

Larwan Berke

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Education

- 2015 → 2021 **Ph.D. Candidate in Computing and Information Sciences**, Rochester Institute of Technology (RIT) – Rochester, NY with 3.97/4.0 cumulative GPA.
- 2011 → 2014 **B.S. in Mathematics**, Gallaudet University (GU) – Washington, DC with 3.228 cumulative GPA and 3.654/4.0 major GPA

Employment History

- 2019 → 2021 » **Instructor**, *Department of Science, Technology, and Mathematics*, Gallaudet University – Washington, DC
- Taught six **Information Technology** courses in total (from 100-level to 400-level)
 - Collaborated with faculty to develop new courses, particularly for data science
- Summer 2019 » **Ph.D. Research Intern**. Microsoft Research: New England Lab – Cambridge, MA
- Twelve-week summer internship supervised by Dr. Bill Thies and Dr. Danielle Bragg
 - Worked with the team to brainstorm/implement technologies for sign language users
- 2017 → 2019 » **National Science Foundation (NSF) Graduate Research Fellow**. Rochester Institute of Technology – Rochester, NY
- NSF Grant No. #1746056, supervised by Dr. Matt Huenerfauth at the B. Thomas Golisano College of Computing & Information Sciences
 - Mentored several DHH Ph.D., graduate, and undergraduate students interested in HCI/CS/IT at RIT or the National Technical Institute for the Deaf (NTID)
- 2016 → 2019 » **ASL Expert for STEM**. Center for Research and Training (CRT) at The Learning Center for the Deaf (TLC) – Framingham, MA
- Created STEM materials in ASL for the *American Sign Language STEM Concept Learning Resource* (ASL-CLEAR) project
 - Provided feedback on the design and implementation of the website (<http://ASLClear.org>)
- 2016 → 2019 » **ASL Expert for Standardized Math Tests**. Measured Progress – Dover, NH
- Translated K-12 math test materials from English to ASL for the *Massachusetts Comprehensive Assessment System* (MCAS) exams
 - Worked with language experts from CRT and the MA dept. of Education to ensure quality
- 2016 → 2018 » **ASL Expert for Standardized Math Tests**. Tri-Lin Integrated Services – San Antonio, TX
- Translated K-12 math test materials from English to ASL for the *Smarter Balanced Assessment Consortium* (SBAC) exams
 - Also acted as a reviewer, submitting feedback on the fluency and quality of videos remotely
- Summer 2016 » **Graduate Assistant for NSF REU**. National Technical Institute for the Deaf – Rochester, NY
- NSF Grant No. #1460894, *Research Experiences for Undergraduates* (REU) 10-week summer program: *Accessible Multimodal Interfaces*, supervised by Dr. Raja Kushalnagar
 - Mentored students as part of their research into Automatic Speech Recognition technologies

Employment History (continued)

- 2015 → 2017 » **Graduate Research Assistant.** Rochester Institute of Technology – Rochester, NY
- NSF Grant No. #1462280: *Immediate Feedback to Support Learning American Sign Language through Multisensory Recognition*, supervised by Dr. Matt Huenerfauth
 - Supervised annotators whom analyzed video files to mark ASL linguistic features for correlation with Kinect data
- 2014 → 2016 » **ASL Expert for Standardized Math Tests.** Pearson – Austin, TX
- Translated K-12 math test materials from English to ASL for the *Partnership for Assessment of Readiness for College and Careers* (PARCC) project
 - Provided feedback on the web-based UI for DHH individuals taking the *PARCC Assessment* test
- Summer 2013 » **AccessComputing/DREU Research Internship.** College of Computing and Digital Media, DePaul University – Chicago, IL
- Contributed to the ASL digital interpreter project (supervised by Dr. Rosalee Wolfe and Ph.D. student Brent Shiver) with feedback and testing of models for the 3D avatar
 - Extended the Java-based ELAN tool with search optimizations and statistical analysis of N-grams
- Spring 2013 » **Director of Finances.** Student Body Government, Gallaudet University – Washington, DC
- Worked with the SBG Student Congress to plan and execute the unit fee budget
 - Arranged payroll and expenses/revenue for SBG and student organizations
- 2006 → 2008 » **Vice President of Engineering.** Viable, Inc. – Rockville, MD
- Led a team of ~15 engineers to develop the VPAD touchscreen hardware videophone
 - Managed a team of ~5 engineers to program the Viable Vision software videophone
 - Coordinated the work on the call center server to add features such as SIP, FCC compliance, and privacy
- 2005 → 2006 » **Senior Software Engineer.** Viable, Inc. – Rockville, MD
- Coded the H.323/H.263 Video Relay Service call center server in Perl with the Radvision H.323 stack in C
 - Worked with an Adobe Flash engineer to develop an API for the server to communicate with the VRS operators
- Summer 2005 » **Software Engineer.** Viable Technologies, Inc. – Potomac, MD
- Developed the transcription server in Perl, MySQL, and PHP communicating via a HTTP API for the operators
 - Programmed the agent GUI in Java, interfacing with the Dragon voice recognition SDK

Skills

- Languages – Native/Fluent in American Sign Language and written English
- Code – C#, Unity, Perl, C, C++, Java, MATLAB, Python, PHP, R, OpenGL/GLSL, SQL, sh, HTML, CSS and JavaScript
- Developing – Deep understanding of open source programming and the community, utilizes source code management tools such as Git, SVN, Request Tracker, and GitHub
- Clouds – Full lifecycle development, maintenance, and scaling of Linux/Microsoft servers and software
- Work – Outstanding work ethic with a desire to always improve, able to visualize the big picture and find solutions, experience managing a group, and ensuring that projects complete on time

Skills (continued)

🌟 Professional Certificates

- 2009 – US 2009/0174759 A1, United States Patent for Audio/video communications device ([USPTO](#))
- 2009 – US D600,242 S, United States Design Patent for Audio/video communications device ([USPTO](#))

🌟 Technical Certificates

- 2022 – IBM Blockchain Essentials V2, [IBM Badge](#)
- 2022 – Data Visualization with R, [IBM Badge](#)
- 2022 – R Essentials, [IBM Badge](#)
- 2022 – Watson and Cloud Foundations, [IBM Badge](#)
- 2022 – Introduction to Machine Learning with Sound, [IBM Badge](#)
- 2022 – App Modernization Basics, [IBM Badge](#)
- 2022 – Machine Learning Specialist – Associate, [IBM Badge](#)
- 2022 – Big Data Foundations – Level 1, [IBM Badge](#)
- 2022 – Unity Creative Core, [Unity Technologies Badge](#)
- 2022 – Unity Junior Programmer, [Unity Technologies Badge](#)
- 2022 – Unity Essentials Pathway, [Unity Technologies Badge](#)

🌟 Other Certifications

- 2015 – Human Subjects Research (HSR) Certification, Collaborative Institutional Training Initiative ([CITI Program](#))
- 2015 – Social and Behavioral Responsible Conduct of Research (RCR) Certification, Collaborative Institutional Training Initiative ([CITI Program](#))
- 2014 – Level 2 Tutor, College Reading & Learning Association ([CRLA](#))
- 2013 – Level 1 Tutor, College Reading & Learning Association ([CRLA](#))

External Funding, Scholarships, Awards

🏆 Fellowships and External Funding

- 2017 – Graduate Research Fellowship (NSF-GRF), National Science Foundation. September 2017 to August 2020. Funding: Tuition and stipend for three years, approximate value: \$138,000.
- 2020 – Travel Scholarship, Computing Research Association (CRA) Grad Cohort Workshop for Underrepresented Minorities + Persons with Disabilities (URMD) – Austin, TX. March 2020. Funding: Travel support, approximate value: \$2,000.
- 2019 – Travel Scholarship, Microsoft Research PhD Summit – Redmond, WA. October 2019. Funding: Travel support, approximate value: \$1,500.
- 2019 – Microsoft Dissertation Grant, Microsoft Research. June 2019. Funding: \$24,900.
- 2019 – Travel Scholarship, Google Scholars' Retreat – Sunnyvale, CA. June 2019. Funding: Travel support, approximate value: \$1,500.
- 2019 – Google Lime Scholarship, Lime Connect and Google. August 2019 to July 2020. Funding: \$10,000.
- 2019 – Travel Scholarship, Computing Research Association (CRA) Grad Cohort Workshop for Underrepresented Minorities + Persons with Disabilities (URMD) – Waikoloa, HI. March 2019. Funding: Travel support, approximate value: \$2,000.
- 2019 – Travel Scholarship, Broadening Participation in Data Mining (BPDM) workshop – Washington, DC. March 2019. Funding: Travel support, approximate value: \$1,000.
- 2018 – CHIME Mentoring/Travel Scholarship, ACM CHI conference – Montréal, Canada. April 2018. Funding: Conference registration and travel support, approximate value: \$2,000.

External Funding, Scholarships, Awards (continued)

- 2014 – **Code-A-Thon/Travel Scholarship**, ACM Richard Tapia Celebration of Diversity in Computing – Seattle, WA. February 2014. Funding: Conference registration and travel support, approximate value: \$1,500.
- 2013 – **Travel Scholarship**, ACM/AnitaB.org Grace Hopper Celebration – Minneapolis, MN. October 2013. Funding: Conference registration and travel support, approximate value: \$1,000.

Academic Scholarships

- 2018 – **NTID Foundation Scholarship**, National Technical Institute for the Deaf (2018 → 2019)
- 2015 – **Ph.D. Merit Scholarship**, Rochester Institute of Technology (2015 → 2017)
- 2012 – **T.R. Johnson Scholarship**, Gallaudet University
- 2011 – **Edward Miner Gallaudet Scholarship**, Gallaudet University

★ Awards

- 2017 – **Young Researcher Award**, 5th Heidelberg Laureate Forum (HLF) – Heidelberg, Germany
- 2017 – **Inducted**, The Honor Society of Phi Kappa Phi (ΦΚΦ) chapter – RIT
- 2016 – **Doctoral Consortium**, ACM ASSETS conference – Reno, NV
- 2014 – **Champion**, Google Student Games Capital City (GU team member) – Washington, DC
- 2011 – **Dean's List**, Gallaudet University (2011 → 2013)

Teaching and Mentoring Experience

Teaching

- Fall 2020 ➤ **Instructor**, *Department of Science, Technology, and Mathematics*, Gallaudet University – Washington, DC
 - **ITS-231 Computer Networking Essentials**: A comprehensive coverage of networking hardware, operating systems, topologies, protocols, design, implementation, security, and troubleshooting; along with research and communication skills necessary to succeed in the dynamic field of computer networking. **Book**: *Network+ Guide to Networks*, **ISBN-13**: 9781337569415.
 - **ITS-453 E-Commerce Application Development**: Provides the students with the prerequisite skills and knowledge to participate in the ever-growing electronic business sector. Topics include E-commerce concepts, emerging technologies related to E-commerce, business to business, business to consumers, consumers to consumers and global business transactions. **Book**: *Building Cross-Platform Mobile and Web Apps for Engineers and Scientists: An Active Learning Approach*, **ISBN-13**: 9781305638037.
- Spring 2020 ➤ **Instructor**, *Department of Science, Technology, and Mathematics*, Gallaudet University – Washington, DC
 - **ITS-110 Programming Fundamentals**: Students learn program logic, flow charting, and problem solving through analysis, development, basic debugging and testing procedures. Topics include variables, expressions, data types, functions, decisions, loops, and arrays. **Book**: *Fundamentals of Python: First Programs*, **ISBN-13**: 9781337560139.
 - **ITS-203 Operating Systems Essentials**: Provides the theory and technical information on popular operating systems, such as Windows, Mac OS, and UNIX/Linux platforms. Topics include operating system theory, installation, upgrading, configuring (operating system and hardware), file systems, security, hardware options, and storage, as well as resource sharing, network connectivity, maintenance, and troubleshooting. **Book**: *CompTIA A+ Core 2 Exam: Guide to Operating Systems and Security*, **ISBN-13**: 9780357108536.

Teaching and Mentoring Experience (continued)

- Fall 2019 ➤ **Instructor**, *Department of Science, Technology, and Mathematics*, Gallaudet University – Washington, DC
- **ITS-202 Computer Hardware Essentials**: Essential concepts in computer hardware with a focus on Personal Computers (PC). Students will learn the core components including the processor, motherboard, memory, video and sound adapters, storage devices, and power supplies. **Book**: *CompTIA A+ Core 1 Exam: Guide to Computing Infrastructure*, ISBN-13: 9780357108376.
 - **ITS-331 Computer Networking Essentials**: A comprehensive coverage of networking hardware, operating systems, topologies, protocols, design, implementation, security, and troubleshooting; along with research and communication skills necessary to succeed in the dynamic field of computer networking. **Book**: *Cisco Networking Essentials*, ISBN-13: 9781119092155.
- Summer 2018 ➤ **STEM Teacher**, Camp Mark Seven (CM7) – Old Forge, NY
- Instructed young DHH students with Dr. Christopher Kurz and Ph.D. candidate Barbara Spiecker
 - The one-week program included activities such as experiments, camping/hiking, engineering challenges, and presentations in ASL
- Fall 2013 ➤ **Special Tutor for Quantitative Reasoning Approach (GSR 104)**. Tutorial & Instructional Programs, Gallaudet University – Washington, DC
- Mentored students in one-on-one sessions to help them grasp abstract mathematical concepts
 - Presented scientific and quantitative approaches for the student to understand the natural world
- Spring 2013 ➤ **Supplemental Instruction Leader for Trigonometry (MAT 126)**. Tutorial & Instructional Programs, Gallaudet University – Washington, DC
- Led group interactive learning activities that integrated study strategies with course content
 - Modeled outstanding student behavior and successful academic practices during group sessions
- Fall 2012 ➤ **Tutor for Physics and Calculus (PHY 151 and MAT 150)**. Tutorial & Instructional Programs, Gallaudet University – Washington, DC
- Utilized my strong ASL skills to visualize problems and improve students' grades
 - Increased students' confidence by working on concepts and applying real-world situations

Peer Mentoring

- 2019 → Present ➤ **Abraham Glasser**, Ph.D. Student in Computing and Information Sciences (RIT)
- 2017 → Present ➤ **Matt Seita**, Ph.D. Student in Computing and Information Sciences (RIT)
- 2015 → Present ➤ **Noella Kolash**, Ph.D. Candidate in Computing and Information Sciences (RIT)
- 2015 → 2019 ➤ **Sushant Kaffle**, Ph.D. in Computing and Information Sciences (RIT), after graduation: Software Engineer at Google

Research Mentoring

- 2017 → 2019 ➤ **Peter Yeung**, MS in Human-Computer Interaction (RIT), after graduation: User Experience Architect at the National Geospatial-Intelligence Agency
- 2017 → 2019 ➤ **Abraham Glasser**, BS in Computer Science (RIT)
- 2016 → 2017 ➤ **Kasmira Patel**, MS in Human-Computer Interaction (RIT), after graduation: Digital Experience Design at Johnson & Johnson
- 2016 ➤ **Graduate Assistant**, NSF Research Experiences for Undergraduates summer program at RIT where I mentored four undergraduates: Paul Bayruns (Rowan University), Kevin Rathbun (Buffalo University), Daniel Saavedra (NTID), and Abigail Spring (NTID).

Teaching and Mentoring Experience (continued)

2015 → 2019 ➤ **Christopher Caulfield**, BS in Information Technology (RIT), dual Masters degree in Information Systems and Connective Media at Cornell Tech in NYC, after graduation: Incoming Program Manager at Microsoft

Service

🎓 Academic Service

- Fall 2020 ➤ **Co-chair**, Organizing Committee (Accessibility) for ACM ASSETS'20 – Online Event
- Fall 2019 ➤ **Case Study and Paper Reviewer**, ACM CHI Conference on Human Factors in Computing Systems (CHI'20)
- Summer 2019 ➤ **Article Reviewer**, ACM Transactions on Accessible Computing
- Fall 2018 ➤ **Paper Reviewer**, ACM CHI Conference on Human Factors in Computing Systems (CHI'19)
- Fall 2018 ➤ **Co-chair**, Organizing Committee (Accessibility) for ACM ASSETS'18 – Galway, Ireland, UK
- Summer 2018 ➤ **Paper Reviewer**, ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW'18)

👥 Community Outreach

- Fall 2019 ➤ **Participant**, *PhD Summit* hosted by Microsoft Research – Redmond, WA
- Summer 2019 ➤ **Participant**, *Ability Summit* hosted by Microsoft – Redmond, WA
- Spring 2019 ➤ **Participant**, *9th International Deaf Academics and Researchers Conference* – Reykjavík, Iceland
- Spring 2019 ➤ **Panelist**, *Science, Technology, and Mathematics Panel* hosted by Dr. Mohammad Obiedat – GU
- Spring 2019 ➤ **Panel Moderator**, *AI for Accessibility: Sign Language Recognition & Translation Workshop* hosted by Microsoft – Redmond, WA
- Summer 2018 ➤ **Panelist**, *NSF Research Experience for Undergraduates* hosted by Dr. Cecilia Ovesdotter Alm – RIT
- Fall 2017 ➤ **Panelist**, *NSF Graduate Research Fellowship Program* hosted by Dr. Caroline Solomon – GU
- Summer 2017 ➤ **Panelist**, *NSF Research Experience for Undergraduates* hosted by Dr. Cecilia Ovesdotter Alm – RIT
- Fall 2015 ➤ **Member**, ASL Club – NTID
- Summer 2014 ➤ **Captain**, *College Bowl* hosted by the National Association of the Deaf (GU team) – Atlanta, GA




👍 Affiliations and Memberships

- 2017 ➤ **ACM's Special Interest Group for Computer-Human Interaction (SIGCHI)**
- 2015 ➤ **ACM's Special Interest Group on Accessible Computing (SIGACCESS)**
- 2015 ➤ **Center for Accessibility and Inclusion Research (CAIR@RIT)**
- 2015 ➤ **Linguistic and Assistive Technologies Laboratory (LATLab@RIT)**
- 2013 ➤ **Association for Computing Machinery (ACM)**
- 2013 ➤ **The Alliance for Access to Computing Careers (AccessComputing)**
- 2013 ➤ **The Alliance for Students with Disabilities in STEM (AccessSTEM)**

Graduate-Level Courses Taken

- CSCI-610 at RIT 📖 **Foundations of Computer Graphics**, Dr. Warren Carithers
- CISC-820 at RIT 📖 **Quantitative Foundations**, Dr. Linwei Wang
- CISC-830 at RIT 📖 **Cyberinfrastructure Foundations**, Dr. Minseok Kwon
- CISC-863 at RIT 📖 **Statistical Machine Learning**, Dr. Rui Li
- ENGL-781 at RIT 📖 **Natural Language Processing**, Dr. Cecilia Ovesdotter Alm
- ENGL-784 at RIT 📖 **Spoken Language Processing**, Dr. Emily Prud'hommeaux

Graduate-Level Courses Taken (continued)

- HCIN-610 at RIT  **Foundations of HCI**, Dr. Matt Huenerfauth
HCIN-700 at RIT  **Current Topics in HCI**, Dr. Vicki Hanson
SWEN-610 at RIT  **Foundations of Software Engineering**, Dr. Daniel Krutz

Publications

Peer-Refereed Journal Articles

- [J.3] **Larwan Berke**, Matt Huenerfauth, and Kasmira Patel. “Design and Psychometric Evaluation of American Sign Language Translations of Usability Questionnaires”. In: *ACM Transactions on Accessible Computing (TACCESS)* 12.2 (June 2019), 6:1–6:43. doi: [10.1145/3314205](https://doi.org/10.1145/3314205).
- [J.2] Kevin Rathbun, **Larwan Berke**, Christopher Caulfield, Michael Stinson, and Matt Huenerfauth. “Eye Movements of Deaf and Hard of Hearing Viewers of Automatic Captions”. In: *Journal on Technology and Persons with Disabilities* 5 (2017), pp. 130–140. <http://hdl.handle.net/10211.3/190208>.
- [J.1] John McDonald, Rosalee Wolfe, Jerry Schnepf, Julie Hochgesang, Diana Gorman Jamrozik, Marie Stumbo, **Larwan Berke**, Melissa Bialek, and Farah Thomas. “An automated technique for real-time production of lifelike animations of American Sign Language”. In: *Universal Access in the Information Society (UAIS)* 15 (4 Nov. 2016), pp. 551–556. doi: [10.1007/s10209-015-0407-2](https://doi.org/10.1007/s10209-015-0407-2).

Peer-Refereed Conference Papers

- [C.10] **Larwan Berke**, William Thies, and Danielle Bragg. “Chat in the Hat: A Portable Interpreter for Sign Language Users”. In: *The 22nd International ACM SIGACCESS Conference on Computers and Accessibility*. ASSETS '20. Virtual Event, Greece: Association for Computing Machinery, Oct. 2020. doi: [10.1145/3373625.3417026](https://doi.org/10.1145/3373625.3417026).
- [C.9] Saad Hassan, **Larwan Berke**, Elahe Vahdani, Longlong Jing, Yingli Tian, and Matt Huenerfauth. “An Isolated-Signing RGBD Dataset of 100 American Sign Language Signs Produced by Fluent ASL Signers”. In: *Proceedings of the LREC2020 9th Workshop on the Representation and Processing of Sign Languages: Sign Language Resources in the Service of the Language Community, Technological Challenges and Application Perspectives*. Marseille, France: European Language Resources Association (ELRA), May 2020, pp. 89–94. <https://www.aclweb.org/anthology/2020.signlang-1.14>.
- [C.8] **Larwan Berke**, Matthew Seita, and Matt Huenerfauth. “Deaf and Hard-of-Hearing Users’ Prioritization of Genres of Online Video Content Requiring Accurate Captions”. In: *Proceedings of the 17th International Web for All Conference*. W4A '20. Taipei, Taiwan: Association for Computing Machinery, Apr. 2020. doi: [10.1145/3371300.3383337](https://doi.org/10.1145/3371300.3383337).
- [C.7] Danielle Bragg, Oscar Koller, Mary Bellard, **Larwan Berke**, Patrick Boudreault, Annelies Braffort, Naomi Caselli, Matt Huenerfauth, Hernisa Kacorri, Tessa Verhoef, Christian Vogler, and Meredith Ringel Morris. “Sign Language Recognition, Generation, and Translation: An Interdisciplinary Perspective”. In: *Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility*. ASSETS'19. [🏆 **Best Paper Winner – top 1%, 26% paper-acceptance rate**]. New York, NY, USA: Association for Computing Machinery (ACM), Oct. 2019. doi: [10.1145/3308561.3353774](https://doi.org/10.1145/3308561.3353774).
- [C.6] **Larwan Berke**, Matt Seita, Khaled Albusays, and Matt Huenerfauth. “Preferred Appearance of Captions Generated by Automatic Speech Recognition for Deaf and Hard-of-Hearing Viewers”. In: *Proceedings of the 2019 ACM CHI Conference on Human Factors in Computing Systems: Extended Abstracts*. CHI'19 EA. New York, NY, USA: Association for Computing Machinery (ACM), May 2019. doi: [10.1145/3290607.3312921](https://doi.org/10.1145/3290607.3312921).
- [C.5] Sedeeq Al-khazraji, **Larwan Berke**, Sushant Kafe, Peter Yeung, and Matt Huenerfauth. “Modeling the Speed and Timing of American Sign Language to Generate Realistic Animations”. In: *Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility*. ASSETS'18. [🏆 **Best Paper Winner – top 1%, 26% paper-acceptance rate**]. New York, NY, USA: Association for Computing Machinery (ACM), Oct. 2018. doi: [10.1145/3234695.3236356](https://doi.org/10.1145/3234695.3236356).

- [C.4] **Larwan Berke**, Sushant Kafle, and Matt Huenerfauth. “Methods for Evaluation of Imperfect Captioning Tools by Deaf or Hard-of-Hearing Users at Different Reading Literacy Levels”. In: *Proceedings of the 2018 ACM CHI Conference on Human Factors in Computing Systems*. CHI’18. [🏆 **Best Paper Honorable Mention – top 5%, 25% paper-acceptance rate**]. New York, NY, USA: Association for Computing Machinery (ACM), Apr. 2018, 91:1–91:12. doi: [10.1145/3173574.3173665](https://doi.org/10.1145/3173574.3173665).
- [C.3] **Larwan Berke**, Christopher Caulfield, and Matt Huenerfauth. “Deaf and Hard-of-Hearing Perspectives on Imperfect Automatic Speech Recognition for Captioning One-on-One Meetings”. In: *Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility*. ASSETS’17. New York, NY, USA: Association for Computing Machinery (ACM), Oct. 2017, pp. 155–164. doi: [10.1145/3132525.3132541](https://doi.org/10.1145/3132525.3132541).
- [C.2] Matt Huenerfauth, Kasmira Patel, and **Larwan Berke**. “Design and Psychometric Evaluation of an American Sign Language Translation of the System Usability Scale”. In: *Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility*. ASSETS’17. [🏆 **Best Paper Honorable Mention – top 5%, 26% paper-acceptance rate**]. New York, NY, USA: Association for Computing Machinery (ACM), Oct. 2017, pp. 175–184. doi: [10.1145/3132525.3132540](https://doi.org/10.1145/3132525.3132540).
- [C.1] Rosalee Wolfe, John McDonald, **Larwan Berke**, and Marie Stumbo. “Expanding n-gram analytics in ELAN and a case study for sign synthesis”. In: *Ninth International Conference on Language Resources and Evaluation*. LREC 2014. Reykjavik, Iceland: European Language Resources Association (ELRA), May 2014. <http://www.lrec-conf.org/proceedings/lrec2014/summaries/6.html>.

📁 Other Publications

- [O.8] **Larwan Berke**. *Proposed Dissertation: “Automatic Speech Recognition as a Captioning Tool: Enabling Greater Accessibility for Users who are Deaf or Hard-of-Hearing”*. Rochester Institute of Technology (RIT): B. Thomas Golisano College of Computing & Information Sciences. **Advisor:** Dr. Matt Huenerfauth (Professor at RIT). **Committee:** Dr. Vicki Hanson (Professor Emeritus at RIT), Dr. Kristen Shinohara (Assistant Professor at RIT), and Dr. Raja Kushalnagar (Associate Professor at GU).
- [O.7] Sushant Kafle, Abraham Glasser, Sedeeq Al-khazraji, **Larwan Berke**, Matthew Seita, and Matt Huenerfauth. “Artificial Intelligence Fairness in the Context of Accessibility Research on Intelligent Systems for People Who Are Deaf or Hard of Hearing”. In: *SIGACCESS Accessibility and Computing* 125 (Mar. 2020). [ACM ASSETS 2019 Workshop on AI Fairness for People with Disabilities position paper (<http://www.sigaccess.org/newsletter/2019-10/introworkshop.html>)]. doi: [10.1145/3386296.3386300](https://doi.org/10.1145/3386296.3386300).
- [O.6] Souad Baowidan, Natalie Ningshan Guo, Sarah Johnson, Robyn Moncrief, and **Larwan Berke**. *A New N-gram Analytics Tool in ELAN and its Application to Improve Automatic Fingerspelling Generation*. DePaul School Of Computing Research Symposium. May 2017. https://scds.cdm.depaul.edu/wp-content/uploads/2017/05/SOCRS_2017_paper_10.pdf.
- [O.5] **Larwan Berke**. “Displaying Confidence from Imperfect Automatic Speech Recognition for Captioning”. In: *ACM SIGACCESS Accessibility and Computing* 117 (Jan. 2017). [Doctoral Consortium at ASSETS ’16], pp. 14–18. doi: [10.1145/3051519.3051522](https://doi.org/10.1145/3051519.3051522).
- [O.4] John McDonald, Rosalee Wolfe, Jerry Schnepp, Julie Hochgesang, Diana Gorman Jamrozik, Marie Stumbo, and **Larwan Berke**. “Toward Lifelike Animations of ASL: Achieving Natural Motions from the Movement-Hold Model”. In: *International Workshops and Symposia on Sign Language Translation and Avatar Technology (SLTAT)*. Chicago, IL, USA, Oct. 2013. <http://sltat.cs.depaul.edu/slides/McDonald.pdf>.
- [O.3] Marie Stumbo, **Larwan Berke**, Melissa Bialek, and Farah Thomas. “Toward a Real-Time ASL Avatar Utilizing Linguistic Principles for Nonmanual Signals”. In: *International Workshops and Symposia on Sign Language Translation and Avatar Technology (SLTAT)*. Chicago, IL, USA, Oct. 2013. <http://sltat.cs.depaul.edu/slides/Stumbo.pdf>.
- [O.2] **Larwan Berke**. *Empowering ELAN with N-gram Analytics for Corpora*. Distributed Research Experiences for Undergraduates (DREU). Aug. 2013. http://dreuarchive.cra.org/2013/Berke/images/DREU_Final_Report.pdf.
- [O.1] **Larwan Berke**. *Larwan Berke’s DREU Experiences: ASL Research Project*. 2013. <http://dreuarchive.cra.org/2013/Berke/index.html>.

Poster Presentations

- [P.14] **Larwan Berke**. *Preferences and Requirements of Deaf and Hard-of-Hearing Users for Captions Generated via Automatic Speech Recognition*. Microsoft Research PhD Summit. Oct. 2019.
- [P.13] **Larwan Berke**. *Preferences and Requirements of Deaf and Hard-of-Hearing Users for Captions Generated via Automatic Speech Recognition*. NTID Student Research Fair. Apr. 2019.
- [P.12] **Larwan Berke**, Matt Seita, Khaled Albusays, and Matt Huenerfauth. *Preferred Appearance of Captions Generated by Automatic Speech Recognition for Deaf and Hard-of-Hearing Viewers*. NTID Student Research Fair. Apr. 2019. https://people.rit.edu/lwb2627/files/CHI_2019-BerkeEtAl.pdf.
- [P.11] **Larwan Berke**. *Preferences and Requirements of Deaf and Hard-of-Hearing Users for Captions Generated via Automatic Speech Recognition*. Computing Research Association (CRA) Grad Cohort Workshop for Underrepresented Minorities + Persons with Disabilities (URMD). Mar. 2019. https://people.rit.edu/lwb2627/files/AI_GCCIS_2018-BerkeEtAl.pdf.
- [P.10] **Larwan Berke**, Matt Seita, Abraham Glasser, Sushant Kafle, and Matt Huenerfauth. *Preferences and Requirements of Deaf and Hard-of-Hearing Users for Captions Generated through Automatic Speech Recognition*. AI@GCCIS: Golisano College Research & Innovation Showcase. Oct. 2018. https://people.rit.edu/lwb2627/files/AI_GCCIS_2018-BerkeEtAl.pdf.
- [P.9] Sedeeq Al-khazraji, **Larwan Berke**, Sushant Kafle, Peter Yeung, and Matt Huenerfauth. *Using Data-Driven Approach for Modeling Timing Parameters of American Sign Language*. AI@GCCIS: Golisano College Research & Innovation Showcase. Oct. 2018. https://people.rit.edu/lwb2627/files/AI_GCCIS_2018-Al-KhazrajiEtAl.pdf.
- [P.8] Matt Seita, **Larwan Berke**, Sushant Kafle, Sedeeq Al-khazraji, and Matt Huenerfauth. *Automatic Captioning Technologies to Support Small-Group Communication between People who are Deaf and Hard-of-Hearing and their Hearing Colleagues*. AI@GCCIS: Golisano College Research & Innovation Showcase. Oct. 2018. https://people.rit.edu/lwb2627/files/AI_GCCIS_2018-SeitaEtAl.pdf.
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Outreach / Press

Invited Talks

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- [T.4] **Larwan Berke.** *Ask Me: Larwan Berke.* NTID Student Life Team. Jan. 2019.
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- [T.3] **Larwan Berke.** *Larwan Berke's Life: Tech What?* ASL Lecture Series at NTID. Jan. 2019.
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- [T.2] **Larwan Berke.** *How I Became a PhD Student: Larwan Berke's Life.* Research Experiences for Undergraduates (REU) at Gallaudet University. June 2018.
- [T.1] **Larwan Berke,** Sushant Kafle, Christopher Caulfield, Matt Huenerfauth, and Michael Stinson. *Making the Best of Imperfect Automatic Speech Recognition for Captioning One-on-One Meetings.* NTID Scholarship Symposium at RIT. Jan. 2017. http://www.ntid.rit.edu/sites/default/files/pd/Symposium_2017/LBerke_MHuenerfauth_1300_1140.pdf.

Press and Blog Mentions

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