Adam N. Goodkind

CONTACT
INFORMATION

Northwestern University
Department of Communications
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RESEARCH
INTERESTS

Combining human-computer interaction (HCI) findings with collaboration and communication (CSCW), to improve the conversational efficiency of people interacting with other people as well as with a computer (chatbot). My research uses keystroke-level analysis, information theory, and text analytics to understand cognitive processing effort and better predict the trajectory of collaboration and communication during task-oriented conversations.

EDUCATION

PhD, Northwestern University
    Media, Technology & Society Program   2019–Present
    PI: Darren Gergle (CollabLab)
    Linguistics Department   2016–2019
    PI: Klinton Bicknell (Language & Computation Lab)
Honors:
    Data Science Fellowship
    Cognitive Science Specialist

M.A., CUNY Graduate Center   **2016**
    Computational Linguistics
        M.A. Thesis: Utilizing Linguistic Context To Improve Identification in Typed Text
        Thesis Advisors: Prof. Andrew Rosenberg and Prof. Martin Chodorow

B.A., Columbia University   **2007**
    Religion (Study of Science & Religion)

RESEARCH
EXPERIENCE

Research Assistant, CollabLab, Evanston, IL, USA   **2019–Present**
PI: Darren Gergle
My proposed dissertation uses keystroke-level analysis to understand differences in language production and linguistic choices depending on the perceived conversational partner. By comparing a user's reaction to mistakes made by another human versus mistakes made by a computer, we can better understand how unique mental models impact collaborative work in different settings.

Research Assistant, LangComp Lab, Evanston, IL, USA   **2017–2019**
PI: Klinton Bicknell
Researching autism diagnoses using linguistic markers, such as semantic similarity (word vectors) and pragmatic deficiencies. Also researching how linguistic predictability affects sentence processing via eye-tracking.

Research Assistant, CUNY Speech Lab, New York, NY, USA   **2012–2016**
PI: Andrew Rosenberg

Research Assistant, Columbia NLP Group, New York, NY, USA   **2006–2007**
PI: Rebecca Passonneau

HONORS AND
AWARDS

Best Paper Award, Cognitive Modeling & Computational Linguistics (CMCL)   **2018**
Developmental Sciences Cluster Fellowship - Finalist, Northwestern University   **2018**
Data Science Fellowship, Northwestern University   **2016–2017**
USS Donald and Mary Ellen Passantino Scholarship, CUNY Graduate Center   **2015**
Google Lime Connect Scholarship-Finalist   **2014**
Thomas W. Smith Academic Fellowship, CUNY Graduate Center   **2013–2014**
National Science Foundation, Undergraduate Research Grant, Columbia University **2007**

Albert A. List Academic Fellowship   **2003–2007**
King's Crown Award for Outstanding Leadership, Columbia University   **2006**

PUBLICATIONS   2018 **Goodkind, A.**, Lee, M., Martin, G. E., Losh, M., & Bicknell, K. *Detecting language impairments in autism: A computational analysis of semi-structured conversations with vector semantics.* In *Proceedings of the Inaugural Meeting of the Society for Computation in Linguistics.* Salt Lake City, UT: Linguistic Society of America. [paper] [slides]

Goodkind, A. & Bicknell, K. *Predictive power of word surprisal for reading times is a linear function of language model quality.* In *Proceedings of the 8th Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2018).* Salt Lake City, UT: Linguistic Society of America. [paper] [slides]

2016 **Goodkind, A.**, Brizan D.G. & Rosenberg, A. *Utilizing Overt and Latent Linguistic Structure to Improve Keystroke-Based Authentication.* Image and Vision Computing: Best of Biometrics Special Issue.

2015 **Goodkind, A.**, Brizan D.G. & Rosenberg, A. *Improvements to Keystroke-Based Authentication By Adding Linguistic Context.* 7th IEEE Conference on Biometrics: Theory, Applications and Systems (BTAS 2015). (Slides)

Goodkind, A. & Rosenberg, A. *Muddying The Multiword Expression Waters: How Cognitive Demand Affects Multiword Expression Production. 11th Workshop on Multiword Expressions at NAACL-HLT 2015.* (Slides)

Brizan, D. G., **Goodkind, A.**, Koch, P., Balagani, K., Phoha, V. V., & Rosenberg, A. *Utilizing Linguistically-Enhanced Keystroke Dynamics to Predict Typist Cognition and Demographics. International Journal of Human-Computer Studies, October 2015, vol. 84, 57-68 .*

2014 Locklear, H., Govindarajan, S., Sitova, Z., **Goodkind, A.**, Brizan, D., Rosenberg, A., Phoha, V., Gasti, P., & Balagani, K. *Continuous Authentication with Cognition-centric Text Production and Revision Features. Biometrics (IJCB), 2014 IEEE International Joint Conference .*

2013 Serwadda, A.,Balagani, K., Wang, Z., Koch, P., Govindarajan, S., Pokala, R., **Goodkind, A.**, Brizan, D.G., Rosenberg, A., & Phoha, V. *Scan-based Evaluation of Continuous Keystroke Authentication Systems. IT Professional, 15(4), 20-23 .*

2008 **Goodkind, A.** *Tracking the Emergence of Narrative Competence in Story Retelling. Quebec Student Journal of Linguistics, Vol. 3 .*

2007 Passonneau, R. J., **Goodkind, A.**, & Levy, E. T. *Annotation of Children's Oral Narrations: Modeling Emergent Narrative Skills for Computational Applications. Florida Artificial Intelligence Research Society (FLAIRS), 253-258 .*

2006 Passonneau, R., McKeown, K., Sigelman, S., & **Goodkind, A.**. *Applying the Pyramid Method in the 2006 Document Understanding Conference. Proceedings of the 2006 Workshop of the Document Understanding Conference (DUC).*

PRESENTATIONS   2018 Lee, M.A., Martin, G.E., **Goodkind, A.**, Bicknell, K., Maltman, N., Bush, L., Losh, M. *A Multi-Method Approach to Characterizing Pragmatic Language Development in Individuals with FXS.* Paper presented at the International Fragile X Conference, Cincinnati, OH, July, 2018

Goodkind, A.. *Complex Data Visualization: Visualizing language production dynamics via keystroke analysis.* Presentation at Inaugural Data Science Research Day, Northwestern University Institute on Complex Systems, 25 June 2018. (Slides)

Goodkind, A.. *Demo of TypeShift software system for tracking keystroke dynamics* at Individual Differences Workshop, Northwestern University, 30 May 2018. (Code)

Lee, M.A., Martin, G.E., **Goodkind, A.**, Bicknell, K., Maltman, N., Bush, L., Losh, M. *A longitudinal, multi-method analysis of pragmatic language in ASD and related developmental disabilities.* Poster presented at the International Society for Autism Research, May, 2018, Rotterdam, Netherlands

Goodkind, A. & Bicknell, K.. *Low-level language statistics affect reading times independently of surprisal.* Poster presentation at the 31st annual CUNY Conference on Human Sentence Processing, UC Davis, Davis, California, 15–17 March 2018.

2015 Goldman, N. & **Goodkind, A.**. *Worth 1,😊😊😎 Words: The Linguistics of Emoji and Emoji of Linguistics.* SQUID X: 10th Annual Conference Showcasing Quirky and Original Ideas in Development. New York, NY April 24, 2015. (Slides)

2014 **Goodkind, A.**. *Detecting Multi-word Expressions Through Typing Patterns. 15th Texas Linguistics Society Conference, Austin ,TX, October 24-26, 2014* (Slides)

Goodkind, A.. *Detecting Multi-word Expressions in Computer Keyboard Produced Text. CUNY Research Day*, New York, NY

TEACHING EXPERIENCE	**Teaching Assistant**

Northwestern University
- Linguistics 220: Language & Society (Prof. Annette D'Onofrio), 2018
  - Guest lecture on quantitative data analysis
- Cognitive Science 210: Language & the Brain (Profs. Matt Goldrick & Mark Beeman), 2019
- Linguistics 221: Language & Prejudice (Prof. Erin Leddon), 2019

NON-ACADEMIC EMPLOYMENT

PhD Data Science Intern, Vail Systems, Chicago, IL, USA	**Summer 2020**
Language Engineering Intern, Transcendental Endeavors, NY, NY, USA	**Summer 2016**
Software Developer in Test Intern, Microsoft, Redmond, WA, USA	**Summer 2013**
Operations Analyst, Goldman Sachs, Multiple Locations, USA	**2008–2011**

DEPARTMENTAL SERVICE

Co-organizer, Northwestern Text Analytics Working Group	**2018–Present**
Founder, Northwestern NLP Group	**2017–2018**
Founder, Linguistics Deep Learning Reading Group	**2017–Present**
Web & Social Media Coordinator, Linguistics	**2017–Present**
Colloquium Reception Committee, Linguistics	**2016–2017**

PROFESSIONAL ACTIVITIES

Diversity & Inclusivity Committee, NAACL 2019, Committee Member
DevSci Cluster, Northwestern University, Member
Institute of Electrical and Electronics Engineers (IEEE), Member
Linguistic Society of America (LSA), Member
Association for Computational Linguistics (ACL), Member
Financial Industry Regulatory Authority (FINRA), Member

LANGUAGES

Computer—Java, Python, R (ggplot2, plotly, lme4), C++, VBA, C#, LaTeX, MATLAB/Octave
Human—American Sign Language (ASL), Hebrew, Latin