

Curriculum Vitae

Bryce E. Hill

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Butte, MT 59701
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Education

2006-2010 University of Utah PhD in Electrical Engineering Expected June 2010

Dissertation: Tracheal breath sound filtering, apnea detection and apnea classification

Supervisor: Dwayne Westenskow PhD Bioengineering

Co-Supervisor: Douglas Christensen PhD Electrical Engineering

Project Synopsis:

- Adaptive filtering of tracheal sounds to eliminate background sounds
- Detections of periods of apnea from breath sounds to trigger alarm
- Classification of periods of apnea to determine source of apnea
- Comparison of recorded data to flow data

2006-2009 University of Utah MS in Electrical Engineering

Course based award

2003-2005 Montana State University BS in Electrical Engineering

Senior Design Project: Wireless trailer light design and testing

Supervisor: Andy Olson BS Electrical Engineering

1999-2003 University of Montana Pre-Engineering program

Research Experience

Anesthesiology Bioengineering Laboratory (University of Utah)

- Application of Expectation Maximization algorithm to find noise floor of an audio system
- Development of a Histogram based classifier
- Development of a tonality detector based on circular auto-correlation
- Adaptive filtering to minimize ambient noise leading to error

Space and Science Engineering Laboratory (Montana State University)

- Part selection and layout for a pico-satellite

Teaching Experience

2008 Private tutor for bioengineering students University of Utah

2005-2006 TA EE 250 Electrical Engineering for non-majors Montana State University
2004-2005 Private tutor for calculus students Montana State University
2002 TA Tutoring session for calculus students University of Montana

Abstracts Posters and Presentations

Providing Patient Safety during Sedation with Breath Monitoring Bryce Hill, Joseph Orr, Dwayne Westenskow University of Utah, Department of Anesthesiology, SLC UT, STA 2008 (Poster)

Respiratory Rate Monitoring during Conscious Sedation Using an Electronic Precordial Stethoscope. Dwayne Westenskow, Bryce Hill, Joseph Orr, Ken Johnson, University of Utah, Department of Anesthesiology, SLC UT, ASA 2007 (Poster)

Work Experience

2004-2006 Lattice Materials LLC Bozeman MT

Materials management in the production of silicon optics and targets

- Measurement of resistivity of bulk silicon ingots
- Production and measurement of optical witness pieces' transmission characteristics
- Preparation Cutting and Annealing of raw silicon material

2002-2003 Bear Claw Bakery Missoula MT

- Bakery item preparation and production

2003 Summer Palmer Carpentry Missoula, MT

- Trim Carpenter Assistant

2002 Summer Pyramid Mountain Lumber Seeley Lake MT

- Lumber sorting and moving off the dry chain

Academic Honors and Scholarships

2006-2010 Nasa Space Grant Fellow

2004-2005 Montana State University Academic Engineering Scholarship

1999-2002 Montana Board of Regents Tuition waiver

Non-Academic Honors and Achievements

1998 Received Eagle Scout Award from the Boy Scouts of America

Service

2007-2010 President of WoodCrest Home Owners Association

2007-2010 Member of High Council Salt Lake Riverside Stake (LDS Church)

1999-2001 Full time religious mission to the people of Austria (LDS Church)

Foreign Languages

Fluent in German