

## Curriculum Vitae

---

PERSONAL INFORMATION	Name Home address Telephone number Email address	Nathan Keil 369 Congress Street, Troy, NY 12180 +1 716 930 8350 keiln@rpi.edu
EDUCATION	<b>Rensselaer Polytechnic Institute</b> , Troy, NY <i>Architectural Acoustics, M.S.</i> – Thesis: “Polyphonic pitch perception in rooms using deep learning networks with data rendered in virtual acoustic environments” – Advisor: Prof. Jonas Braasch  <i>Applied Physics, B.S., Cum Laude</i> – Concentration: Architectural Acoustics – Minor: Music Technology	<b>May 2018 – May 2020</b>  <b>August 2014 – May 2018</b>
RELEVANT COURSEWORK	Ensemble Nonlinear, Introduction to Deep Learning, Sonics Research Lab I & II, Sonification Art & Science, Sound Recording & Production, Music and Technology I & II, Engineering Acoustics, Architectural Acoustics I & II, Aural Architecture, Psychoacoustics, Music Theory, Computer Music.	
LANGUAGES & SOFTWARE	<i>Proficient:</i> ChuckK, git, L <sup>A</sup> T <sub>E</sub> X, MATLAB, Max/MSP, Pro Tools, Pure Data, Python, TensorFlow. <i>Familiar:</i> C++, CSS, HTML	
PROFESSIONAL EXPERIENCE	<b>Adobe Research</b> , San Francisco, CA <i>Internship</i> Wrote a Python module for an Audio Processing Library in order to streamline the data preprocessing pipeline for easier audio machine learning research.  <b>Rensselaer Polytechnic Institute</b> , Troy, NY <i>Undergraduate Co-Op</i> Built an audiovisual system designed to network remote music performers to a MIDI ensemble in an immersive environment.	<b>August 2019 – November 2019</b>  <b>June 2017 – December 2017</b>
ADDITIONAL EXPERIENCE	<b>Acoustical Society of America RPI Student Chapter</b> , Troy, NY <i>President</i>  <b>Ground Zero Basement</b> , Troy, NY <i>Booking Manager</i> Booking/promoting and event organizing for a DIY music venue.  <b>RPI Orchestra</b> , Troy, NY <i>Principal Cellist</i>  <b>Society of Physics Students RPI Chapter</b> , Troy, NY <i>Vice President</i>	<b>September 2018 – May 2019</b>  <b>May 2018 – May 2019</b>  <b>September 2017 – May 2018</b>  <b>May 2016 – May 2017</b>

*Secretary/Treasurer*

**May 2015 – May 2016**

HONORS AND AWARDS      Acoustical Society of America Student Design Competition Commendation Award (USD 700, 2017).

PUBLICATIONS      **Conference**  
Keil, N., et al., “Polyphonic pitch perception in rooms using deep learning networks with data rendered in auditory virtual environments” *177th Meeting of the Acoustical Society of America*, 2019.  
  
Çakmak, C., Huang, M., Keil, N., “Designing immersive audiovisual environments for music performers with disabilities” *International Symposium on Adaptive Technology in Music and Art*, 2017 (submitted).

REFERENCES	<b>Prof. Jonas Braasch</b> RPI Troy, NY	<b>Prof. Rob Hamilton</b> RPI Troy, NY	<b>Juan-Pablo Caceres</b> Adobe Research San Francisco, CA
------------	---	--	--