CAROL NEIDLE   August 8, 2023

Boston University   e-mail: carol@bu.edu
CAS Linguistics Department   URL: https://www.bu.edu/asllrp/carol.html
621 Commonwealth Avenue   office phone number: (617) 353-6218
Boston, MA 02215

EDUCATION

Ph.D. in Linguistics, 1983; Massachusetts Institute of Technology (1978–1982).
   Dissertation title: *The Role of Case in Russian Syntax*. Dissertation supervisor: Joan Bresnan

M.A. in French, 1978; Middlebury College French School (summers of 1973–1976).
   (Although all requirements were fulfilled in 1976, the degree could not be awarded until I received my B.A. in 1978.)

B.A., *magna cum laude,* with Distinction in Linguistics, 1978; Yale College (1974–1978).

PROFESSIONAL EXPERIENCE

Boston University:

Professor *Emerita* of Linguistics, July 2023 – present.
Professor of French & Linguistics, 2001 – June 2023.
Chair of the Linguistics Department (established 7/2018), 2018 to 2020.
Director the Linguistics Program (established 7/2015), 2015 to 2018.
Head of the Linguistics Section of the Department of Modern Foreign
   Languages (later: Department of Romance Studies), 1985 to 2015.
Director of the interdisciplinary Ph.D. Program in Applied Linguistics
   in the Graduate School (established 1/1988), 1988 to 1994.
Faculty adviser for the Boston University Conferences on Language
   Development, 1988–1994.

Sabbatical years
1996–97, 2004, 2011–2012, 2020–21
2022–23

Conducting research on ASL syntax and computer–based sign language
recognition from video; development of annotation software and
linguistically annotated video corpora, all shared on the Web -- partially
funded by the National Science Foundation

1989–1990

University of Trondheim,
Trondheim, Norway

Visiting Scholar, August–November, 1989; worked with Trondheim
   Linguistic Lexicon Project (TROLL)

Xerox, Palo Alto Research
Center, Palo Alto, CA

Consultant, December 1989–May 1990; worked with Annie Zaenen and
   Lauri Karttunen *et al.* on two-level lexicon for French; produced rules
   for INFL (French verbal system). [This morphological analyzer for
   French, after some revisions, became an Inxight product.]

Stanford University, Center for the
Study of Language and Information

Visiting Scholar, December 1989–May 1990.

National Foreign Language
Center, Washington, DC

Research Fellow, June–July 1990.

Boston University:

Associate Professor of French & Linguistics (with tenure), 1987–2001.
Assistant Professor of French & Linguistics, 1982–1987.

Middlebury College French School:

Faculty Member, summers of 1983, 1985, 1986, 1987, 1988.

CALICO New Technologies Workshop:

Master Teacher, July 1988.

Massachusetts Institute of Technology:

Instructor of French, 1980–1982.

Harvard University:

Teaching Assistant, French, summer of 1980.

Northeastern University:

Instructor, English as a Second Language, winter of 1980.

Yale University:

Instructor, English as a Second Language, Summer Institute, 1978, 1979.

Merck, Sharp, Dohme et Chibret, Paris:

Translator and Teacher of English, summer of 1977.

PUBLICATIONS

Books

Carol Neidle, Judy Kegl, Dawn MacLaughlin, Benjamin Bahan, and Robert G. Lee [2000]
The Syntax of American Sign Language: Functional Categories and Hierarchical Structure.
Cambridge, MA: MIT Press. ISBN: 9780262512213.

Carol Neidle [1988] *The Role of Case in Russian Syntax*. Dordrecht: Kluwer. doi:10.1007/978-94-009-2703-2.

Carol Neidle and Rafael A. Núñez Cedeño (eds.) [1987] *Linguistic Studies in Romance Languages*.
Dordrecht: Foris Publications. ISBN:978-3-11-084630-0.

Articles

Carol Neidle, Augustine Opoku, and Dimitris Metaxas [2022] ASL Video Corpora & Sign Bank: Resources
Available through the American Sign Language Linguistic Research Project (ASLLRP).
arXiv:2201.07899 [cs.CL], 1–20. https://arxiv.org/abs/2201.07899.

Jingjing Liu, Bo Liu, Shaoting Zhang, Fei Yang, Peng Yang, Dimitris N. Metaxas, and Carol Neidle [2014]
Non-manual Grammatical Marker Recognition based on Multi-scale Spatio-temporal Analysis of Head Pose
and Facial Expressions. *Image and Vision Computing: Best of Automatic Face and Gesture Recognition 2013.
Volume 32, Issue 10*, October 2014, Pages 671–681. doi:10.1016/j.imavis.2014.02.009.

Gabriel Tsechpenakis, Dimitris Metaxas, and Carol Neidle [2006] Learning-based Dynamic Coupling of Discrete
and Continuous Trackers. *Computer Vision and Image Understanding 104* (2–3), 140–156, Nov/Dec 2006.
doi: 10.1016/j.cviu.2006.07.009.

Carol Neidle [2003] Language across modalities: ASL focus and question constructions. *Linguistic Variation
Yearbook 2,* 69–96. doi: 10.1075/livy.2.05nei.

Fran Conlin, Paul Hagstrom, and Carol Neidle [2003] A particle of indefiniteness in American Sign Language.
Linguistic Discovery 2. http://journals.dartmouth.edu/cgi-bin/WebObjects/Journals.woa/1/xmlpage/1/article/142/.
doi: 10.1349/PS1.1537-0852.A.142.

Carol Neidle [2002] SignStream™: A Database Tool for Research on Visual-Gestural Language.
*Sign Language & Linguistics 4:*1/2, 203–214. doi:10.1075/sll.4.12.14nei.

Carol Neidle, Stan Sclaroff, and Vassilis Athitsos [2002] SignStream™: A Tool for Linguistic and Computer Vision
Research on Visual-Gestural Language Data. *Behavior Research Methods, Instruments, and Computers*. *33:*3,
311–320. [Journal discontinued in 2004. Continued by Behavior Research Methods (1554-351X).]

Dawn MacLaughlin, Carol Neidle, Benjamin Bahan, and Robert G. Lee [2000] Morphological Inflections and
Syntactic Representations of Person and Number in ASL. In M. Blondel and L. Tuller (eds.), *Recherches
linguistiques de Vincennes 29 : Langage et surdité*, 73–100. http://rlv.revues.org/1199. doi: 10.4000/rlv.1199.

Benjamin Bahan, Judy Kegl, Robert G. Lee, Dawn MacLaughlin, and Carol Neidle [2000] The Licensing of
Null Arguments in American Sign Language. *Linguistic Inquiry 31:*1, 1–27. doi:10.1162/002438900554271.

Carol Neidle, Dawn MacLaughlin, Robert G. Lee, Benjamin Bahan, and Judy Kegl [1998] The Rightward Analysis
of Wh–movement in ASL: A Reply to Petronio and Lillo-Martin 1997. *Language 74:*4, 819–831.
doi:10.2307/417004.

PUBLICATIONS (cont.)

Carol Neidle, Benjamin Bahan, Dawn MacLaughlin, Robert G. Lee, and Judy Kegl [1998] Realizations of Syntactic Agreement in American Sign Language: Similarities between the Clause and the Noun Phrase. *Studia Linguistica 52:*3, 191–226. doi: 10.1111/1467-9582.00034

Carol Neidle and Dawn MacLaughlin [1998] SignStream™: A Tool for Linguistic Research on Signed Languages. *Sign Language & Linguistics 1:*1, 111–114. doi: 10.1075/sll.1.1.14nei.

Judy Kegl, Carol Neidle, Dawn MacLaughlin, Jack Hoza, and Benjamin Bahan [1996] The Case for Grammar, Order and Position in ASL: A Reply to Bouchard and Dubuisson. *Sign Language Studies 90,* 1996, 1–23. doi:19.1353/sls.1996.0017.

James Shepard-Kegl, Carol Neidle, and Judy Kegl [1995] Legal Ramifications of an Incorrect Analysis of Tense in ASL. In *Journal of Interpretation 7:*1, 53–71.

Debra Aarons, Benjamin Bahan, Judy Kegl, and Carol Neidle [1992] Clausal Structure and a Tier for Grammatical Marking in American Sign Language. *Nordic Journal of Linguistics, 15:*2, 103–142. doi: 10.1017/S0332586500002560.

Book chapters

Carol Neidle and Joan Cottle Poole Nash [2015] American Sign Language. In Julie Bakken Jepsen, Goedele De Clerck, Sam Lutalo-Kiingi, and William B. McGregor (eds.), *The World's Sign Languages*. Mouton DeGruyter, 31–70. doi:10.1515/9781614518174–007.

Carol Neidle and Joan Nash [2012] Noun Phrase. In Roland Pfau, Markus Steinbach, and Bencie Woll (eds.), *Sign Language: An International Handbook* (in the *Handbooks of Linguistics and Communication Science* series). Berlin/New York: Mouton de Gruyter. doi:0.1515/9783110261325.265.

Sandro Zucchi, Carol Neidle, Carlo Geraci, Quinn Duffy, and Carlo Cecchetto [2010] Functional Markers in Sign Languages. In Diane Brentari (ed.), *Sign Languages: A Cambridge Language Survey*. Cambridge, UK: Cambridge University Press, pp. 197–224 & 602–604. doi: 10.1017/CBO9780511712203.011.

Carol Neidle [2009] Now we see it, now we don't: Agreement puzzles in ASL. In Linda Uyechi and Lian Hee Wee (eds.), *Reality Exploration and Discovery: Pattern Interaction in Language & Life*. Stanford, CA: CSLI Publications.

Carol Neidle and Robert G. Lee [2008] WELL, "WHAT" is it? Discovery of a new particle in ASL. In Kristin Lindgren, Doreen DeLuca, and Donna Jo Napoli (eds.), *Signs and Voices*. Washington, DC: Gallaudet University Press. 100–116.

Gabriel Tschepenakis, Dimitris Metaxas, and Carol Neidle [2008] Combining Discrete and Continuous 3D Trackers. In Bodo Rosenhahn, Reinhard Klette, and Dimitris Metaxas (eds.), *Understanding, Modeling, Capture and Animation Series: Computational Imaging and Vision, Vol. 36,* 133–158. doi:10.1007/978-1-4020-6693-1_6.

Carol Neidle [2007] Interplay between manual and non-manual expressions in American Sign Language (ASL). In Annie Zaenen, Jane Simpson, Tracy Holloway King, Jane Grimshaw, Joan Maling, and Chris Manning (eds.), *Architectures, Rules, and Preferences: Variations on Themes of Joan Bresnan*. Stanford, CA: CSLI Publications, 127–138.

.

PUBLICATIONS (cont.)

Carol Neidle and Robert G. Lee [2006] Syntactic Agreement across Language Modalities: American Sign Language. In João Costa and Maria Cristina Figueiredo Silva (eds.), *Studies on Agreement*. John Benjamins, 203–222. doi:10.1075/la.86.10nei

Carol Neidle and Dawn MacLaughlin [2002] The Distribution of Functional Projections in ASL: Evidence from Overt Expressions of Syntactic Features. In G. Cinque (ed.), *Functional Structure in the DP and IP: The Cartography of Syntactic Structures, Vol. 1,* Oxford University Press, 195–224.

Carol Neidle, Judy Kegl, Benjamin Bahan, Debra Aarons, and Dawn MacLaughlin [1997] Rightward Wh–Movement in American Sign Language. In Dorothee Beerman, David LeBlanc, and Henk van Riemsdijk (eds.), *Rightward Movement*. Amsterdam: John Benjamins, 247–278.

Debra Aarons, Benjamin Bahan, Judy Kegl, and Carol Neidle [1995] Lexical Tense Markers in American Sign Language. In Karen Emmorey and Judy Reilly (eds.), *Language, Gesture, and Space*. Hillsdale, NJ: Lawrence Erlbaum, 225–253.

Debra Aarons, Benjamin Bahan, Judy Kegl, and Carol Neidle [1994] Subjects and Agreement in American Sign Language. In Inger Ahlgren, Brita Bergman, and Mary Brennan (eds.), *Perspectives on Sign Language Structure*. Durham, England: International Sign Linguistics Association, 13–28.

Carol Neidle [1982] Case Agreement in Russian. Chapter 6 in Joan Bresnan (ed.), *The Mental Representation of Grammatical Relations*. Cambridge: MIT Press, 391–426.

Conference proceedings

Saad Hassan, Sooyeon Lee, Dimitris Metaxas, Carol Neidle, and Matt Huenerfauth [2022] Understanding ASL Learners' Preferences for a Sign Language Recording and Automatic Feedback System to Support Self-Study. *Proceedings of ASSETS 2022*.

BU Open Access: https://open.bu.edu/handle/2144/45440

Konstantinos M. Dafnis, Evgenia Chroni, Carol Neidle, and Dimitris Metaxas [2022] Bidirectional Skeleton-Based Isolated Sign Recognition using Graph Convolution Networks. *Proceedings of LREC 2022,* Marseille, France, June 2022.

BU Open Access: https://open.bu.edu/handle/2144/45154

Konstantinos M. Dafnis, Evgenia Chroni, Carol Neidle, and Dimitris Metaxas [2022] Isolated Sign Recognition using ASL Datasets with Consistent Text-based Gloss Labeling and Curriculum Learning. *Proceedings of the Seventh International Workshop on Sign Language Translation and Avatar Technology: The Junction of the Visual and the Textual (SLTAT 2022)*. LREC, Marseille, France, June 2022.

BU Open Access: https://open.bu.edu/handle/2144/45153

Carol Neidle, Augustine Opoku, Carey Ballard, Konstantinos M. Dafnis, Evgenia Chroni, and Dimitris Metaxas [2022] Resources for Computer-Based Sign Recognition from Video, and the Criticality of Consistency of Gloss Labeling across Multiple Large ASL Video Corpora. *Proceedings of the 10th Workshop on the Representation and Processing of Sign Languages: Multilingual Sign Language Resources*. LREC, Marseille, France, June 2022, 165–172.

BU Open Access: https://open.bu.edu/handle/2144/45152

Publications (cont.)

Zhaoyang Xia, Yuxiao Chen, Qilong Zhangli, Matt Huenerfauth, Carol Neidle, and Dimitris Metaxas [2022] Sign Language Video Anonymization. *Proceedings of the 10th Workshop on the Representation and Processing of Sign Languages: Multilingual Sign Language Resources*. LREC, Marseille, France, June 2022.

   BU Open Access: https://open.bu.edu/handle/2144/45151

Sooyeon Lee, Abraham Glasser, Becca Dingman, Zhaoyang Xia, Dimitris Metaxas, Carol Neidle, and Matt Huenerfauth [2021] American Sign Language Video Anonymization to Support Online Participation of Deaf and Hard of Hearing Users. *ASSETS 2021 (the 23rd International ACM SIGACCESS Conference on Computers and Accessibility)*. October 18–22, 2021. **Nominated for best paper award.**

   BU Open Access: https://hdl.handle.net/2144/43545

Dimitris Metaxas, Mark Dilsizian, and Carol Neidle [2018] Linguistically-driven Framework for Computationally Efficient and Scalable Sign Recognition. *LREC 2018,* Miyazaki, Japan, May 2018.

   BU Open Access: https://open.bu.edu/handle/2144/30048

Carol Neidle, Augustine Opoku, Gregory Dimitriadis, and Dimitris Metaxas [2018] NEW Shared & Interconnected ASL Resources: SignStream® 3 Software; DAI 2 for Web Access to Linguistically Annotated Video Corpora; and a Sign Bank. *Eighth Workshop on the Representation and Processing of Sign Languages: Involving the Language Community*. *LREC 2018,* Miyazaki, Japan, May 12, 2018.

   BU Open Access: https://open.bu.edu/handle/2144/30047

Dimitris Metaxas, Mark Dilsizian, and Carol Neidle, Scalable ASL Sign Recognition using Model-based Machine Learning and Linguistically Annotated Corpora [2018] Eighth Workshop on the Representation and Processing of Sign Languages: Involving the Language Community. LREC 2018, Miyazaki, Japan, May 12, 2018.

   BU Open Access: https://open.bu.edu/handle/2144/30049

Polina Yanovich, Carol Neidle, and Dimitris Metaxas [2016] Detection of Major ASL Sign Types in Continuous Signing for ASL Recognition. *LREC (Language Resources and Evaluation Conference) 2016,* May 23–30, 2016. Portorož, Slovenia, pp. 3067–3073.

   BU Open Access: https://hdl.handle.net/2144/27492

Hernisa Kacorri, Ali Raza Syed, Matt Huenerfauth, and Carol Neidle [2016] Centroid-Based Exemplar Selection of ASL Non-Manual Expressions using Multidimensional Dynamic Time Warping and MPEG4 Features. *7th Workshop on the Representation and Processing of Sign Languages: Corpus Mining, LREC 2016*, Portorož (Slovenia), May 28, 2016, pp. 105–110.

   BU Open Access: https://hdl.handle.net/2144/27493

Mark Dilsizian, Zhiqiang Tang, Dimitris Metaxas, Matt Huenerfauth, and Carol Neidle [2016] The Importance of 3D Motion Trajectories for Computer-based Sign Recognition. *7th Workshop on the Representation and Processing of Sign Languages: Corpus Mining, LREC 2016*, Portorož (Slovenia), May 28, 2016, pp. 53–58.

   BU Open Access: https://open.bu.edu/handle/2144/27494

PUBLICATIONS (cont.)

Carol Neidle, Jingjing Liu, Bo Liu, Xi Peng, Christian Vogler, and Dimitris Metaxas [2014] Computer-based tracking, analysis, and visualization of linguistically significant non-manual events in American Sign Language (ASL). *Sixth Workshop on the Representation of Signed Languages: Beyond the Manual Channel. Proceedings of the LREC (Language Resources and Evaluation Conference) 2014,* Reykjavik, Iceland, May 31, 2014.

Bo Liu, Jingjing Liu, Dimitris Metaxas and Carol Neidle [2014] 3D Face Tracking and Multi-Scale, Spatio-temporal Analysis of Linguistically Significant Facial Expressions and Head Positions in ASL. *LREC (Language Resources and Evaluation Conference) 2014,* Reykjavik, Iceland, May 28–30, 2014, 4512–4518.

Mark Dilsizian, Polina Yanovich, Shu Wang, Carol Neidle and Dimitris Metaxas [2014] New Framework for Sign Recognition based on 3D Handshape Identification and Linguistic Modeling. *LREC (Language Resources and Evaluation Conference) 2014,* Reykjavik, Iceland, May 28–30, 2014.

Jingjing Liu, Bo Liu, Shaoting Zhang, Fei Yang, Peng Yang, Dimitris N. Metaxas, and Carol Neidle [2013] Recognizing Eyebrow and periodic Head Gestures Using CRFs for Non-Manual Marker Detection in ASL. *Proceedings of the 10th IEEE International Conference on Automatic Face and Gesture Recognition,* Shanghai, China, April 2013. [**Best of *Face & Gesture* Award**, given for 13 out of ~300 papers.]

Carol Neidle and Christian Vogler [2012] A New Web Interface to Facilitate Access to Corpora: Development of the ASLLRP Data Access Interface. *Proceedings of the 5th Workshop on the Representation and Processing of Sign Languages: Interactions between Corpus and Lexicon.* LREC 2012, Istanbul, Turkey, May 2012, 137–142.

   BU Open Access: https://hdl.handle.net/2144/31886

Carol Neidle, Ashwin Thangali, and Stan Sclaroff [2012] Challenges in the Development of the American Sign Language Lexicon Video Dataset (ASLLVD) Corpus. *Proceedings of the 5th Workshop on the Representation and Processing of Sign Languages: Interactions between Corpus and Lexicon.* LREC 2012, Istanbul, Turkey, May 2012, 143–150.

Dimitris Metaxas, Bo Liu, Fei Yang, Peng Yang, Nicholas Michael, and Carol Neidle [2012] Recognition of Nonmanual Markers in American Sign Language (ASL) Using Non-Parametric Adaptive 2D-3D Face Tracking. *Proceedings of LREC 2012.* Istanbul, Turkey, May 2012.

   BU Open Access: https://hdl.handle.net/2144/31898, 2414–2420

Zoya Gavrilov, Stan Sclaroff, Carol Neidle, and Sven Dickinson [2012] Detecting Reduplication in Videos of American Sign Language. *Proceedings of LREC 2012.* Istanbul, Turkey, May 2012.

Nicholas Michael, Peng Yang, Qinqshan Liu, Dimitris Metaxas, and Carol Neidle [2011] A Framework for the Recognition of Nonmanual Markers in Segmented Sequences of American Sign Language, *British Machine Vision Conference* 2011, Dundee, Scotland, August 31, 2011.

Ashwin Thangali, Joan P. Nash, Stan Sclaroff, and Carol Neidle [2011] Exploiting Phonological Constraints for Handshape Inference in ASL Video. *2013 IEEE Conference on Computer Vision and Pattern Recognition (2011),* pp. 521–528, 2011, doi:10.1109/CVPR.2011.5995718.

   BU Open Access: https://open.bu.edu/handle/2144/11370

Haijing Wang, Alexandra Stefan, Sajjad Moradi, Vassilis Athitsos, Carol Neidle, and Farhad Kamangar [2010] A System for Large Vocabulary Sign Search. *Proceedings of the International Workshop on Sign, Gesture, and Activity (SGA) 2010,* in conjunction with ECCV 2010. September 2010. Hersonissos, Heraklion, Crete, Greece.

PUBLICATIONS (cont.)

Vassilis Athitsos, Carol Neidle, Stan Sclaroff, Joan Nash, Alexandra Stefan, Ashwin Thangali, Haijing Wang, and Quan Yuan [2010] Large Lexicon Project: American Sign Language Video Corpus and Sign Language Indexing/Retrieval Algorithms. LREC, Malta, May 2010.

Nicholas Michael, Carol Neidle, and Dimitris Metaxas [2010] Computer-based recognition of facial expressions in ASL: from face tracking to linguistic interpretation. *Proceedings of the 4th Workshop on the Representation and Processing of Sign Languages: Corpora and Sign Language Technologies*. LREC, Malta, May 2010.

Nicholas Michael, Dimitris Metaxas, and Carol Neidle [2009] Spatial and Temporal Pyramids for Grammatical Expression Recognition of American Sign Language. *11th ACM Conference on Computers and Accessibility,* Pittsburgh, PA, October 2009.

Carol Neidle, Nicholas Michael, Joan Nash, and Dimitris Metaxas [2009] A Method for Recognition of Grammatically Significant Head Movements and Facial Expressions, Developed Through Use of a Linguistically Annotated Video Corpus. *ESSLLI 2009 (21st European Summer School in Logic, Language and Information) Workshop on Formal Approaches to Sign Languages,* Bordeaux, France, July 2009.

Weijun He, Xiaolei Huang, Gabriel Tsechpenakis, Dimitris Metaxas, and Carol Neidle [2005] Discovery of Informative Unlabeled Data for Improved Learning. In the Modeling People and Human Interaction Workshop of *ICCV 2005: the Tenth IEEE International Conference on Computer Vision* (Beijing, China). Gabriel Tsechpenakis, Dimitris Metaxas, and Carol Neidle [2005] Learning-based dynamic coupling of discrete and continuous trackers. In the Modeling People and Human Interaction Workshop of *ICCV 2005: the Tenth IEEE International Conference on Computer Vision* (Beijing, China).

Benjamin Bahan, Judy Kegl, Dawn MacLaughlin, and Carol Neidle [1995] Convergent Evidence for the Structure of Determiner Phrases in American Sign Language. In L. Gabriele, D. Hardison and R. Westmoreland (eds.), *FLSM VI, Proceedings of the Sixth Annual Meeting of the Formal Linguistics Society of Mid–America, Volume Two*. Bloomington, IN: Indiana U. Linguistics Club Publications, 1–12.

Vassilis Athitsos, Carol Neidle, Stan Sclaroff, Joan Nash, Alexandra Stefan, Quan Yuan, and Ashwin Thangali [2008] The ASL lexicon video dataset. *IEEE Workshop on CVPR for Human Communicative Behavior Analysis*. June 2008, 11–14.

Philippe Dreuw, Carol Neidle, Vassilis Athitsos, Stan Sclaroff, and Hermann Ney [2008] Benchmark Databases for Video-Based Automatic Sign Language Recognition. *The Sixth International Conference on Language Resources and Evaluation (LREC)*. Morocco. May 2008.

Gabriel Tsechpenakis, Dimitris Metaxas, Olympia Hadjiliadis, and Carol Neidle [2006] Robust Online Change-point Detection in Video Sequences. *2nd IEEE Workshop on Vision for Human Computer Interaction (V4HCI), in conjunction with IEEE Conference on Computer Vision and Pattern Recognition (CVPR'06), New York, NY,* June 2006.

Thomas Castelli, Margrit Betke, and Carol Neidle [2006] Facial feature tracking and occlusion recovery in American Sign Language. In A. Fred and A. Lourenço (eds.), *Pattern Recognition in Information Systems: Proceedings of the 6th International Workshop on Pattern Recognition in Information Systems – PRIS 2006, Paphos, Cyprus, May 2006,* 81–90. INSTICC Press.

PUBLICATIONS (cont.)

Encyclopedia articles

Carol Neidle [2016] Syntax. In Genie Gertz and Patrick Boudreault, eds., *The SAGE Deaf Studies Encyclopedia*. SAGE Publications. 650–656. https://open.bu.edu/handle/2144/27497

Carol Neidle and Robert G. Lee [2004] Language, Gestural. *Encyclopedia of Neuroscience,* third edition. Oxford: Elsevier.

Carol Neidle [1996] Lexical Functional Grammar. In K. Brown and J. Miller (eds.), *Concise Encyclopedia of Syntactic Theories*. Oxford: Elsevier, 223–231.

Carol Neidle [1994] Lexical Functional Grammar. *The Encyclopedia of Language and Linguistics*. New York: Pergamon Press [1994] 2147–2153; also available in electronic format from

`<http:/clwww.essex.ac.uk/LFG/Retrieval.html>`

Other

Carol Neidle [1996] Modeling Grammatical Categories. In O. Yokoyama and E. Klenin (eds.), *Selected Essays of Catherine V. Chvany*. Columbus, Ohio: Slavica Publishers, 171–174.

Dawn MacLaughlin and Carol Neidle [1992] Review of Elizabeth Pearce's *Parameters in Old French Syntax Infinitival Complements, French Review 65:* 6, 1992, 1084–1085.

Technical reports

Carol Neidle and Augustine Opoku [2023] Documentation for Download of ASLLRP Signs Segmented from Continuous Signing Corpora. *American Sign Language Linguistic Research Project Report No. 24*, Boston University, Boston, MA. `<https://www.bu.edu/asllrp/rpt24/asllrpr24.pdf>`

Carol Neidle [2023] What's New in SignStream® 3.4.1? *American Sign Language Linguistic Research Project Report No. 23*, Boston University, Boston, MA. `<https://www.bu.edu/asllrp/rpt23/asllrp23.pdf>`

Carol Neidle [2022] What's New in SignStream® 3.4.0? *American Sign Language Linguistic Research Project Report No. 22,* Boston University, Boston, MA.

BU Open Access: `<https://open.bu.edu/handle/2144/45443>`

Carol Neidle and Carey Ballard [2022] Why Alternative Gloss Labels Will Increase the Value of the WLASL Dataset. *American Sign Language Linguistic Research Project Report No. 21,* Boston University, Boston, MA.

See also: Carol Neidle and Carey Ballard [2022] Revised Gloss Labels for Signs from the WLASL Dataset: Preliminary Version. `< http://www.bu.edu/asllrp/wlasl-alt-glosses.pdf>`

BU Open Access: `<https://open.bu.edu/handle/2144/45441>`

Carol Neidle and Augustine Opoku [2022] Documentation for Download of ASLLRP Sign Bank Citation-Form Sign Datasets. *American Sign Language Linguistic Research Project Report No. 20,* Boston University, Boston, MA. July 2023 addendum: `<https://www.bu.edu/asllrp/rpt20/Addendum.pdf>`

BU Open Access: `<https://open.bu.edu/handle/2144/45442>`

Carol Neidle and Augustine Opoku [2021] Update on Linguistically Annotated ASL Video Data Available through the American Sign Language Linguistic Research Project (ASLLRP). *American Sign Language Linguistic Research Project Report No. 19,* Boston University, Boston, MA.

`<https://www.bu.edu/asllrp/rpt19/asllrp19.pdf>`

PUBLICATIONS (cont.)

Carol Neidle and Augustine Opoku [2020] A User's Guide to the American Sign Language Linguistic Research Project (ASLLRP) Data Access Interface (DAI) 2 — Version 2. *American Sign Language Linguistic Research Project Report No. 18,* Boston University, Boston, MA.

   BU Open Access: `<https://open.bu.edu/handle/2144/45444>`

   Addendum: New Features of DAI 2 – May 2021

   `<http://www.bu.edu/asllrp/New-features-DAI2.pdf>`

   Addendum: Data Sets available through DAI 2 (Most recent update: March 2022):

   `<http://www.bu.edu/asllrp/about-datasets.pdf>`

Carol Neidle [2020] What's New in SignStream® 3.3.0? *American Sign Language Linguistic Research Project Report No. 17,* Boston University, Boston, MA.
   `<https://www.bu.edu/asllrp/SignStream/3/SS_update-3_3.pdf>`

Carol Neidle [2018] What's New in SignStream® 3.1.0? *American Sign Language Linguistic Research Project Report No. 16,* Boston University, Boston, MA. (8 pages)
   `<https://www.bu.edu/asllrp/SignStream/3/SS_update.pdf>`

Carol Neidle [2017] A User's Guide to SignStream® 3. *American Sign Language Linguistic Research Project Report No. 15,* Boston University, Boston, MA. (111 pages)
   `<https://www.bu.edu/asllrp/SignStream/3/SS_User-guide.pdf>`

Carol Neidle [2007] SignStream™ Annotation: Addendum to Conventions used for the American Sign Language Linguistic Research Project. *American Sign Language Linguistic Research Project Report No. 13,* Boston University, Boston, MA. `<https://www.bu.edu/asllrp/asllrpr13.pdf>`

Thomas Castelli, Margrit Betke, Carol Neidle [2005] Facial Feature Tracking and Occlusion Recovery in American Sign Language. *Boston University Computer Science Technical Report No. 2005-0024,* July 7, 2005.

   BU Open Access: `<https://open.bu.edu/handle/2144/1850>`

Carol Neidle and Robert G. Lee [2005] The Syntactic Organization of American Sign Language: A Synopsis. *American Sign Language Linguistic Research Project Report No. 12,* Boston University, Boston, MA.
   `<http://www.bu.edu/asllrp/asllrpr12.pdf>`

Carol Neidle [2002] SignStream™ Annotation: Conventions used for the American Sign Language Linguistic Research Project. *American Sign Language Linguistic Research Project Report No. 11,* Boston University, Boston, MA. `<http://www.bu.edu/asllrp/asllrpr11.pdf>`

Carol Neidle [2000] SignStream™ : A Database Tool for Research on Visual-Gestural Language. *American Sign Language Linguistic Research Project Report No. 10,* Boston University, Boston, MA.
   `<https://www.bu.edu/asllrp/rpt10/ASLLRPr10.pdf>`

PUBLICATIONS (cont.)

Dawn MacLaughlin, Carol Neidle, and David Greenfield [2000] SignStream™ User's Guide, Version 2.0. *American Sign Language Linguistic Research Project Report No. 9,* Boston University, Boston, MA.
<http://www.bu.edu/asllrp/asllrpr9.pdf>

Dawn MacLaughlin, Carol Neidle, and David Greenfield [1999]. SignStream™ User's Guide, Version 1.5. *American Sign Language Linguistic Research Project Report No. 8,* Boston University, Boston, MA.
<https://www.bu.edu/asllrp/asllrpr8.pdf>

Dawn MacLaughlin, Carol Neidle, Robert G. Lee, and David Greenfield [1998]. SignStream™ User's Guide, Version 1.0. *American Sign Language Linguistic Research Project Report No. 7,* Boston University, Boston, MA.

Carol Neidle, Dawn MacLaughlin, Robert G. Lee, Benjamin Bahan, and Judy Kegl [1998] Wh-Questions in ASL: A Case for Rightward Movement in American Sign Language. *American Sign Language Linguistic Research Project Report No. 6,* Boston University, Boston, MA.

Carol Neidle, Dawn MacLaughlin, Benjamin Bahan, Robert G. Lee, and Judy Kegl [1997] The SignStream Project. *American Sign Language Linguistic Research Project Report No. 5,* Boston University, Boston, MA.

Carol Neidle, Dawn MacLaughlin, and Robert G. Lee (eds.) [1997] *Syntactic Structure and Discourse Function: An Examination of Two Constructions in American Sign Language. American Sign Language Linguistic Research Project Report No. 4,* Boston University, Boston, MA.
<https://louis-xiv.bu.edu/pub/asl/rpt4/ASLLRPr4.pdf>

Contents:

- • Robert G. Lee, Carol Neidle, Dawn MacLaughlin, Benjamin Bahan, and Judy Kegl, Role Shift in ASL: A Syntactic Look at Direct Speech (pp. 1–23).

- • Jack Hoza, Carol Neidle, Dawn MacLaughlin, Judy Kegl, and Benjamin Bahan, A Unified Syntactic Account of Rhetorical Questions in American Sign Language (pp. 24–45).

Dawn MacLaughlin, David Greenfield, and Carol Neidle [1997] Addendum I to the SignStream™ Design Specifications. (American Sign Language Linguistic Research Project Report No. 3), Boston University, Boston, MA.

Dawn MacLaughlin, Carol Neidle, and Robert G. Lee [1996] Design Specifications for SignStream™, A Multimedia Database Tool for Language Research. *American Sign Language Linguistic Research Project Report No. 3,* Boston University, Boston, MA.

Carol Neidle, Dawn MacLaughlin, Benjamin Bahan, and Judy Kegl [1996] Non-manual Correlates of Syntactic *Agreement in American Sign Language. Report No. 2,* Boston University, American Sign Language Linguistic Research Project. Boston University, Boston, MA.

Joyce Friedman and Carol Neidle [1986] Phonological Analysis for French Dictation : Preliminaries to an Intelligent Tutoring System. Boston University *Computer Science Technical Report # 86-004*, April 1986.

SOFTWARE DEVELOPMENT:

Carol Neidle, **SignStream® version 3 *** (design, user support, and oversight of others working on implementation:
esp. Gregory Dimitriadis, Rutgers University Laboratory for Computer Science Research)

`<http://www.bu.edu/asllrp/SignStream/3/>`

• released in August 2017 (Open Source – MIT License); updates have been released
periodically since then, and further development is ongoing.

- Version 3.1 – released May 2018
- Version 3.2 – released May 2019
- Version 3.3 – released July 2020
- Version 3.4 – released June 2022

Carol Neidle, Dawn MacLaughlin, Benjamin Bahan, Robert G. Lee, Jack Hoza, David Greenfield, Otmar Foelsche,
and Judy Kegl, *SignStream* (multimedia database tool for language research; distributed on CD-ROM (see
below) and over the Internet, along with sample databases, documentation and other materials:

• **version 2.2**, released in 2003.   • **version 1.0**, released in 1998.

• **version 2.0**, released in 2000.   • **beta version** (version 1.0b1), released in 1997

WEB-ACCESSIBLE LINGUISTICALLY ANNOTATED VIDEO CORPORA

- **Linguistically annotated video corpora** shared via our **Data Access Interface**

  o Our NCSLGR corpus has been browsable, searchable, and downloadable via our **ASLLRP Data
  Access Interface (DAI),** originally from `http://secrets.rutgers.edu/dai/queryPages`/.

    ▪ 2003–2012: **National Center for Sign Language & Gesture Resources (NCSLGR) SignStream® 2**
    linguistically annotated video **Corpus** [about **1,900** utterances linguistically annotated for their
    manual and non-manual components, about **10,700** sign tokens corresponding to **1,300** distinct entries
    (not including gestures and classifier constructions)]. Note: this data collection was originally released
    on a set of CD-ROMs that we distributed:

---

* Trademark granted to Boston University, Spring 2008.   Renewed as of January 2014. Renewed again –
registration number 3391939 – as of May 2017; to expire March 2028.

WEB-ACCESSIBLE LINGUISTICALLY ANNOTATED VIDEO CORPORA (cont.)

CD-ROM PRODUCTION AND DATA DISTRIBUTION

Produced by Carol Neidle, for the American Sign Language Linguistic Research Project

2007   • *NCSLGR SignStream Databases Vol. 2* [more than 200 ASL utterances]
        Annotated ASL narratives
        • *NCSLGR SignStream Databases Vol. 3* [Close call; Speeding; Three Pigs]
        • *NCSLGR SignStream Databases Vol. 4* [Accident; Biker; Boston-LA]
        • *NCSLGR SignStream Databases Vol. 5* [Ali, Dorm prank; Whitewater]
        • *NCSLGR SignStream Databases Vol. 6* [Football; LAPD; Siblings]
        • *NCSLGR SignStream Databases Vol. 7* [Roadtrip 1; Roadtrip 2; Scary Story]

2004   • *ASLLRP SignStream Databases Vol. 1, Version 2*

2003   • *SignStream v. 2.2.2*
        • *NCSLGR SignStream Databases Vol. 1*
        • *ASLLRP Electronic Publications 3.0*

2000   • *SignStream v. 2.0*
        • *ASLLRP SignStream Databases Vol. 1* [annotated excerpts of stories distributed
                                                  on video by DawnSignPress]
        • *ASLLRP Electronic Publications 2.0*

1999   • *ASLLRP Electronic Publications 1.5*
        • *SignStream™ Version 1.5*

1998   •*ASLLRP Electronic Publications 1.0*
        • *SignStream™ Version 1.0*

Contents: SignStream software, ASL data transcribed with SignStream software, electronic publications, and movie files to accompany publications and SignStream databases.

---

o A new version of the **DAI** was released in fall 2017, with periodic updates and enhancements; 2020 marked the release of *version 2* of **DAI 2**: `https://dai.cs.rutgers.edu/dai/s/dai`. It is still under development by Augustine Opoku, under the supervision of Carol Neidle, providing access to expanding video corpora (including the one listed above) and a **Sign Bank**.

▪ 2013–2023: **ASLLRP SignStream® 3** linguistically annotated video **Corpus** [rapidly expanding; currently contains **2,650** utterances linguistically annotated for their non-manual and manual components (including handshapes and sign types). Over **500** of these utterances were contributed recently by DawnSignPress. These continuous signing corpora include **39,158** sign tokens.

WEB-ACCESSIBLE LINGUISTICALLY ANNOTATED VIDEO CORPORA:

Linguistically annotated video corpora shared via our **Data Access Interface (cont.)**

- 2018–23: **ASLLRP Sign Bank**, initially developed from our ASLLVD **(American Sign Language Lexicon Video Dataset).** A substantially expanded version has just been released, incorporating our own continuous signing corpora (listed above), data contributed by DawnSignPress, and data collected for us (thanks to funding from NSF) at RIT. As of 1/29/23, the **Sign Bank** includes **43,998** sign tokens, representing **5,978** distinct entries (not including fingerspelled signs, classifier constructions, and gestures) [up from **32,800** sign tokens, representing **4,230** distinct entries, two years ago].

- **ASL feature tracking and identification of non-manual expressions of linguistic significance: Data visualizations** – available at http://www.bu.edu/av/asllrp/NM/.

CONFERENCE PARTICIPATION AND INVITED TALKS

Saad Hassan, Sooyeon Lee, Dimitris Metaxas, Carol Neidle, and Matt Huenerfauth [2022] Understanding ASL Learners' Preferences for a Sign Language Recording and Automatic Feedback System to Support Self-Study (poster). ASSETS 2022.

Carol Neidle [2022] Pre-recorded invited guest lecture for Dimitris Metaxas's course on *Model-based, Explainable, Semisupervised and Unsupervised Machine Learning for Dynamic Analytics in Computer Vision and Medical Image Analysis,* at DeepLearn 2022 Summer, 6th International Gran Canaria School on Deep Learning, Las Palmas de Gran Canaria, Spain: Language in the visual-gestural modality: Linguistic & computational research, July 2022.

Konstantinos M. Dafnis, Evgenia Chroni, Carol Neidle, and Dimitris Metaxas [2022] Bidirectional Skeleton-Based Isolated Sign Recognition using Graph Convolution Networks. LREC 2022, Marseille, France, June 2022.

Konstantinos M. Dafnis, Evgenia Chroni, Carol Neidle, and Dimitris Metaxas [2022] Isolated Sign Recognition using ASL Datasets with Consistent Text-based Gloss Labeling and Curriculum Learning. Seventh International Workshop on Sign Language Translation and Avatar Technology: The Junction of the Visual and the Textual [SLTAT 2022] LREC, Marseille, France, June 2022, 13–20.

Carol Neidle, Augustine Opoku, Carey Ballard, Konstantinos M. Dafnis, Evgenia Chroni, and Dimitris Metaxas [2022] Resources for Computer-Based Sign Recognition from Video, and the Criticality of Consistency of Gloss Labeling across Multiple Large ASL Video Corpora. 10th Workshop on the Representation and Processing of Sign Languages: Multilingual Sign Language Resources. LREC, Marseille, France, June 2022.

Zhaoyang Xia, Yuxiao Chen, Qilong Zhangli, Matt Huenerfauth, Carol Neidle, and Dimitris Metaxas [2022] Sign Language Video Anonymization. 10th Workshop on the Representation and Processing of Sign Languages: Multilingual Sign Language Resources. LREC, Marseille, France, June 2022.

Dimitris Metaxas and Carol Neidle [Invited, June 2021] Technical Methods & Resources for American Sign Language (ASL). Chalearn Looking at People: Sign Language Recognition in the Wild Workshop at CVPR. June 25, 2021. https://chalearnlap.cvc.uab.cat/workshop/42/program/

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Sooyeon Lee, Abraham Glasser, Becca Dingman, Zhaoyang Xia, Dimitris Metaxas, Carol Neidle, and Matt Huenerfauth [2021] American Sign Language Video Anonymization to Support Online Participation of Deaf and Hard of Hearing Users. *ASSETS 2021 (the 23rd International ACM SIGACCESS Conference on Computers and Accessibility)*. October 18–22, 2021. **Nominated for best paper award.**

Carol Neidle and Dimitris Metaxas [May 2019] Linguistic Foundations for Computationally Efficient and Scalable Sign Recognition. Automatic Sign Language Recognition workshop, University of Chicago.

Dimitris Metaxas and Carol Neidle [May 2019] Linguistically-Driven Machine Learning Methods for ASL Recognition. Automatic Sign Language Recognition workshop, University of Chicago.

Dimitris Metaxas, Mark Dilsizian, and Carol Neidle [2018] Linguistically-driven Framework for Computationally Efficient and Scalable Sign Recognition. *LREC 2018*, Miyazaki, Japan, May 2018.

BU Open Access: https://hdl.handle.net/2144/30048, 1711–1718

Carol Neidle, Augustine Opoku, Gregory Dimitriadis, and Dimitris Metaxas [2018] NEW Shared & Interconnected ASL Resources: SignStream® 3 Software; DAI 2 for Web Access to Linguistically Annotated Video Corpora; and a Sign Bank. *Eighth Workshop on the Representation and Processing of Sign Languages: Involving the Language Community*. *LREC 2018*, Miyazaki, Japan, May 12, 2018, 147–154.

BU Open Access: https://open.bu.edu/handle/2144/30047

Dimitris Metaxas, Mark Dilsizian, and Carol Neidle, Scalable ASL Sign Recognition using Model-based Machine Learning and Linguistically Annotated Corpora [2018] Eighth Workshop on the Representation and Processing of Sign Languages: Involving the Language Community. LREC 2018, Miyazaki, Japan, May 12, 2018.

BU Open Access: https://hdl.handle.net/2144/30049

Carol Neidle, Language in the Visual-Gestural Modality: Linguistic and Computational Research Synergies [keynote presentation, 2017] *Johns Hopkins Center for Talented Youth: Family Academic Programs Science and Technology Series, Boston University*, October 21, 2017.

Hernisa Kacorri, Ali Syed, Matt Huenerfauth and Carol Neidle [2016] Centroid-Based Exemplar Selection of ASL Non-Manual Expressions using Multidimensional Dynamic Time Warping and MPEG4 Features. *Seventh Workshop on the Representation and Processing of Sign Languages: Corpus Mining, LREC 2016*, Portorož (Slovenia], 105-110, May 28, 2016. http://www.lrec-conf.org/proceedings/lrec2016/workshops/LREC2016Workshop-SignLanguage_Proceedings.pdf https://open.bu.edu/handle/2144/27493.

Mark Dilsizian, Zhiqiang Tang, Dimitris Metaxas, Matt Huenerfauth, and Carol Neidle [2016] The Importance of 3D Motion Trajectories for Computer-based Sign Recognition. *Seventh Workshop on the Representation and Processing of Sign Languages: Corpus Mining, LREC 2016*, Portorož (Slovenia), 53-58, May 28, 2016. http://www.lrec-conf.org/proceedings/lrec2016/workshops/LREC2016Workshop-SignLanguage_Proceedings.pdf

Polina Yanovich, Carol Neidle and Dimitris Metaxas [2016] Detection of Major ASL Sign Types in Continuous Signing for ASL Recognition. *Tenth Language Resources and Evaluation Conference (LREC)*, 3067–3073. May 23–28, 2016, Portorož (Slovenia), 3067–3073. https://open.bu.edu/handle/2144/27492.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Carol Neidle [invited presentation, 2016] Linguistic and Computational Research Synergies for the Study of American Sign Language. *Yale University Linguistics Colloquium*. April 18, 2016.

Carol Neidle [invited presentation, 2014] Using linguistic modeling and linguistically annotated corpora for computer–based sign language recognition from video. Invited presentation, *ChaLearn Workshop, ECCV 2014*, Zurich, Switzerland, September 6–7, 2014.

Carol Neidle, Jingjing Liu, Bo Liu, Xi Peng, Christian Vogler, and Dimitris Metaxas [2014] Computer-based tracking, analysis, and visualization of linguistically significant non-manual events in American Sign Language (ASL) *Sixth Workshop on the Representation of Signed Languages: Beyond the Manual Channel*. *LREC (Language Resources and Evaluation Conference) 2014,* Reykjavik, Iceland, May 31, 2014, 127–134. http://www.lrec-conf.org/proceedings/lrec2014/workshops/LREC2014Workshop-SignLanguage%20Proceedings.pdf, https://hdl.handle.net/2144/31880.

Bo Liu, Jingjing Liu, Dimitris Metaxas and Carol Neidle [2014] 3D Face Tracking and Multi-Scale, Spatio-temporal Analysis of Linguistically Significant Facial Expressions and Head Positions in ASL. *LREC (Language Resources and Evaluation Conference) 2014,* Reykjavik, Iceland, May 28-30, 2014, 4512–4518. http://www.lrec-conf.org/proceedings/lrec2014/pdf/370_Paper.pdf, https://hdl.handle.net/2144/31882.

Mark Dilsizian, Polina Yanovich, Shu Wang, Carol Neidle and Dimitris Metaxas [2014] New Framework for Sign Recognition based on 3D Handshape Identification and Linguistic Modeling. *LREC (Language Resources and Evaluation Conference),* Reykjavik, Iceland, May 28–30, 2014, 1924–1929. http://www.lrec-conf.org/proceedings/lrec2014/pdf/1138_Paper.pdf, https://hdl.handle.net/2144/31881.

Carol Neidle, two invited presentations for the *Linguistics Department at Syracuse University*, NY [April 16, 2014]

• American Sign Language (ASL) and its Standing in the Academy

• Crossdisciplinary Approaches to Sign Language Research: Video Corpora for Linguistic Analysis and Computer-based Recognition of American Sign Language (ASL)

Carol Neidle [invited presentation, 2013] The American Sign Language Linguistic Research Project. *NSF Avatar & Robotics "Signing Creatures" Workshop,* Gallaudet University, November 15–16, 2013   .

Carol Neidle [invited colloquium talk, 2013] Crossdisciplinary Approaches to American Sign Language Research: Linguistically Annotated Video Corpora for Linguistic Analysis and Computer-based Sign Language Recognition/Generation. *CUNY Linguistics Colloquium*, October 10, 2013**.**

Jingjing Liu, Bo Liu, Shaoting Zhang, Fei Yang, Peng Yang, Dimitris N. Metaxas, and Carol Neidle [2013] Recognizing Eyebrow and periodic Head Gestures Using CRFs for Non-Manual Marker Detection in ASL. *10th IEEE International Conference on Automatic Face and Gesture Recognition,* Shanghai, China, April 22–26, 2013.

Bo Liu, Dimitrios Kosmopoulos, Mark Dilsizian, Peng Yang, Carol Neidle and Dimitris Metaxas [2012] Detection and Classification of Non-manual Grammatical Markers in American Sign Language (ASL). Presented at the *2nd Multimedia and Vision Meeting in the Greater New York Area,* Columbia University, New York City, NY, June 15, 2012.

Carol Neidle, Ashwin Thangali, Joan Nash, and Stan Sclaroff [2012] Challenges in development of the American Sign Language Linguistic Video Dataset (ASLLVD) Corpus. *5th Workshop on the Representation and Processing of Sign Languages: Corpora and Sign Language Technologies: Interactions between Corpus and Lexicon* at LREC 2012, Istanbul, Turkey, May 27, 2012.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.]

Carol Neidle, and Christian Vogler [2012] A New Web Interface to Facilitate Access to Corpora: Development of the ASLLRP Data Access Interface (DAI). *5th Workshop on the Representation and Processing of Sign Languages: Corpora and Sign Language Technologies: Interactions between Corpus and Lexicon* at LREC 2012, Istanbul, Turkey, May 27, 2012.

Dimitris Metaxas, Bo Liu, Fei Yang, Peng Yang, Nicholas Michael, and Carol Neidle [2012] Recognition of Nonmanual Markers in American Sign Language (ASL) Using Non-Parametric Adaptive 2D-3D Face Tracking [2012] the *8th International Conference on Language Resources and Evaluation (LREC 2012),* Istanbul, Turkey, May 24, 2012.
http://www.lrec-conf.org/proceedings/lrec2012/pdf/287_Paper.pdf

Zoya Gavrilov, Stan Sclaroff, Carol Neidle, and Sven Dickinson [2012] Detecting Reduplication in Videos of American Sign Language. Presented at the *8th International Conference on Language Resources and Evaluation (LREC 2012),* Istanbul, Turkey. May 5, 2012.
http://www.lrec-conf.org/proceedings/lrec2012/pdf/199_Paper.pdf

Carol Neidle and Stan Sclaroff [2012] A Demonstration System for Video-Based Sign Language Retrieval. Presented at the *Rafik B. Hariri Institute for Computing and Computational Science & Engineering,* Boston University, May 15, 2012.

Carol Neidle [invited speaker, 2012] Conditionals in American Sign Language, *CNRS,* Paris, France, April 4, 2012.

Nicholas Michael, Peng Yang, Qinqshan Liu, Dimitris Metaxas, and Carol Neidle [2011] A Framework for the Recognition of Nonmanual Markers in Segmented Sequences of American Sign Language, poster presented at the *British Machine Vision Conference 2011,* Dundee, Scotland, 1–12. August 31, 2011.
http://www.bmva.org/bmvc/2011/proceedings/paper124/paper124.pdf

Ashwin Thangali, Joan P. Nash, Stan Sclaroff and Carol Neidle [2011] Exploiting Phonological Constraints for Handshape Inference in ASL Video, poster presented at the *IEEE Conference on Computer Vision and Pattern Recognition (CVPR),* June 20–25, 2011.

Carol Neidle [invited speaker, 2011] Two Web-Accessible ASL Corpora (with Joan Nash and Christian Vogler), *Sign language corpus workshop,* Gallaudet University, Washington, DC, May 21, 2011.

Haijing Wang, Alexandra Stefan, Sajjad Moradi, Vassilis Athitsos, Carol Neidle, and Farhad Kamangar [2010] A System for Large Vocabulary Sign Search. Presented at the *International Workshop on Sign, Gesture, and Activity (SGA) 2010,* in conjunction with *ECCV 2010.* September 11, 2010. Hersonissos, Heraklion, Crete, Greece.

Stan Sclaroff, Athitsos, Vassilis, Neidle, Carol, Nash, Joan, Stefan, Alexandra, Thangali, Ashwin, Wang, Haijing, and Yuan, Quan [2010] American Sign Language Lexicon Project: Video Corpus and Indexing/Retrieval Algorithms: Poster presented at *the International Workshop on Computer Vision (IWCV),* Vietri Sul Mare, Salerno, Italy. May 25–27, 2010.

Vassilis Athitsos, Carol Neidle, Stan Sclaroff, Joan Nash, Alexandra Stefan, Ashwin Thangali, Haijing Wang, and Quan Yuan [2010] Large Lexicon Project: American Sign Language Video Corpus and Sign Language Indexing/Retrieval Algorithms. *4th Workshop on the Representation and Processing of Sign Languages: Corpora and Sign Language Technologies.* LREC, Malta, May 22–23, 2010.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Nicholas Michael, Carol Neidle, and Dimitris Metaxas [2010] Computer-based recognition of facial expressions in ASL: from face tracking to linguistic interpretation. LREC, Malta, May 22–23, 2010.

Nicholas Michael, Dimitris Metaxas, and Carol Neidle [2009] Spatial and Temporal Pyramids for Grammatical Expression Recognition of American Sign Language. *11th ACM Conference on Computers and Accessibility,* Pittsburgh, PA, October 27, 2009.

Carol Neidle, Nicholas Michael, Joan Nash, and Dimitris Metaxas [2009] A Method for Recognition of Grammatically Significant Head Movements and Facial Expressions, Developed Through Use of a Linguistically Annotated Video Corpus. *ESSLLI 2009 (21st European Summer School in Logic, Language and Information) Workshop on Formal Approaches to Sign Languages,* Bordeaux, France, July 27–31, 2009.

Carol Neidle [invited speaker, 2009] Crossdisciplinary Corpus-Based ASL Research. *2008–2009 VL2 Presentation Series* at Gallaudet University, Washington, DC, March 26, 2009.

Stan Sclaroff and Carol Neidle [invited, 2009] The Road to Sloogle: Building a Video Lexicon of American Sign Language, Discoveries: BU Alumni Lecture Series, Thursday, May 14, 2009:

Vassilis Athitsos, Carol Neidle, Stan Sclaroff, Joan Nash, Alexandra Stefan, Quan Yuan, and Ashwin Thangali [2008] The ASL Lexicon Video Dataset. *First IEEE Workshop on CVPR for Human Communicative Behavior Analysis*. Anchorage, Alaska, Monday June 28, 2008. [**best paper award**]

Philippe Dreuw, Carol Neidle, Vassilis Athitsos, Stan Sclaroff, and Hermann Ney [2008] Benchmark Databases for Video-Based Automatic Sign Language Recognition, the *sixth International Conference on Language Resources and Evaluation [LREC]* Morocco, May 29, 2008

Carol Neidle [invited speaker] Sign Language Research: Challenges for Sharing and Dissemination of Video Files and Linguistic Annotations [2007] *Preservation and Discovery in the Digital Age* (Association of Research Libraries Directors' Meeting), Cambridge, MA, November 14–15, 2007.

Gabriel Tsechpenakis, Dimitris Metaxas, Olympia Hadjiliadis, and Carol Neidle [2006] Robust Online Change-point Detection in Video Sequences, 2nd IEEE Workshop on *Vision for Human Computer Interaction* (V4HCI), in conjunction with *IEEE Conference on Computer Vision and Pattern Recognition (CVPR'06)*, New York, NY, June 2006.

Carol Neidle [invited speaker, 2006] The crossmodal study of human language and its importance to linguistic theory. *Revolutions in Sign Language Studies: Linguistics, Literature, Literacy*. Gallaudet University, Washington, DC, March 22–24, 2006.

Gabriel Tsechpenakis, Dimitris Metaxas, and Carol Neidle [2005] Learning-based dynamic coupling of discrete and continuous trackers. In the *Modeling People and Human Interaction (PHI '05) workshop of ICCV 2005: the Tenth IEEE International Conference on Computer Vision*. Beijing, China, October 15, 2005.

Weijun He, Xiaolei Huang, Gabriel Tsechpenakis, Dimitris Metaxas, and Carol Neidle [2005] Discovery of Informative Unlabeled Data for Improved Learning. In the *Modeling People and Human Interaction (PHI '05) workshop of ICCV 2005: the Tenth IEEE International Conference on Computer Vision*. Beijing, China, October 15, 2005.

Carol Neidle [invited speaker] and Robert G. Lee [2005] Aspects of ASL syntax: CP and the left and right peripheries. Guest lecture at the *Linguistic Society of America Summer Institute,* MIT. Cambridge, MA, July 28, 2005.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Carol Neidle, and Dimitris Metaxas [invited speakers, 2005] Linguistically-based computational methods for ASL recognition. *SIGNA VOLANT, Sign Language Linguistics and the Application of Information Technology to Sign (SLL&IT)*. Milan, Italy, June 22–24, 2005.

Carol Neidle [invited speaker, 2005] Another look at some non-manual expressions of syntactic information in ASL. *SIGNA VOLANT, Sign Language Linguistics and the Application of Information Technology to Sign (SLL&IT)*. Milan, Italy, June 22–24, 2005.

Carol Neidle [invited participant 2005] panel discussion: How analysis shapes data. *2nd Conference of the International Society for Gesture Studies (ISGS), INTERACTING BODIES – CORPS EN INTERACTION*, École normale supérieure Lettres et sciences humaines, Lyon, France, June 15–18, 2005.

Dimitris Metaxas and Carol Neidle [invited speakers, 2005] Linguistically-Based Computational Methods for ASL Recognition. *Rutgers University Center for Cognitive Science (RuCCS) Colloquium,* Piscataway, NJ, April 26, 2005.

Carol Neidle [invited speaker, 2005] Focus on the left and right peripheries in ASL. *Linguistics Department Colloquium. University of Toronto,* Canada, February 4, 2005.

Carol Neidle [invited speaker, 2005] Language in another dimension: the syntax of American Sign Language (ASL*). York University DLLL,* Toronto, Canada, February 3, 2005.

Carol Neidle [invited speaker, 2004] Reflexes of Focus in American Sign Language. *Linguistics Colloquium, University of Massachusetts, Amherst,* November 12, 2004.

Carol Neidle [plenary speaker, 2004] Dimensions of linguistic research: Analysis of a signed language. *Australian Linguistic Society conference 2004,* Sydney, Australia, July 13–15, 2004.

Carol Neidle, and Robert G. Lee, Unification, competition and optimality in signed languages: aspects of the syntax of American Sign Language [2004] *International Lexical Functional Grammar Conference*. Christchurch, New Zealand, July 10–12, 2004.

Carol Neidle [2004] Resources for the study of visual language data: SignStream software for linguistic annotation and analysis of digital video and an annotated ASL corpus. *International Lexical Functional Grammar Conference*. Christchurch, New Zealand, July 10–12, 2004.

Carol Neidle [invited speaker] and Robert G. Lee, Dimensions of the Linguistic Analysis of ASL: Challenges for Computer-Based Recognition [2004] *HCI Seminar Series, Computer Science and Artificial Intelligence Laboratory,* MIT, June 9, 2004.

Carol Neidle [invited speaker] and Robert G. Lee [2004] The SignStream Project: Available Resources and Future Directions. *Workshop on the Representation and Processing of Sign Languages*. Workshop on the occasion of the 4th International Conference on Language Resources and Evaluation (LREC 2004). Lisbon, Portugal. May 30, 2004.

Carol Neidle, and Robert G. Lee [2003] Syntactic agreement across language modalities: American Sign Language. *Lisbon Workshop on Agreement,* Universidade Nova de Lisboa, July 10–11, 2003.

Robert G. Lee and Carol Neidle [2003] New developments in the annotation of gesture and sign language data: Advances in the SignStream project. *The 5th International Workshop on Gesture and Sign Language based Human-Computer Interaction,* Genoa, Italy. April 15–17, 2003.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Carol Neidle [invited speaker] and Robert G. Lee [2003] New developments in the annotation of gesture and sign language data: Advances in the SignStream project. *University of Palermo,* Italy. April 14, 2003.

Carol Neidle [invited speaker] and Robert G. Lee [2003] Questions and Conditionals in American Sign Language: Focusing on the left and right periphery. *Università Milano-Bicocca,* Italy. April 10, 2003.

Carol Neidle [invited speaker, 2002] Focus and Wh Constructions in ASL. *GSAS Workshop on Comparative Syntax and Linguistic Theory,* Harvard University, Cambridge, Massachusetts. May 17, 2002.

Carol Neidle [invited speaker, 2002] Visual Analysis of Signed Language Data. *Rutgers Center for Cognitive Science Colloquium,* New Brunswick, New Jersey. April 23, 2002.

Carol Neidle [invited speaker, 2002] American Sign Language: Linguistic Perspectives. *Rutgers University Language and Linguistics Club,* New Brunswick, New Jersey. April 22, 2002.

Carol Neidle [invited speaker, 2002] Master Class for linguistics faculty: The Linguistics of American Sign Language. *Rutgers University,* New Brunswick, New Jersey. April 22, 2002.

Carol Neidle [invited speaker, 2001] Linguistic annotation and analysis of signed language using SignStream. IEEE (Institute of Electrical and Electronics Engineers) *International Workshop on Cues in Communication* (in conjunction with *Computer Vision and Pattern Recognition 2001*), Kauai, Hawaii. December 9, 2001.

Carol Neidle [2001] invited participant in panel discussion on at the workshop listed above (on the future of research in this area). December 9, 2001.

Carol Neidle [invited speaker, 2001] SignStream as a tool for linguistic annotation of signed language data. *TalkBank Gesture Workshop,* Carnegie Mellon University, Pittsburgh, Pennsylvania. October 26–28, 2001.

Carol Neidle [invited speaker, 2000] SignStream, un logiciel de base de données qui facilite l'encodage et l'analyse linguistique de données visuo-gestuelles. *Transcription de la parole normale et pathologique* – avec une session spéciale sur la transcription des langues des signes et du gestuel. l'Université de Tours, France. December 8 and 9, 2000.

Carol Neidle [invited speaker] and Stan Sclaroff [2000] SignStream, A tool for linguistic and computational research on visual-gestural language data. *Third International Conference on Methods and Techniques in Behavioral Research*. Nijmegen, The Netherlands. August 15–18, 2000.

Carol Neidle [2000] SignStream, A tool for crosslinguistic analysis of signed languages. *Seventh International Conference on Theoretical Issues in Sign Language Research (TISLR 2000)*. Amsterdam, The Netherlands. July 23–27, 2000.

Carol Neidle [invited speaker] and Dawn MacLaughlin [1999] Language in another dimension: American Sign Language. *Dartmouth College,* Hanover, New Hampshire. October 22, 1999.

Carol Neidle, Dawn MacLaughlin, and Robert G. Lee [invited speakers, 1999] Language in the visual modality: Linguistic research and computational tools. *University of Pennsylvania,* Philadelphia, Pennsylvania. May 7, 1999.

Carol Neidle [1999] SignStream: A Multimedia Tool for Language Research. Poster presented at the *National Science Foundation Human Computer Interaction Grantees' Workshop '99*. Orlando, Florida. February 22, 1999.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Carol Neidle [invited speaker], Robert G. Lee, Dawn MacLaughlin, Benjamin Bahan, and Judy Kegl [1997] SignStream and the American Sign Language Linguistic Research Project. *University of Stellenbosch,* South Africa. February 19, 1997.

Carol Neidle, Judy Kegl, Benjamin Bahan, Dawn MacLaughlin, Robert G. Lee [1996] Symposium: Non-manual Grammatical Marking as Evidence for Hierarchical Relations in American Sign Language. *Fifth International Conference on Theoretical Issues in Sign Language Research,* Montreal, Canada. September 19–21, 1996:

- The Distribution of Non-Manual Correlates of Syntactic Features: Evidence for the Hierarchical Organization of ASL
- Non-Manual Realization of Agreement in the Clause.
- Non-Manual Realization of Agreement in the Noun Phrase.

Carol Neidle, Judy Kegl, Dawn MacLaughlin, Benjamin Bahan, Robert G. Lee, Jack Hoza, Otmar Foelsche, and David Greenfield [1996] SignStream™: A Multimedia Database Tool for Linguistic Analysis, Poster session and two software demonstrations. *Fifth International Conference on Theoretical Issues in Sign Language Research,* Montreal, Canada. September 19–21, 1996.

Dawn MacLaughlin, Carol Neidle, Benjamin Bahan, and Judy Kegl [1996] SignStream: A Multimedia Database for Sign Language Research. Talk and demonstration presented at the *Human Movement Coding Workshop*. City University, London, England. May 29, 1996.

Dawn MacLaughlin, Carol Neidle, Benjamin Bahan, and Judy Kegl [invited speakers, 1996] The SignStream Project. Talk and demonstration. *University of Durham,* England. May 28, 1996.

Benjamin Bahan, Carol Neidle, Dawn MacLaughlin, and Judy Kegl [invited speakers, 1996] Non-Manual Realization of Agreement in American Sign Language. *University of Durham,* England. May 27, 1996.

Carol Neidle [invited speaker] Dawn MacLaughlin, Benjamin Bahan, and Judy Kegl [1996] Non-Manual Correlates of Syntactic Agreement in American Sign Language. *University of Iceland,* Reykjavik, Iceland. May 23, 1996.

Carol Neidle [invited speaker] Dawn MacLaughlin, Judy Kegl and Benjamin Bahan [1996], SignStream: A Multimedia Database for Sign Language Research. *University of Iceland,* Reykjavik, Iceland. May 22, 1996.

Judy Kegl, Benjamin Bahan, Otmar Foelsche, David Greenfield, Jack Hoza, Dawn MacLaughlin, and Carol Neidle [1995], SignStream: A Multimedia Tool for Language Analysis. *Conference on Gestures Compared Cross-Linguistically,* 1995 Linguistic Institute, University of New Mexico, Albuquerque, New Mexico. July 10, 1995.

Judy Kegl, Benjamin Bahan, Dawn MacLaughlin, and Carol Neidle [1995] Overview of Arguments about Rightward Movement in ASL. Talk presented in the course on the *Linguistic Structure of American Sign Language* at the 1995 *Linguistic Institute*. University of New Mexico, Albuquerque, New Mexico. July 11, 1995.

Carol Neidle [invited speaker] Dawn MacLaughlin, Judy Kegl, Benjamin Bahan, and Debra Aarons [1995] Overt Realization of Syntactic Features in American Sign Language. *Syntax Seminar,* University of Trondheim, Trondheim, Norway. May 30, 1995.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Benjamin Bahan, Judy Kegl, Dawn MacLaughlin, and Carol Neidle [1995] Convergent Evidence for the Structure of Determiner Phrases in American Sign Language. *Formal Linguistics Society of Mid–America,* Bloomington, Indiana. May 19–21, 1995.

Carol Neidle, Judy Kegl, Benjamin Bahan, and Debra Aarons [1994] Rightward Wh-Movement in American Sign Language. *Tilburg Conference on Rightward Movement,* Tilburg, the Netherlands. October 6–8, 1994.

Carol Bahan, Judy Kegl, and Carol Neidle [1994] two talks presented at the *New York Statewide Conference for Teachers of American Sign Language.* June 4, 1994:

  • Introduction to Syntax for Sign Language Teachers

  • The Spread of Grammatical Facial Expressions and Evidence of the Structure of Sentences in ASL.

Carol Neidle, Judy Kegl, and Benjamin Bahan [invited speakers, 1994] The Architecture of Functional Categories in American Sign Language. *Harvard University Linguistics Department Colloquium,* Cambridge, Massachusetts. May 2, 1994.

James Shepard-Kegl, Carol Neidle, and Judy Kegl [1994] Legal Ramifications of an Incorrect Analysis of Tense in ASL. *American Association for Applied Linguistics,* Baltimore, Maryland. March 8, 1994.

Carol Neidle and Judy Kegl [invited speakers, 1993] The Architecture of Functional Categories in American Sign Language. *Syracuse University Linguistics Colloquium,* Syracuse, New York. December 10, 1993.

Carol Neidle [1992] Case Features. *AATSEEL (American Association of Teachers of Slavic and Eastern European Languages),* New York, New York. December 28, 1992.

Debra Aarons, Benjamin Bahan, Judy Kegl, and Carol Neidle [1992] Tense and Agreement in American Sign Language. *International Conference on Theoretical Issues in Sign Language Research,* University of California, San Diego, California. August 5, 1992.

Debra Aarons, Judy Kegl, and Carol Neidle [1992] Subjects and Agreement in American Sign Language. *International Symposium on Sign Language Research,* Salamanca, Spain. May 26, 1992.

Carol Neidle [1990] Case Decomposition. *AATSEEL (American Association of Teachers of Slavic and Eastern European Languages),* Chicago, Illinois. December 28, 1990.

Carol Neidle [invited speaker, 1990] and Sam-po Law, X'-Structures and Sentence-Final Particles in Cantonese. *Stanford University Syntax Workshop,* Stanford, California. May 29, 1990.

Carol Neidle [invited speaker, 1989] Case Alternations in Russian. *University of Trondheim,* Trondheim, Norway. November 8, 1989.

Carol Neidle [1989] Course Authoring for the Macintosh, *Conference on Portuguese Language: Teaching and Testing.* University of Texas, Austin, Texas. March 4, 1989.

Carol Neidle [1987] Computer-Aided Correction of French Dictation. *Massachusetts Foreign Language Association,* Newton, Massachusetts. November 6, 1987.

Carol Neidle [invited speaker, 1987] Numeral Phrases and Case. *Slavic Linguistics Colloquium,* Harvard University Russian Research Center, Cambridge, Massachusetts. May 18, 1987.

CONFERENCE PARTICIPATION AND INVITED TALKS (cont.)

Carol Neidle [1987] An Intelligent Tutoring System for French. *Kentucky Foreign Language Conference*, Lexington, Kentucky. April 25, 1987.

Carol Neidle [invited speaker, 1987] Computer Modeling of Second Language Knowledge. *University of Tromsø*, Tromsø, Norway. March 13, 1987.

Carol Neidle [invited speaker, 1987] Computer Modeling of Second Language Knowledge. *University of Trondheim*, Dragvoll, Norway. March 10, 1987. Carol Neidle [invited speaker, 1987] An Intelligent Tutoring System for French. *University of Florida*, Gainesville, Florida. January 21, 1987.

Carol Neidle [invited speaker, 1987] Informatique, linguistique, et didactique. *U.C.L.A. Department of French*, Los Angeles, California. January 8, 1987.

Carol Neidle, and Joyce Friedman [invited speakers, 1986] Phonological Analysis for French Dictation. *Bolt Beranek and Newman Inc.*, Cambridge, Massachusetts. December 5, 1986.

Carol Neidle [invited speaker, 1986] Computer-Assisted Foreign Language Learning. *Boston University Language Behavior Colloquium*, Boston, Massachusetts. December 3, 1986.

Carol Neidle [invited speaker, 1986] An Intelligent Tutoring System for French. *Harvard University*, Cambridge, Massachusetts. November 13, 1986.

Carol Neidle [1985] What is Applied Linguistics? *Modern Language Association Meetings*, Chicago, Illinois. December 30, 1985.

Carol Neidle [1985] Russian Case Assignment and Quantifier Phrases. *Canadian Linguistics Association Meetings*, Montreal, Canada. June 5, 1985.

Carol Neidle [invited speaker, 1984] Case and Quantifiers in Russian. *Stanford Linguistics Colloquium*, Stanford, California. January 10, 1984.

Carol Neidle [1982] *There*, *il*, and the Genitive of Negation in Russian. *Linguistic Society of America*, San Diego, California. December 28, 1982.

GRANTS AND AWARDS

2007/08 Templeton Prize for Excellence in Student Advising in the College of Arts and Sciences, Boston University, November 12, 2008.

Boston University College of Arts and Sciences **Award for outstanding teaching in the College Honors Program**, April 15, 2005.

Mellon Fellowship, summer 1990 (for research at the Johns Hopkins University at the National Foreign Language Center, Washington, DC).

Grant from **Xerox Palo Alto Research Center** – Visiting Scholar position November 1989–May 1990

Fellowship awarded by the **Norwegian Research Council** for Visiting Scholar position at the University of Trondheim (for work with the Trondheim Linguistic Lexicon Project, TROLL), Fall 1989.

GRANTS AND AWARDS (cont.)

Apple Computers: Curriculum Development Grant (equipment grant awarded to the Department of Modern Foreign Languages and Literatures: six Macintosh SE Computers and a laser printer, for curriculum development – established MFLL Computer Center), 1988.

Boston University: **Humanities Society Fellowship**, 1984–1985.

National Science Foundation

Funded Research

<u>**Principal Investigator**</u> on the following NSF grants (total of $ **6,140,982** to Boston University):

1. NSF grant #**2212302**, C. Neidle, PI ($**405,106**), in collaboration with Rutgers University (D. Metaxas, PI) and RIT (M. Huenerfauth, PI) **Collaborative Research: HCC: Medium: Linguistically-Driven Sign Recognition from Continuous Signing for American Sign Language (ASL).** 2022–2025.

2. NSF grant #**1763486**, C. Neidle, PI ($**300,023**), in collaboration with Rutgers University (D. Metaxas, PI, $689,999) and RIT (M. Huenerfauth, PI, $209,896) **CHS: Medium: Collaborative Research: Scalable Integration of Data-driven and Model-based Methods for Large Vocabulary Sign Recognition and Search**. 2018–2022.

3. NSF grant #**1748016,** C. Neidle, PI ($**18,001**), in collaboration with Rutgers University (D. Metaxas, PI, $54,999) **EAGER: Collaborative Research: Data Visualizations for Linguistically Annotated, Publicly Shared, Video Corpora for American Sign Language (ASL).** 2017–2018.

4. NSF grant #**CNS-0964385**, C. Neidle, PI, S. Sclaroff, co-PI ($**368,205**), in collaboration with Rutgers University (D. Metaxas, PI, $97,908), Gallaudet University (B. Bahan, PI, C. Vogler, co-PI, $92,257), and the University of Texas Arlington (V. Athitsos, PI, $66,630). **Collaborative Research: CI-ADDO-EN: Development of Publicly Available, Easily Searchable, Linguistically Analyzed, Video Corpora for Sign Language and Gesture Research.** 2011–2017.

5. NSF grant #**IIS-1065013**, C. Neidle, PI (**$385,957**), in collaboration with Rutgers University (D. Metaxas, PI, $469,996), and Queens College, CUNY (M. Huenerfauth, PI, $338,005). **HCC: Collaborative Research: Medium: Generating Accurate, Understandable Sign Language Animations Based on Analysis of Human Signing**. 2011–2016.

6. NSF grant #**IIS-0964385**, C. Neidle, PI ($**469,000**), in collaboration with Rutgers University (D. Metaxas, PI, $739,000). **III: Medium: Collaborative Research: Linguistically Based ASL Sign Recognition as a Structured Multivariate Learning Problem.** Includes REU Supplement: **$8,000** (for 2011-14, provided funding for student from Gallaudet for summer 2011: B. Painter, plus BU undergraduates T. Sampson and I. Oliver). 2010–2014.

7. NSF grant #**CNS-04279883**, C. Neidle, PI; S. Sclaroff, co-PI; Boston University (**$70,000**), in collaboration with Rutgers University (D. Metaxas, PI) and University of Texas, Arlington (V. Athitsos, PI). **Collaborative Research: II-EN: Development of Publicly Available, Easily Searchable, Linguistically Analyzed, Video Corpora for Sign Language and Gesture Research.** 2010–2011.

GRANTS AND AWARDS (cont.)

8. NSF grant **#CNS-04279883**, C. Neidle, PI, Boston University (**$500,000**), in collaboration with Rutgers University (D. Metaxas, PI; Ahmed Elgammal and Vladimir Pavlovic, co-PI's, $849,817) and Gallaudet University (C. Vogler, PI, $249,998). **COLLABORATIVE RESEARCH: ITR [ASE+ECS]-[dmc+int] DDDAS Advances in Recognition and Interpretation of Human Motion: An Integrated Approach to ASL Recognition** 2004–2009. Plus REU Supplement: **$6,000** (for 2008–09; funded P. Nichols and S. Li). 2004–2009.

9. NSF grant **#IIS-0329009**, C. Neidle, P.I.; M. Betke, G. Kollios, and S. Sclaroff, co-PIs: **Pattern Discovery in Signed Languages and Gestural Communication** (**$749,999**). Plus REU Supplement: **$12,000** (funded undergraduate, B. Waber, summer of 2005). 2003–2007.

10. NSF grant **#IIS-9912573**, C. Neidle, P.I.; S. Sclaroff, co-PI: **Essential Tools for Computational Research on Visual-Gestural Language Data** (**$682,602**). Plus REU Supplement: **$5,000** (funded Deaf undergraduate, M. Schlang, summer of 2002). 2003-2007

11. NSF grant **#EIA-9528985**, C. Neidle, PI and S. Sclaroff, co-PI, at Boston University (**$650,000**), in collaboration with D. Metaxas, PI, N. Badler and M. Liberman, co-PIs, at the University of Pennsylvania (#EIA-9809209, $650,000): **National Center for Sign Language and Gesture Resources**. 1998–2003

12. NSF **#SBR-9729010** (C. Neidle, PI, **$210,000**, Boston University) and #SBR-9729065; (J. Kegl, co-PI, $140,000, University of Southern Maine), renewal of **The Architecture of Functional Categories in American Sign Language**. Plus REU Supplement: **$5,000** (funded undergraduate, E. Hruby, summer of 2000). 1998–2002

13. NSF grant #IRI/IIS-9528985, Carol Neidle, PI: **SignStream: A Multimedia Tool for Language Research,** (**$748,199**). 1995–1999.

14. NSF grant #SBR-9410562, Carol Neidle, PI, and Judy Kegl, Co-PI: **The Architecture of Functional Categories in American Sign Language** (**$350,000**). Plus REU Supplement: **$5,000** (funded Deaf undergraduate, B. Eger, summer of 1995). 1994–1997.

<u>**Principal Investigator**</u> on BU subcontracts ($ **391,890**) to Rutgers University for NSF grants:

15. NSF **Convergence Accelerator [Phase I] Track H: AI-based Tools to Enhance Access and Opportunities for the Deaf**. [PI at Rutgers: D. Metaxas; PI on RIT subcontract: Matt Huenerfauth] Total award $750,000 (**$180,000** to BU). 2022–2023.

16. NSF **Convergence Accelerator [Phase I] Track D: Data & AI Methods for Modeling Facial Expressions in Language with Applications to Privacy for the Deaf, ASL Education & Linguistic Research.** [PIs at Rutgers: D. Metaxas, M. D'Imperio; PI on RIT subcontract: Matt Huenerfauth] Total award $960,000 (**$211,890** to BU). 2020–2022.

<u>**Co-Principal Investigator**</u> on the following grants (total of over $ **1.5 million** to BU):

1. NSF grant **#CNS-0855065,** S. Sclaroff, PI; M. Betke and C. Neidle, co-PIs, Boston University (**$591,445**). **II-EN: Infrastructure for Gesture Interface Research Outside the Lab**. 2009–2013.

2. NSF grant **#IIS-0705749**, S. Sclaroff, PI; C. Neidle, co-PI, Boston University (**$927,984).** **HCC: Large Lexicon Gesture Representation, Recognition, and Retrieval.** (Includes $12,000 REU supplement, supporting: E. Cornelius, J. Suen, S. Li, J. DiMarco, C. Papera, A. Kraminitz, C. Pacelli, D. Riggle) 2007–2011.

GRANTS AND AWARDS (cont.)

Participation in other grants:

1. Senior personnel, **WIN: Women in Networks, Building Community and Gaining Voice**
(NSF; Deborah Belle, PI), 2008–2012. [carrying out analyses of demographic and other data and
writing a final 108-page report on the benchmark data]

UNIVERSITY SERVICE

Boston University, <u>Linguistics Department</u> (established 7/1/18):

Department Chair (2018–2020)

Member, Search Committee for ASTP of Computational Linguistics (2019–20)

Member, Search Committee for ASTP of Phonology (2018–19)

Boston University, <u>Linguistics Program</u> (established 7/1/15):

Program Director (2015–2018)

Chair, Search Committee for ASTP of Phonology (fall 2017 [search cancelled])

Chair, Search Committee for ASTP of Semantics (2016–17)

Boston University, <u>Department of Modern Foreign Languages and Literatures/Romance Studies</u>:

Director of Undergraduate Studies (2009–10, 2010–11)

Linguistics Section Head (1985–2015)

Chair, Search Committee for ASTP of Phonology (1996–1997, 2001–2002)

Chair, Search Committee for ASTP of Semantics (2004–2005, 2008–2009)

Chair, Search Committee for VASTP of Syntax (2013–14)

Chair, Search Committee for ASTP of Morphology (2009–2010, 2013–14)

Chair, Search Committee for ASTP of Language Acquisition (1988–1989, 1993–1995, 1999–2000, 2013–14)

Chair, Search Committee for ASTP of Language Acquisition (2010) [search cancelled]

Chair, Search Committee for VASTP of Phonology (1999–2000, 2000–2001, 2008–2009)

Chair, Search Committee for VASTP of Semantics (2003–2004, 2006–07)

UNIVERSITY SERVICE (cont.)

Chair, Search Committee for VASTP of Language Acquisition and Syntactic Theory (1998–1999)

Chair, Search Committee for ASTP of Spanish Linguistics (1986–1988)

Chair, Search Committee for Linguistics lecturers (1984–2018; lecturers hired included: A. Henry, J. Kim, M. Kissock, P. Lesourd, M. Luján, D. MacLaughlin, V. Manfredi, L. Matthewson, I. Mel'chuk, S. Minkoff, I. Paul, W. Philip, K. Plaster, C. Reiss, A. Vainikka)

Member, Search Committee for ASTP of Philosophy (2008–09, fall 2016)

Member, Search Committee for ASTP of Spanish and Linguistics (2010) [search cancelled]

Member, Search Committee for French Preceptors (1985–1986, 1990–1991)

Member, Search Committee for French Medievalist (1985–1986)

Member, Search Committee for ASTP of African Linguistics (1983–1985)

Interviewer, Search Committee for ASTP of African Linguistics (1989–1990)

Interviewer, Search for MFLL Grants Administrator (2006–2007)

Interviewer, Search for MFLL Administrative Assistant (summer 2003)

Interviewer, Search for MFLL Administrator (2002–2003)

Chair, Computer Committee (1983–1989)

Technology Coordinator (2002–2006)

Member, MFLL Executive Committee (2002–2006, 2007–2008, 2008–09, 2009–10)
Special projects 2002–2003: Overhaul of telephone system; assistance with budget oversight; administration of MFLL course waiting list for students; assistance with enrollment projections.

Member, Academic Policy Committee (1983–1984, 1985–1986, 1987–1989)

Member, Curriculum Committee (1983–1984, 1986–1987, 1988–1996, 1997–2001, 2002–2005, 2013–14, 2014–15)

Member (elected), Merit Committee (2005–2006, 2007–08)

Member, Committee on Linguistics (1983–1984)

Member/*Chair* of Linguistics Library Committee (1984–2018)

Member, Ad–Hoc Evaluations Committee (1982–1983)

Member, Evaluation Team (1983–1984, 1985–1986)

Member, Ad-Hoc Committee on the Emeriti Lounge (1986–1987)

Founding member, Ad-Hoc Committee on departmental working conditions, salary, and governance (2001–2002)

Member, Task Force on Undergraduate Advising; Convener, Technology Subcommittee (2009–2010)

UNIVERSITY SERVICE (cont.)

Boston University, <u>College of Liberal Arts / Graduate School</u>:

Chair, Search Committee for Chairman of MFLL (1987–1988)

Member, Presidential University Graduate Fellowship Committee (1990–1993)

Member, Academic Conduct Committee (1988–1989)

Faculty Advisor for Linguistics Honors Programs, Dept. of Romance Studies (2012–13, 2013–14, 2014–15)

Faculty Advisor for Boston University Undergraduate Linguistics Association (1993–1996, 2000–2003, 2005–2008, 2013–14, 2014–15, co-advisor in fall 2015)

Member, Committee on Linguistics (1982–1989)

Member, Interview Team for hiring UNIX sysadmin (2001–2002)

Boston University:

Member, Information Security & Business Continuity technology governance committee (and the Data Protection Standards Working Group) (March – May, 2011)

Member, Council for Faculty Diversity and Inclusion (2006–2008)
Convener, Subcommittee on Leadership and University Governance; and Member, Salary Subcommittee (2006–2008)

Member, Advisory Board, WISE – Women in Science and Engineering (2006–2012); Member, WISE (2004–2018)

Chair, University Council Committee on Scholarly Activities and Libraries (and Faculty Council Committee on Research Activities, Libraries, and Support Services) (2012–2013)

Chair, Faculty Council Committee on Equity and Inclusion (2004–2006)

Chair, Faculty Council Committee on Compensation (1992–1994)

Member, Faculty Council Executive Committee (1992–1994, 2004–2006, 2012–13)

Member, Faculty Council Committee on Libraries, Research, and Support Services (2004–2005);
   Chair, Subcommittee on Libraries

Member, Faculty Council Committee on Academic Freedom (1992–1996)

Member, Review Panel for Instructional Technology Grant Program (1998–1999)

Member, Search Committee for Expert in Literacy, School of Education (1988–1989)

Member, Appointment, Promotion, and Tenure Committee (1987–1988, 1988–1989, 1990–1991)

COMPUTER WORK

Hiring and supervisory responsibilities for MFLL computer operations, training, and support for UNIX (1989–2004, with support from IT starting in 2003) and MacOS (1989–1999) systems.

Operation of MFLL and UNIX systems and user training and support (1988–1989).

Creation of MFLL Computing Center and oversight of equipment and software purchases (1988).
   Operation of MFLL Vax 730 and user support (1984–1987).

Operator of the Linguistics Information on bu-pub/Gopher Server 1990–1994.

UNIVERSITY SERVICE (cont.)

PROFESSIONAL SERVICE

Professional Associations

Chair (2013–14) and Member (2011–2013)—by invitation of the LSA Executive Committee—of the Linguistic Society of America Audit Committee.

Member, Advisory Committee on Linguistics Programs, Linguistic Society of America, two terms (1992–1995, 1995–1998).

Inaugural Member, Modern Language Association's Committee on Computers and Emerging Technologies in Teaching and Research (1989–1992).

Reviewing for funding agencies, journals, and publishers

Proposal Reviewer (Linguistics) and Panel Member (including CHS, CHS small, HCC, HCI, UA, ITR, and CAREER) for National Science Foundation, 1996–present.

Proposal Reviewer for numerous other funding agencies (including, in recent years, Foundation for Polish Science, Netherlands Organization for Scientific Research (NWO); Economic and Social Research Council (ERC), UK; Association canadienne-française pour l'avancement des sciences; U.S. Civilian Research and Development Foundation (U.S. Department of State) and for Rutgers University.

Reviewer for various journals (including *Canadian Journal of Linguistics, Emerging Technologies for Deaf Accessibility in the Information Society, Foundation for Polish Science, International Journal of Semantic Computing, Interpreting, Journal of Linguistics, Language, Lingua, Linguistic Inquiry, Natural Language and Linguistic Theory, TAL* (the journal of the French association for Computational Linguistics), *Universal Access in the Information Society)*.

Reviewer of books and monographs for many publishers (including Cambridge University Press, Elsevier, Kluwer Academic Publishers, McGraw-Hill, Mouton DeGruyter, Oxford University Press, and Thomson).

Reviewer for tenure and promotion, University of Michigan

Contributor for the *Chicago Manual of Style* (section on sign language transcription), Chicago University Press.

Conferences

Chair, Local Arrangements Committee for the Linguistic Society of America Meeting, January 2004.

Member, Organizing Committee, Linguistic Society of America Meeting, January 1994.

Faculty adviser for the Boston University Conferences on Language Development, 1988–1994.

Co-organizer of the Fifteenth Annual Linguistics Symposium on Romance Languages, Boston University, Boston, Massachusetts, March 7–9, 1985.

Organizer of colloquia and occasional lectures at Boston University (some sponsored by the Geddes Lecture Series), 2002–2020

Member, Program Committee for LREC (a conference held every two years, sponsored by the European Language Resources Association) – for many years, through 2022.

PROFESSIONAL SERVICE (cont.)

Reviewer of abstracts and manuscripts for various conferences (including: the Boston University Conference on Language Development (BUCLD); CVPR annual workshops on gesture recognition; ECCV workshop on Human-centric Visual Computing in Interactive Environments; ECCV ChaLearn Multimodal Gesture Recognition; Eastern States Conference on Linguistics (ESCoL); Formal and Experimental Advances in Sign language Theory (Venice FEAST); Formal Linguistics Society of Mid-America (FLSM); International Conference on Universal Access in Human-Computer Interaction; International Symposia on Sign Language Translation and Avatar Technology (SLTAT); International Workshop on Cues in Communication; International Workshop on Human Language Technology; Language Resources and Evaluation (LREC); Workshop on the Representation and Processing of Sign Languages; Linguistic Society of America (LSA); North East Linguistic Society (NELS); Speech Prosody, Theoretical Issues in Sign Language Research (TISLR); Formal and Experimental Advance in Sign Language Theory (FEAST); West Coast Conference on Formal Linguistics (WCCFL)).

Other

Member, Advisory Panel, NSF-funded Science of Learning Center on Visual Language and Visual Learning, Gallaudet University (2006–2008)

Member, Honors Examining Committee for Linguistics, Swarthmore College, May 2001

PhD DISSERTATION ADVISING

first reader at Boston University

Debra Aarons, Ph.D. thesis, 1994, *Aspects of the Syntax of American Sign Language*.

Current position: Senior Lecturer, Linguistics Department, University of New South Wales, Sydney, Australia.

Previously, she held a tenured position as Associate Professor at the University of Stellenbosch, South Africa, where she founded the first academic program on South African Sign Language in the country.

Benjamin Bahan, Ph.D. thesis, 1996, *Non-manual Realization of Agreement in American Sign Language*.

Current position: Recently retired from Full Professor (and Former Chair), Department of ASL and Deaf Studies, Gallaudet University; Vice President, Dawn Sign Press, San Diego, CA. http://www.gallaudet.edu/x2354.xml

Previously: Hired in 1996 as Associate Professor and Chair, Department of Deaf Studies; has also served as the Chair of the more recently created Department of ASL and Deaf Studies and Director of the graduate programs in Deaf Studies at Gallaudet. Honored as *Distinguished Faculty Member of the Year* at Gallaudet in 2001.

Dalia Cahana-Amitay, Ph.D. thesis, 1996, *Syntactic Aspects of the Production of Verbal Inflection in Aphasia.*

Current position: National board-certified health and wellness coach

Recent position: Research Assistant Professor of Neurology, BU School of Medicine and the Aphasia Research Center at the Boston VA Hospital.

Previous position: Assistant Professor, Department of English, Beit Berl Academic College, Kfar Sabba, Israel

PhD DISSERTATION ADVISING (cont.)

Sam-po Law, Ph.D. thesis, 1990, *The Syntax and Phonology of Cantonese Sentence-Final Particles*.

Current position: Professor (and former Head of Division), Speech and Hearing Sciences, Faculty of Education, University of Hong Kong. http://www0.hku.hk/speech/spl-1.htm. Specialization: Chinese Aphasiology; Chinese Language Processing.

Previously: postdoctoral researcher in neurolinguistics at Johns Hopkins. Specialization: Assessment and treatment of reading and writing disorders after stroke in Chinese speakers.

Dawn MacLaughlin, Ph.D. thesis, 1997, *The Structure of Determiner Phrases: Evidence from American Sign Language*.

Current position: Consultant.

Hired in 1999–2000 as Visiting Assistant Professor in the Department of Linguistics at McGill University, Montreal, Canada. Served at BU as VASTP of Linguistics in 1998–1999.

Second reader for Boston University Department of Computer Science

Ashwin Thangali, Ph.D. thesis, 2013, *A Probabilistic Framework to Exploit Phonological Constraints for Handshape Inference in American Sign Language Video*.

Current position: On staff at Vecna.

External service:

Christian Vogler, University of Pennsylvania Ph.D. thesis in Computer Science, 2003, *American Sign Language Recognition: Reducing the Complexity of the Task with Phoneme-Based Modeling and Parallel Hidden Markov Models*. [External reader]

Current position: Professor (with tenure) and Director, Technology Access Program, Department of Communication Studies, Gallaudet University. https://tap.gallaudet.edu/Contact/staff.asp#Christian

He leads and co-leads multiple research grants that focus on accessible technology for the deaf and hard of hearing. Topics include video relay services, captioned telephone services, closed captions for TV and streaming video, better consumer control over hearing aids and cochlear implants, next-generation smart home alerting systems, and accessibility of voice interfaces like Amazon Alexa and Google Assistant. He has served on the Federal Communication Commission's Disability Advisory Committee.

Recent position: Research Fellow in Computational Linguistics, Computer Vision, and Sign Languages at the Institute for Language and Speech Processing in Athens, Greece.

PhD Dissertation Advising (cont.)

Matt Huenerfauth, University of Pennsylvania, Ph.D. thesis in Computer Science, 2006,
Generating American Sign Language Classifier Predicates for English-to-ASL Machine Translation. [External reader]

Current position: Professor and Dean, Golisano College of Computing and Information Sciences at Rochester Institute of Technology. http://huenerfauth.ist.rit.edu

Recognized in 2017 by the ACM (Association of Computing Machinery) as a "Distinguished Member and Pioneering Innovator Advancing the Digital Age"

Honored with RIT Trustee Scholarship Award for faculty research.

Recent position: Associate Professor in the Computer Science department at the City University of New York (CUNY), Queens College. (Also Associate Dean, Division of Math & Natural Sciences, Queens College and Acting director of the masters program and doctoral certificate program in Computational Linguistics at CUNY Graduate Center; general chair for the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS–2012); and associate editor of the *ACM Transactions on Accessible Computing (TACCESS)* journal.)

MA Supervision

Fran Conlin   (September 2003)   "A Particle of Indefiniteness in American Sign Language"
Current position: Lector, ASL, Department of Linguistics, Yale U., New Haven, CT

Quinn Duffy   (September 2007)   "The ASL Perfect Formed by Preverbal FINISH"
Current position: VP of Product at Alma, San Francisco, CA

Judith Labath   (May 2000)   "What's in Raised Eyebrows in American Sign Language?"
Current position: sign language interpreter, Greensboro, North Carolina

Robert Lee   (September 1996)   "Role Shift in ASL: A Syntacticlook at Direct Speech"
Current position: Associate Academic Specialist, Northeastern U.

Deborah Perry   (May 2005)   "The Use of Reduplication in ASL Plurals"
Current position: Part-time Lecturer, Northeastern U.; and sign language interpreter, Boston U.

Supervisor for Practical Training

Ariel Gardner   (Spring 2013)   Undergraduate Senior (enrolled in Deaf Studies, BU School of Education)
Caitlin Coons   (Spring 2015)   Undergraduate Senior (enrolled in Deaf Studies, BU School of Education)

Curriculum Development

New programs launched since September of 2018:
- Undergraduate joint major in Linguistics & African Languages
- MET Graduate Certificate in Linguistics
- GRS Graduate Certificate in Linguistics
- Undergraduate Major in Linguistics & Computer Science
- PhD in Linguistics

CURRICULUM DEVELOPMENT (cont.)

Other programs:

- Undergraduate minor in Linguistics; undergraduate major in Linguistics (1989–1990)
- Undergraduate joint majors in French/Spanish/Italian/Japanese & Linguistics
- Co-sponsor (with Prof. Juliet Floyd, Philosophy) of 2008 proposal for joint major in Linguistics and Philosophy (recently approved)
- Intercollegiate joint major in Linguistics & Speech and Hearing Science (developed collaboratively with faculty in SAR)
- MA in Linguistics
- BA/MA in Linguistics

Major revision of Linguistics Curriculum, 2015–16

New Courses:

LX 250/253 Foundations of Language
LF 101 French Reading I
LF 102 French Reading II
LX 111 Language Learning

LF 500 French Phonetics
LF 502 French Syntax
LF 503 French Phonology
LR 405 Russian Linguistics

LX 522 Syntax I
LX 523 Syntax II
LX 513 Phonology

COURSE COORDINATION

LF 112 2nd Semester French (1982–1984)
LF 132 SFA Elementary French 2 (1982–1984)
LF 123 Intensive Beginning French (1982–1984)
LF 139 Review of First Year French (1983–1984)
LF 211 3rd Semester French (1985–1986)

LF 212 4th Semester French (1985–1986; 1987–1988)
LX 111 Language Learning (1987–1989, 1990–1991)
LF 101, 102 French Reading (1986–1987; 1987–1989)
LS 101, 102 Spanish Reading (1987–1989)

TEACHING

Courses taught at Boston University

LF 101 Reading French (for students with language-learning disabilities)
LF 112 Second Semester French
LF 211 Third Semester French
LF 303 French Self-Expression I
LF 304 French Self-Expression II
LF 306 French Advanced Oral Expression
LF 500 French Phonetics and Diction
LF 502 Structure of French--Syntax
LF 503 Structure of French--Phonology

LX 111 Introduction to Language and Language Learning (French section)
LX 250/253 Foundations of Language (Introduction to Linguistics)
LX 512 Syntax
LX 522 Syntax I
LX 523 Syntax II
LR 405 Russian Linguistics
LX 801/802 Research Seminar in Applied Linguistics

TEACHING (cont.)

Courses taught at the Middlebury College
French School

  301 Compréhension aurale

  302 Production orale

  423 Introduction à l'analyse linguistique

  713 Informatique et didactique

Courses taught at the Massachusetts Institute of
Technology

  21.212 French II

  21.214 French IV

  21.215 Intensive French Reading for
                Graduate Students

LANGUAGE PROFICIENCY

English:	native speaker
French:	near-native proficiency
Russian:	good reading skills
Norwegian:	intermediate level
American Sign Language:	good comprehension