1991 – 1995    **B.Sc. Computer Science, Calvin College, Grand Rapids, Michigan.**

## Research Publications

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### Journal Articles

- 1 Bobeldyk, D. & Ross, A. (2018). Predicting Gender and Race from Near Infrared Iris and Periocular Images. *IEEE Access*.

### Conference and Workshop Proceedings

- 1 Bobeldyk, D. & Ross, A. (2019). Predicting Soft Biometric Attributes from 30 Pixels: A Case Study in NIR Ocular Images. In *Proc. of IEEE Demographic Variations in Performance of Biometric Algorithms at the Workshop on Applications of Computer Vision (WACV)*.
  
- 2 Bobeldyk, D. & Ross, A. (2018). Predicting Eye Color from Near Infrared Iris Images. In *IAPR International Conference on Biometrics (ICB)*. **Best Presentation**.
  
- 3 Bobeldyk, D. & Ross, A. (2016). Iris or Periocular? Exploring Sex Prediction from Near Infrared Ocular Images. In *IEEE International Conference of the Biometrics Special Interest Group (BIOSIG)* (pp. 1–7).

## **Presentations**

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### **iProbe Research Lab Presentations**

- 2019
  - **Advancing Attribute Prediction from NIR Ocular Images**
  - **Predicting Soft Biometric Attributes from 30 Pixels: A Case Study in NIR Ocular Images**
- 2018
  - **Predicting Soft Biometric Attributes from 30 Pixels**
  - **Predicting Attributes from Near Infrared Ocular and Iris Images in the Context of an Iris Recognition System**
- 2017
  - **Predicting Dark Color Irides in the NIR using the Texture Descriptor BSIF**
  - **Exploiting BSIF to Predict Soft Biometric Attributes using NIR Ocular images**
  - **Eye Color Prediction from NIR Ocular Images**
- 2016
  - **Exploiting BSIF to Predict Soft Biometric Attributes using NIR Ocular Images**
  - **Towards Predicting Sex from NIR Iris Images**
  - **Towards Predicting Soft Biometric Attributes from NIR Iris Images**
- 2015
  - **Can Sex be Deduced from an Iris Image?**
  - **Towards Predicting Sex from NIR Iris Images**
  - **Can Sex be Deduced from an Iris Image?**
  - **Gender Prediction from an Iris Image**
- 2014
  - **Computer Vision and Sports**

### **Michigan State University Engineering Symposium**

- 2018
  - **Predicting Eye color from Near Infrared Iris Images**
- 2017
  - **Attribute-based Ocular Biometrics: A New Paradigm for Iris Recognition**
- 2016
  - **Exploring Sex Prediction from a Near Infrared Iris Image**
- 2015
  - **Can Sex be Deduced from an Iris Image?**

### **Davenport University Day of Research**

- 2019
  - **Predicting Soft Biometric Attributes from 30 Pixels: A Case Study in NIR Ocular Images**
- 2018
  - **Predicting Eye Color from Near Infrared Iris Images**
- 2017
  - **Attribute-based Ocular Biometrics: A New Paradigm for Iris Recognition**

### **Invited Talks**

- 2015
  - **Davenport University Convocation Speaker**
- 2011
  - **Grand Valley State University REU Summer Program**

## Curriculum Development

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### Undergraduate

2014    ■ I worked on a team to develop the inaugural Computer Science undergraduate program at Davenport University. For each of the courses listed below, I was responsible for writing the course description, the learning outcomes, the course assignments and the ‘community’ syllabus. I also worked closely with the online team to develop the blackboard shell, online assignments and discussion board material. The courses are listed below:

- CSCI 222 Biometric Fundamentals
- CSCI 326 Biometric Spoofing
- CSCI 380 Computer Vision
- CSCI 410 Pattern Recognition
- CSCI 446 Advances in Biometrics
- CSCI 445 Design and Analysis of Algorithms

### Graduate

2016    ■ I worked on a team to develop the inaugural Masters in Computer Science graduate program at Davenport University. For each of the following courses, I developed the course descriptions and either have, or am currently developing the assignments for both the in-seat and online version of the course:

- CSCI 678 Artificial Intelligence
- CSCI 728 Design and Analysis of Algorithms
- CSCI 744 Pattern Recognition and Machine Learning
- CSCI 756 Computer Vision

## Skills

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|-----------|--|
| Coding    | <span style="color: #800000;">■</span> Matlab, C#, Python, Java, R, SQL, $\LaTeX$ , Windows.NET, Visual Basic.                   |
| Databases | <span style="color: #800000;">■</span> MySQL, SQLite, Access.  |
| Web Dev   | <span style="color: #800000;">■</span> HTML, CSS, JavaScript, Apache Web Server.   |
| Oper Sys  | <span style="color: #800000;">■</span> Linux, Windows, Cisco IOS, AIX, Solaris, SunOS, SCO, Novell Netware                       |
| Sports    | <span style="color: #800000;">■</span> Volleyball, Beach Volleyball, Softball, Baseball  |
| Misc.     | <span style="color: #800000;">■</span> Academic research, teaching, training, consultation, $\LaTeX$ typesetting and publishing. |

## Skills (continued)

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Courses    **■** Experience in teaching/developing the following courses:

- CSCI 222 Biometric Fundamentals
- CSCI 231 Introduction to Programming
- CSCI 234 Object-Oriented Programming with C#
- CSCI 280 Artificial Intelligence
- CSCI 325 Deep Learning
- CSCI 380 Computer Vision
- CSCI 385 Special Topics: Advances in Biometrics
- CSCI 410 Pattern Recognition
- CSCI 445 Design and Analysis of Algorithms
- CSCI 497 College of Technology Capstone
- IAAS 221 Security Foundations
- IAAS 223 Applicable Biometrics (retired)
- CSCI 326 Biometric Spoofing (retired)
- IAAS 340 Biometric ID and Privacy Law (retired)
- CSCI 350 Biometric Algorithms (retired)
- IAAS 411 Patter Recognition II (retired)
- IAAS 425 Biometric Architectures (retired)
- CSCI 446 Advances in Biometrics (retired)

## Service

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2018 – Present    **■** **Scholarly Reviewer:**

- 10th IEEE International Conference on Biometrics Theory, Applications and Systems (BTAS 2019)
- Journal: IEEE Transactions on Image Processing
- Journal: IEEE Transactions on Image Forensics and Security
- Journal: IEEE Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization

2016 – Present    **■** **Byron Center Christian School Technology Committee**

Assess current technological needs, review technology purchases and attend committee meetings 3 – 4 times a year.

## Service (continued)

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- 2005 – 2015    **Unity Christian High School Technology Advisor**  
Consult and advise on advanced infrastructure and infrastructure security solutions. Provide education and advice on Cisco network and network security solutions.

## Miscellaneous Experience

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### Awards and Achievements

- 2018    **Best Presentation Award**, International Conference on Biometrics for presenting *Predicting Eye Color from Near Infrared Iris Images*.
- Excellence in Teaching Award Finalist**, Davenport University. Top teaching award for faculty.
- 2014    **Excellence in Teaching Award**, Davenport University. Top teaching award for faculty.

### Previous Certifications

- 2000    **Cisco Certified Internetworking Expert CCIE#5509**
- 1999    **Cisco Certified Systems Instructor CCSI#20292**
- 1998    **Cisco Certified Network Associate CCNA**  
         **Cisco Certified Design Associate CCDA**
- 1996    **Master Certified Novell Engineer 4.11 MCNE**

## References

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Available on Request