

Brian R. SNIDER

PERSONAL

ADDRESS: 1961 Crater Lane, Newberg, Oregon 97132
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DEGREES

- 2017 Ph. D. in COMPUTER SCIENCE & ENGINEERING
(expected) **Oregon Health & Science University** – *Portland, Oregon*
Thesis: *Sleep Signal Processing for Disordered Breathing Event Detection and Severity Estimation*
Advisor: Alexander KAIN, Ph. D.
- 2008 B. S. in COMPUTER & INFORMATION SCIENCE: COMPUTER SCIENCE
George Fox University – *Newberg, Oregon*

PROFESSIONAL EXPERIENCE

- 2016–PRESENT ASSISTANT PROFESSOR
George Fox University – *Newberg, Oregon*
Department of Electrical Engineering & Computer Science
- 2011–PRESENT PH. D. CANDIDATE & GRADUATE RESEARCH ASSISTANT
Oregon Health & Science University – *Portland, Oregon*
Center for Spoken Language Understanding
- 2015–2017 CHIEF ENGINEER
BioSpeech, Inc. – *Portland, Oregon*
- 2015–2016 ADJUNCT INSTRUCTOR
George Fox University – *Newberg, Oregon*
Department of Electrical Engineering & Computer Science
- 2015 DATA WAREHOUSE ARCHITECT
George Fox University – *Newberg, Oregon*
Department of Analytics
- 2012–2015 SENIOR SOFTWARE ENGINEER
BioSpeech, Inc. – *Portland, Oregon*
- 2011–2013 SENIOR RESEARCH ASSISTANT
Oregon Health & Science University – *Portland, Oregon*
Department of Behavioral Neuroscience
- 2008–2010 PRODUCTION ENGINEER
Huron Consulting Group – *Lake Oswego, Oregon*

TEACHING EXPERIENCE

George Fox University – *Newberg, Oregon*

CSIS 201 Intro to Computer Science I
CSIS 202 Intro to Computer Science II
CSIS 304 Web-Based Programming
CSIS 314 Client-Server Systems
CSIS 321 Software Engineering
CSIS 330 Human-Computer Interactions
CSIS 370 Object-Oriented Analysis & Design
CSIS 440 Artificial Intelligence
CSIS 485 Big Data & Analytics
ENGR 481/482 Senior Design

Oregon Health & Science University – *Portland, Oregon*

BMI 540/640 Computer Science with Java Programming (graduate teaching assistant)

ACADEMIC ADVISING

- 2018 (planned) **DEEP LEARNING FOR BRAIN-COMPUTER INTERFACE-BASED PROSTHESIS CONTROL**
George Fox University – Richter Scholars Program
Advisee: Thomas NOEL (undergraduate research assistant)
- 2017 **A DEEP NEURAL NETWORK-BASED PREDICTIVE MODEL OF UNDERGRADUATE STUDENT RETENTION**
George Fox University – Richter Scholars Program
Advisee: Taylor DAWSON (undergraduate research assistant)

PROFESSIONAL ACTIVITIES

- 2017-PRESENT **UNDERGRADUATE CURRICULUM COMMITTEE**
George Fox University – *Newberg, Oregon*
- 2017-PRESENT **PAPERS CHAIR**
CCSC-NW 2018 Program Committee – *Bothell, Washington*
- 2017-PRESENT **STRATEGIC DESIGN TEAM 3: STUDENT RETENTION AND CAREER PLACEMENT**
George Fox University – *Newberg, Oregon*
- 2016-PRESENT **ASSOCIATE MEMBERSHIP SECRETARY**
CCSC National Board
- 2017 **PAPER REVIEWER**
CCSC-NW 2017 – *Richland, Washington*
- 2016 **STUDENT POSTERS CHAIR**
CCSC-NW 2016 Program Committee – *Portland, Oregon*
- 2016 **PAPER REVIEWER**
CCSC-NW 2016 – *Portland, Oregon*

PROFESSIONAL MEMBERSHIPS

ASSOCIATION FOR COMPUTING MACHINERY (ACM)
ACM SPECIAL INTEREST GROUP ON COMPUTER SCIENCE EDUCATION (SIGCSE)
CONSORTIUM FOR COMPUTING SCIENCES IN COLLEGES (CCSC)
INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
SLEEP RESEARCH SOCIETY (SRS)

GRANTS & RESEARCH SUPPORT

- 2017–2018 PROSODY ASSESSMENT TOOLBOX \$705,641
National Institutes of Health — 4R44DC015145-02
PI: Pamela A. CONNORS (BioSpeech)
- 2016 OHSU GSO TRAVEL GRANT (\$400)
Oregon Health & Science University
- 2016 ICASSP 2016 NSF TRAVEL GRANT (\$500)
National Science Foundation
- 2016–2017 PROSODY ASSESSMENT TOOLBOX (\$224,044)
National Institutes of Health — 1R44DC015145-01
PI: Pamela A. CONNORS (BioSpeech)
- 2015–2016 AN AUTOMATED, MULTI-MODAL TOOL FOR QUANTIFYING THE AUTISM PHENOTYPE (\$75,000)
Oregon Clinical and Translational Research Institute — 5-UL1-TR000128-10
PI: Alison Presmanes HILL (OHSU)
- 2013–2016 SCREENING FOR SLEEP DISORDERED BREATHING WITH MINIMALLY OBTRUSIVE SENSORS (\$234,295)
National Institutes of Health — 1R43DA037588-01A1
PI: Brian R. SNIDER (BioSpeech)
- 2012–2015 COMPUTER-BASED AUDITORY SKILL-BUILDING PROGRAM FOR AURAL REHABILITATION (\$463,990)
National Institutes of Health — 5R44DC009515-03
PI: Pamela A. CONNORS (BioSpeech)
- 2012–2013 A GENE EXPRESSION BRAIN ATLAS OF THE ZEBRA FINCH (\$385,000)
National Institutes of Health — 5R24GM092842-03
PI: Claudio V. MELLO (OHSU)
- 2011–2013 COMPUTERIZED SYSTEM FOR PHONEMIC AWARENESS INTERVENTION (\$216,403)
National Institutes of Health — 1R43DC011706-01
PI: Pamela A. CONNORS (BioSpeech)

PUBLICATIONS

- APRIL 2017 ESTIMATION OF LOCALIZED IDEAL OXIMETRY SENSOR LAG VIA OXYGEN DESATURATION-
DISORDERED BREATHING EVENT CROSS-CORRELATION
SLEEP: Journal of Sleep and Sleep Disorders Research
Volume 40 (Supplement), A232
SNIDER, Brian R. and KAIN, Alexander
- MARCH 2016 CLASSIFICATION OF RESPIRATORY EFFORT AND DISORDERED BREATHING DURING SLEEP
FROM AUDIO AND PULSE OXIMETRY SIGNALS
**Proceedings of The 41st IEEE International Conference on Acoustics, Speech,
and Signal Processing**
SNIDER, Brian R. and KAIN, Alexander
- MARCH 2013 AUTOMATIC CLASSIFICATION OF BREATHING SOUNDS DURING SLEEP
**Proceedings of The 38th IEEE International Conference on Acoustics, Speech,
and Signal Processing**
SNIDER, Brian R. and KAIN, Alexander
- JUNE 2012 ADAPTIVE REDUCTION OF ADDITIVE NOISE FROM SLEEP BREATHING SOUNDS
Oregon Health & Science University
Technical Report CSLU-2012-001
SNIDER, Brian R. and KAIN, Alexander
- APRIL 2007 CORE DEVELOPMENTS ON THE COMPUTING FRONT
George Fox University Undergraduate Academic Journal
Volume 2 (Spring 2007), 70-75
SNIDER, Brian R.

MANUSCRIPTS IN PREPARATION

SLEEP SIGNAL PROCESSING FOR DISORDERED BREATHING EVENT DETECTION
AND SEVERITY ESTIMATION
Oregon Health & Science University
Ph. D. Dissertation
SNIDER, Brian R.

DEEP NEURAL NETWORK-BASED DISORDERED BREATHING EVENT DETECTION
AND FULL-NIGHT SEVERITY ESTIMATION
SLEEP: Journal of Sleep and Sleep Disorders Research
SNIDER, Brian R. and KAIN, Alexander

PRESENTATIONS

- (planned) SLEEP SIGNAL PROCESSING FOR DISORDERED BREATHING EVENT DETECTION AND SEVERITY ESTIMATION
Oregon Health & Science University – *Portland, Oregon*
Ph.D. Dissertation Defense
- 2017 ARTIFICIAL INTELLIGENCE: A GENTLE INTRODUCTION TO THE SINGULARITY
Science & Religion Club, George Fox University – *Newberg, Oregon*
- 2017 SLEEP SIGNAL PROCESSING FOR DISORDERED BREATHING EVENT DETECTION AND SEVERITY ESTIMATION
Oregon Health & Science University – *Portland, Oregon*
Ph.D. Thesis Proposal
- 2017 ESTIMATION OF LOCALIZED OXIMETRY SENSOR LAG VIA OXYGEN DESATURATION-DISORDERED BREATHING EVENT CROSS-CORRELATION
Meeting of Associated Professional Sleep Societies (SLEEP 2017) – *Boston, Massachusetts*
- 2016 THE QUANTIFIED SELF: HOLISTIC ASSESSMENT OF STUDENT QUALITY OF LIFE
George Fox University – *Newberg, Oregon*
- 2016 CLASSIFICATION OF RESPIRATORY EFFORT AND DISORDERED BREATHING DURING SLEEP FROM AUDIO AND PULSE OXIMETRY SIGNALS
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2016) – *Shanghai, China*
- 2014 FEATURE ANALYSIS OF POLYSOMNOGRAPHY SIGNALS
Oregon Health & Science University – *Portland, Oregon*
- 2014 STATISTICAL ANALYSIS OF CLINICAL POLYSOMNOGRAPHY
Oregon Health & Science University – *Portland, Oregon*
- 2013 AUTOMATIC CLASSIFICATION OF BREATHING SOUNDS DURING SLEEP
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2013) – *Vancouver, British Columbia, Canada*
- 2013 MINIMALLY-OBTRUSIVE RESPIRATORY CYCLE TRACKING FOR ASSESSING SLEEP-DISORDERED BREATHING SEVERITY
Oregon Health & Science University – *Portland, Oregon*
Ph. D. Qualifying Examination
- 2012 TRACKING BREATHING DURING SLEEP
Oregon Health & Science University – *Portland, Oregon*
- 2011 PREDICTION OF SLEEP BREATHING STATES FROM ACOUSTIC SIGNALS USING HIDDEN MARKOV MODELS
Oregon Health & Science University – *Portland, Oregon*

HONORS AND AWARDS

- 2009 INNOVATION AWARD: 2008 Q4 (\$50)
Huron Consulting Group – *Lake Oswego, Oregon*
- 2008 ASSOCIATE OF THE QUARTER: 2008 Q3 (\$25)
Huron Consulting Group – *Lake Oswego, Oregon*
- 2007 CCSE-NW STUDENT POSTER COMPETITION: 2ND PLACE (\$100)
Linfield College – *McMinnville, Oregon*
- 2003 HONORABLE DISCHARGE
United States Marine Corps
- 2003 IRAQ CAMPAIGN MEDAL
United States Marine Corps
- 2003 NAVY AND MARINE CORPS ACHIEVEMENT MEDAL (GOLD STAR IN LIEU OF 2ND AWARD)
United States Marine Corps
- 2003 SEA SERVICE DEPLOYMENT RIBBON (BRONZE STAR IN LIEU OF 2ND AWARD)
United States Marine Corps
- 2003 GLOBAL WAR ON TERRORISM EXPEDITIONARY MEDAL
United States Marine Corps
- 2002 HUMANITARIAN SERVICE MEDAL
United States Marine Corps
- 2002 PRESIDENTIAL UNIT CITATION
United States Marine Corps
- 2002 MERITORIOUS UNIT COMMENDATION
United States Marine Corps
- 2002 NAVY AND MARINE CORPS ACHIEVEMENT MEDAL
United States Marine Corps
- 2002 CERTIFICATE OF COMMENDATION
United States Marine Corps
- 2002 SEA SERVICE DEPLOYMENT RIBBON
United States Marine Corps
- 2002 NATIONAL DEFENSE SERVICE MEDAL
United States Marine Corps
- 2001 MERITORIOUS PROMOTION TO CORPORAL
United States Marine Corps
- 2001 MARINE CORPS ASSOCIATION CERTIFICATE OF ACHIEVEMENT
United States Marine Corps
- 2001 MERITORIOUS MAST
United States Marine Corps