Nicolas Mathews

1507 Kepner Dr. Anchorage, AK 99504

### Education

• New Mexico Institute of Mining and Technology

Civil Engineering, Bachelor of Science, Graduated December 2015 Cumulative GPA: 3.08 GPA (Last 60 hours): 3.32

• Oregon State University

Geotechnical Engineering, Master of Science, Attending September 2016

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### Work Experience

- Taos Ski Valley, Guest Services December 2015-April 2016
  - Patrolled mountain, assisting guests and ski patrol
- New Mexico Tech Civil Engineering Department, Grader (Steel Design) September 2015-December 2015
  - Graded assignments for Dr. Claudia Wilson's steel design class
- Alcohol Safety Awareness Program at New Mexico Tech, Student Leader August 2014-December 2015
  - Prepared media for social outreach
  - Conducted an IRB approved focus group
  - Distributed an IRB approved survey on New Mexico Tech student lifestyles
  - Prepared in-depth summaries analyzing the effectiveness of the program
- Campbell Rhea Construction, LLC. May 2013-August 2015
  - Built custom cabinets, furniture, and homes for various clients
  - Participated in framing, but focused on trim and custom carpentry
  - Built custom pieces and did custom trim work in an award-winning home
- Habitat Management, Inc. May 2012-August 2012
  - Worked on reclamation projects in the Rocky Mountains
  - Learned about erosion control, PH regulation, and noxious weed management
  - Worked long hours in wet and harsh conditions

# • Engineering Internship: Chevron Mining, Inc. May 2010-August 2011

- Gathered data and performed studies to improve operations efficiency
- Surveyed, processed, and mapped mine reclamation with engineering team
- Applied problem solving techniques to create an automated volumetrics system
- Performed field reviews, mapped and tabulated results
- Wrote technical instructions
- Gave a presentation at the end of summer

## • Mary Conrad Center: Assisted Living Home September 2009 - December 2009

- Communicated and interacted with handicap residents

# • Sylvan Learning Center September 2008 – September 2009

 Assisted teachers, parents, and students during and in between tutoring sessions.

### Certifications

## AIARE Avalanche Training

American Institute for Avalanche Research and Education, Level 1 certification

#### ASCE Member

American Society of Civil Engineers

### Skills and Qualifications

### • Research Qualifications:

- A in graduate-level course: *ME 540: Computer Applications in Geotechnical Engineering*
- Created an image processing GUI in MATLAB for analyzing soil grains
- Used numerical modeling method (finite difference method) to create
  MATLAB code for analyzing seepage beneath a dam
- Created MATLAB codes to analyze CU triaxial tests and standard compaction tests
- Created working slope stability GUI in MATLAB (Bishop's Method)
- Limited experience with PLAXIS finite element software
- Strong technical and creative writing background
- Intuitive understanding of slope stability from backcountry skiing and avalanche studies

# • Leadership and Organizations:

- ASCE Concrete Canoe Design Team Team Captain and Design Manager
- Technical Presenter at 2015 ASCE Rocky Mountain Regional Conference
- President: New Mexico Tech Rock Climbing Club (2010-2012)
- Vice President: New Mexico Tech Biking Club (2012)
- Teacher's Assistant: NMT Rock Climbing Class (2011)
- Social Chairman: Mu Alpha Theta National Honors Math Society (2009)
- Member of FIRST Robotics Team 1544 at Bartlett High School (2008-2009)

## • Computer and Technical Skills:

- Proficient with AutoCAD, MS Office Suite, Adobe Photoshop and Premiere Pro, MATLAB
- Experience with Trimble Survey Equipment and software

### Volunteer Work:

- Special Olympics: Volunteer Coach (2009)
- PACE Peer Facilitation Program (2009)
- Alaska Visitor Industry Charity Walk Promoter (2009)
- Spirit of Youth Awards: Guest Peer Facilitator (2009)
- Co-coordinator: Annual Box Canyon Clean-Up (Socorro, New Mexico) (2010-2012)
- Co-teacher of Social Emotional Class (Anchorage School District, 2009)

<sup>\*</sup>References available upon request.