

# Esti Blanco-Elorrieta

Psychology Department  
New York University  
8 Washington Place, 10003, New York

Email: [eb134@nyu.edu](mailto:eb134@nyu.edu)  
Website: <https://estiblancoelorrieta.github.io/>  
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## ACADEMIC EMPLOYMENT

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**Assistant Professor:** **New York University** (2023 - )  
Department of Psychology  
Department of Neural Science

**Post-doctoral fellow:** **Harvard University** (2020 – 2023)  
Cognitive Neuropsychology Lab (PI: Alfonso Caramazza)  
Department of Psychology

## EDUCATION

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**Ph.D.:** **New York University** (2015 – 2020)  
Psychology (Supervisor: Liina Pykkänen)  
Thesis: *Towards an ecologically valid neuroscience of bilingualism.*

**Harvard University** (research fellow, 2018 – 2019)  
Psychology (Supervisor: Alfonso Caramazza)

**M.Sc.:** **Basque Center on Cognition, Brain and Language** (Honors, 2013)  
Cognitive Neuroscience of language.

**B.A.:** **University of Deusto** (Honors, 2012)  
Basque philology and Linguistics

## AWARDS AND SCHOLARSHIPS

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**2021:** Glushko dissertation award: Cognitive Science Society.

**2021:** NYU-wide Outstanding dissertation award in the basic sciences.

**2021:** Graduate School of Arts and Sciences: Outstanding dissertation award.

**2020:** Ben Barres fellowship for post-doctoral research.

**2020:** Coons/Leibowitz graduate student teaching award.

**2019:** Forbes 30 under 30 in Science.

**2019:** Martin Braine Fellowship in Psychology.

**2018:** Dingwall Foundation Award in the Cognitive, Clinical, and Neural Foundations of Language.

**2018:** New York University: Dean's Student Travel Award.

**2017:** Society of the Neurobiology of Language: Predoctoral fellow merit award.

**2017:** Woodcock Institute Award for the advancement of neurocognitive research.

**2016:** Helmsley Fellowship for cross-disciplinary research.

**2016:** New York University: Dean's Student Travel Award.

**2015:** Neurobiology of Language Conference: Travel Award.

**2015:** New York University: MacCracken Fellowship for doctoral studies.

**2014:** La Caixa Foundation: fellowship for graduate studies in North America (4% success rate).

**2012:** BCBL: academic scholarship (awarded to the 5% most promising incoming students).

- 2011:** Basque Government fellowship for undergraduate research projects.
- 2010:** University of Deusto: Dean's fellowship for undergraduate research projects.
- 2008:** Basque Government: Distinguished Academic scholarship (top 1% students graduating high school in the country).

## GRANTS

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- 2025 – 2028** **Neural bases of bilingual language production (PI \$607,772)**  
**Funding Agency:** NSF BCS (grant 2446452)
- 2024 – 2025** **Influence of multilingualism on brain plasticity and development (PI \$27,140)**  
**Funding Agency:** NYU (type: Mega-grants initiative award)
- 2022 – 2027** **Language-specific and language-general mechanisms in bilingual aphasic individuals (PI \$1,003,338)**  
**Funding Agency:** NIH/NIDCD (type: K99/R00, 1K99DC019973-01)
- 2022 – 2025** **ATOM (Adaptations to Multilingualism) (Advisory team 68.365,00 €).**  
**Funding Agency:** Ministry of Science (type: PID2021-124399NA-I00).

## TRAINEE GRANTS

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- 2025 – 2028** **Fellowship Award (Sponsor \$144,500; PI Maya Taliaferro)**  
**Funding Agency:** National Defense Science and Engineering Graduate Fellowship (NDSEG)

## JOURNAL PUBLICATIONS

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27. Chen, X., Salvatore, M., & **Blanco-Elorrieta, E.** (*under review*). A large sample investigation across 4 language groups reveals no consistent bilingualism specific neural adaptations.
26. Chen, X., & **Blanco-Elorrieta, E.** (*under review*). A theoretically driven, publicly available, calculation for language dominance and multilingualism score.
25. Chen, X., Marte, M., Kiran, S., & **Blanco-Elorrieta, E.** (*under review*). Evidence for an integrated bilingual language system across levels of representation through discourse tasks in bilingual aphasia.
24. Arantzeta, M., & **Blanco-Elorrieta, E.** (2025). Basque-Spanish bilingual aphasia: a case-study to inform bilingual language organization. *Neurobiology of Language*, 1 - 35.
23. **Blanco-Elorrieta, E.** (2024). Is adaptation the new “bilingual advantage”? *Trends in Cognitive Sciences*. 1-8.
22. Abdullah, L., **Blanco-Elorrieta, E.**, & Valdez, D. L. (2024). “¿Cómo qué, cómo qué? cómo qué?” Single-language echolalia in a bilingual female with progressive supranuclear palsy: a case report. *Neurocase*, 1-8.
21. Baus, C., Millan, I., Chen, X. J., & **Blanco-Elorrieta, E.** (2024). Exploring Language Comprehension through Cortical Tracking: the bilingual test case. *Neurobiology of Language*, 1-28.

20. Abdullah, L., Valdez, D., **Blanco-Elorrieta, E.**, (2023). Single-language echolalia in a bilingual female with Progressive Supranuclear Palsy: A case report. *Archives of Clinical Neuropsychology* , 38(7), 1482-1482.
19. Zhu, J., **Blanco-Elorrieta, E.**, Sun, Y., Szakay, A., & Sowman, P. (2022). Natural vs. forced language switching: free selection and consistent choices eliminate significant performance costs and cognitive demands in the brain. *NeuroImage*, 247, 188797.
18. **Blanco-Elorrieta, E.\***, Hauptman, M.\*, & Pylkkänen, L. (2021). Inflection across categories: Tracking abstract morphological processing in language production with MEG. *Cerebral Cortex*, 309.
17. **Blanco-Elorrieta, E.** & Caramazza, A. (2021). On the need of theoretically guided approaches to possible bilingual advantages: an evaluation of the potential loci in the language and executive control systems. *Neurobiology of Language*, 1-16.
16. Honari-Jahromi, M., Chouinard, B., Fyshe, A., **Blanco-Elorrieta, E.**, & Pylkkänen, L. (2021). Neural representation of words within phrases: Temporal evolution of color-adjectives and object-nouns during simple composition. *Plos One*, 16(3), e0242754.
15. **Blanco-Elorrieta, E.** & Caramazza, A. (2021). A common selection mechanism at each linguistic level in bilingual and monolingual language production. *Cognition*, 104625.
14. **Blanco-Elorrieta, E.\***, Gwilliams, L\*., Marantz, A., & Pylkkänen, L. (2020). Adaptation to mis-pronounced speech: evidence for a prefrontal-cortex repair mechanism. *Nature Scientific Reports*, 11, 97.
13. **Blanco-Elorrieta, E.**, Ding, N., Pylkkänen, L., & Poeppel, D. (2020). Understanding requires tracking: Noise and knowledge interact in bilingual language comprehension. *Journal of Cognitive Neuroscience*. 32(10), 1975-1983.
12. Liu, H., Zhang, Y., **Blanco-Elorrieta, E.**, Hea, Y., Chen, B. (2019). Role of proactive control on subcomponents of language control: Evidence from trilinguals. *Cognition*, 194, 104055.
11. **Blanco-Elorrieta, E.**, & Pylkkänen, L. (2018). Ecological validity in bilingualism research and the bilingual advantage. *Trends in Cognitive Sciences*, 22(12), 1117-1126
10. **Blanco-Elorrieta, E.**, Emmorey, K., & Pylkkänen, L. (2018). Language switching decomposed through MEG and evidence from bimodal bilinguals. *Proceedings of the National Academy of Sciences*, 115(39), 9708-9713.
9. **Blanco-Elorrieta, E.**, Kastner, I., Emmorey, K., & Pylkkänen, L. (2018). Shared neural correlates for building phrases in signed and spoken language. *Nature Scientific Reports*, 8, 5492.
8. **Blanco-Elorrieta, E.** Emmorey, K., & Pylkkänen, L. (2017). Decoding Language Switching in the Bilingual Brain: evidence from simultaneous speech and sign production. *Cognitive Computational Neuroscience (CCN)*.
7. Fyshe, A., **Blanco-Elorrieta, E.** & Pylkkänen, L. (2017). The neural representation of concepts during composition. *Cognitive Computational Neuroscience (CCN)*.
6. **Blanco-Elorrieta, E.**, Ferreira, V.S., Del Prato, P., & Pylkkänen, L. (2017). The priming of basic combinatory responses in MEG. *Cognition*, 70, 49-63.
5. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2017). Bilingual language switching in the lab vs. in the wild: The spatio-temporal dynamics of adaptive language control. *The Journal of Neuroscience*, 37: 9022-9036.

4. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2016). Bilingual language control in perception vs. action: MEG reveals comprehension control mechanisms in anterior cingulate cortex and domain-general production control in dorsolateral prefrontal cortex. *The Journal of Neuroscience*, 36(2): 290 – 301.
3. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2016). Composition of complex numbers: Delineating the computational role of the left anterior temporal lobe. *NeuroImage*, 124, 194 - 203.
2. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2015). Brain bases of language selection: MEG evidence from Arabic-English bilingual language production. *Frontiers in Human Neuroscience*, 9.
1. Pylkkänen, L., Bemis, D.K. & **Blanco-Elorrieta, E.** (2014). Building phrases in language production: An MEG study of simple composition. *Cognition*, 133, 371-384.

## PEER-REVIEWED PROCEEDING PAPERS

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2. Singh, A.\*, Taliaferro, M.\*, & **Blanco-Elorrieta, E.** (*accepted*). Blending Boundaries: A Computational Approach to How Bilinguals Reconcile Cross-Linguistic Categorization. *Proceedings of the 46<sup>th</sup> Annual Meeting of the Cognitive Science Society. (CogSci)*
1. Taliaferro, M.\*, Imel, N.\*, Zaslavsky, N<sup>^</sup>., & **Blanco-Elorrieta, E<sup>^</sup>.** (*accepted*). Bilinguals exhibit semantic convergence while maintaining near-optimal efficiency. *Proceedings of the 46<sup>th</sup> Annual Meeting of the Cognitive Science Society. (CogSci)*

## INVITED TALKS [last 5 years]

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37. *Keynote Speaker.* 2<sup>nd</sup> Conference in Clinical Linguistics, Baiona, France. (2025, July).
36. *Invited Speaker.* LOT Summer School on Linguistics, Antwerp, Belgium. (2025, June).
35. *Keynote Speaker.* 5th International Conference on Theoretical East Asian Psycholinguistics, Tokyo, Japan. (2025, April).
34. *Colloquium Speaker.* *Concepts and Categories Colloquium*, New York University, USA (2025, March).
33. *Colloquium Speaker.* *Department of Communicative Sciences and Disorders*, New York University, USA (2025, March).
32. *Colloquium Speaker.* *Neuroscience Graduate Program*, UC San Diego, USA. (2025, February).
31. *Colloquium Speaker.* *Language and Communicative Disorders Speaker Series*, SDSU, USA. (2025, February).
30. *Keynote Speaker.* *Adaptations to Multilingualism/Bilingualism and the Role of Linguistic Proximity.* Universidad Autonoma de Barcelona, Catalunya (2025, February).
29. *Keynote Speaker.* *Stony Brook, Yale, NYU & CUNY (SYNC) Linguistics Conference*, USA. (2024, December).
28. *Colloquium Speaker.* *USA & Spain bridge for the neurosciences colloquium*, King Juan Carlos Center, NY, USA. (2024, October).
27. *Colloquium Speaker.* *Speech-Language-Hearing Sciences*, The Graduate Center of CUNY, USA. (2024, October).

26. *Invited Speaker. 2025-2029 Strategic Plan Development Workshop. University of Mondragon, Basque Country. (2024, March).*
25. *Plenary Speaker, Architectures and Mechanisms for Language Processing AMLaP Conference, Donostia-San Sebastian, Basque Country. (2023, August).*
24. *Plenary Speaker, XVI International Symposium of Psycholinguistics, Vitoria-Gasteiz, Basque Country. (2023, May; available [here](#)).*
23. *Colloquium Speaker, Donostia International Physics Center. Donostia-San Sebastian, Basque Country. (2023, March; available [here](#)).*
22. *Keynote Speaker, Perspectives on Multilingualism: An Interdisciplinary Roundtable. NYUAD Research Institute, New York, USA. (2023, January; available [here](#)).*
21. *Symposium Speaker. Dementia and Alzheimer in Low and Middle Income Countries, Nairobi, Kenya. (2022, December).*
20. *Colloquium Speaker. Cognitive Sciences Program Weekly Speaker Series, Dartmouth University, USA. (2022, October).*
19. *Symposium Speaker. Intersectional Experiences in Academia, University of Oslo, Norway. (2022, March).*
18. *Colloquium Speaker. Psychology Department Seminar, New York University, USA. (2022, March).*
17. *Colloquium Speaker. Cognitive Science Seminar, Johns Hopkins University, USA. (2022, March).*
16. *Colloquium Speaker. Language and Cognitive Science Seminar, Delaware University, USA. (2022, March).*
15. *Colloquium Speaker. Princeton Neuroscience Institute Seminar Series, Princeton University, USA. (2022, March).*
14. *Colloquium Speaker. Neuroscience Research Research Seminar Series, University of Texas Rio Grande Valley, USA. (2022, February).*
13. *Colloquium Speaker. Cognitive Area Talk, University of Michigan, Ann Arbor, USA. (2022, January).*
12. *Colloquium Speaker. Aphasia Community Group Seminar Series, Boston University, USA. (2021, November).*
11. *Colloquium Speaker. Language and Brain Colloquium, University of Florida, USA. (2021, October).*
10. *Colloquium Speaker. Department of Language Science, University of California Irvine, USA. (2021, March).*
9. *Plenary speaker. Young Scholar Speaker Series, Pennsylvania State University, USA. (2021, March).*
8. *Colloquium Speaker. NIH National Institute on Aging's Virtual Workshop, USA. (2021, March).*
7. *TEDx Talk, Tarragona, Spain. (August 2020).*
6. *Ev Lab, MIT, Cambridge, USA. (May 2020).*
5. *Colloquium Speaker. Dartmouth University, New Hampshire, USA. (May 2020).*
4. *Meet the author series, Linguistics Department, NYU, USA. (March 2020).*
3. *Mesgarani lab. Columbia University, New York, USA. (March 2020).*
2. *Entre cuatro paredes. Expatriados & Co., New York, USA. (March 2020).*
1. *Colloquium Speaker. Linguistics. Cornell University, Ithaca, USA. (February 2020).*

## TEACHING

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### **Teaching Instructor (NYU):**

Spring 2024: Undergraduate Cognition

Fall 2024: Undergraduate Cognition

### **Teaching Assistant (NYU):**

Spring 2019: Psychology and Linguistics: *Neurolinguistics*. (Graduate and Undergraduate).

Fall 2018: Psychology: *Introduction to Psychology*. (Undergraduate).

Spring 2018: Psychology: *Cognition* (Undergraduate).

Spring 2017: Psychology: *Cognition* (Undergraduate).

Fall 2016: Psychology and Linguistics: *Neural Bases of Language*. (Graduate and Undergraduate).

### **Guest lectures & Summer schools:**

2025: *Graduate School of Linguistics (LOT)*. Week-long summer course on neurolinguistics (Radboud University).

2022: *Linguistics and Cognitive Science*. Lecture on the neural bases of bilingualism (NYU).

2020: *Cognitive Psychology*. Lecture on bilingualism and sign language cognition (Dartmouth).

2019: *Neural bases of Language*: Lecture on the neurobiology of bilingualism (NYU).

2017: *Neurolinguistics*. Lecture on bilingualism and aging (Young Leaders of the Americas Initiative).

2017: *Cognition*. Lecture on language and cognition (NYU).

2016: *Neural Bases of Language*. Lecture on the neurobiology of bilingualism (NYU).

2016: *Neural Bases of Language*. Lecture on the neural bases of perceptual attunement (NYU).

## MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

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2020 – 2022 Accessibility and Diversity Committee, Society for the Neurobiology of Language

2018 – 2021 Elected Board Member, Society for the Neurobiology of Language

2016 – present Member, Society for Neuroscience

2015 – present Member, Cognitive Neuroscience Society

2014 – present Member, Society for the Neurobiology of Language

## ADVISING AND MENTORING

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### **PhD advisees:**

2024-present Aditi Singh

2023-present Jessica Chen, Maya Taliaferro (Psychology, NYU)

### **Undergraduate thesis:**

2022-2023 Alisa Ragassa (Psychology, Harvard)

### **Dissertation committee:**

2024 Natália Pinheiro (Linguistics, Federal University of Santa Catarina in Brazil)

Alline-Priscillia Messi (Psychology, NYU)

Jessica Goebbel (Linguistics, NYU)

## Advisory committee:

Hanxiao Lu (Psychology, NYU)

Meghan Kalvey (Psychology, NYU)

## ACADEMIC SERVICE

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**a) Ad hoc journal reviewer:** Nature Reviews Psychology; Neurobiology of Language; Cognition; Scientific Reports; Human Brain Mapping; Proceedings of the National Academy of Sciences, PLOS Biology; PLOS One; Journal of Neuroscience; NeuroImage; Brain and Language; Language, Cognition and Neuroscience; Journal of Cognitive Psychology; Journal of Neurolinguistics, Bilingualism: Language and Cognition; Cerebral Cortex; Journal of Cognitive Neuroscience.

**b) Ad hoc grant reviewer:** National Science Foundation (NSF) – Linguistics and Developmental Sciences Program Panel; Polish Ministry of Science and Higher Education; Polish National Centre for Research and Development; Rochester Neuroscience Grant Program.

**c) Ad hoc conference reviewer:** Architectures and Mechanisms for Language Processing (AMLaP), Society for the Neurobiology of Language, International Symposium on Bilingualism, International Conference on Theoretical East Asian Psycholinguistics.

### c) Conference organization:

Program committee (Society for the Neurobiology of Language annual meeting; 2020, 2021).

### d) Elected Representative:

Society for the Neurobiology of Language (2019-2022); Linguistics student body (University of Deusto; 2008-2012).

## SCIENTIFIC OUTREACH

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- 2025: Outreach Talk at Waseda University, Tokyo, Japan.
- 2024: Interview at “The Science of Perception Box” podcast, USA.
- 2024: Outreach Talk at “Sin Fronteras” Educational in Madrid, Spain.
- 2023: Outreach Talk on Bilingualism and Child Development at Montessori School in Williamsburg, NYC.
- 2023: Interview in La Mecanica del Caracol radio program on language policy ([here](#), in Spanish).
- 2023: Interview in El Diario Vasco newspaper on language evolution ([here](#), in Spanish).
- 2023: Interview on Berria newspaper about the prejudices around multilingualism ([here](#), in Basque).
- 2023: Podcast episode on the psychology, neuroscience and philosophy of multilingualism ([here](#), in English).
- 2023: ‘De ondas de sonido a significado’ Outreach talk at the University of the Basque Country.
- 2023: Radio program at EITB discussing the bilingual brain (available [here](#) in Spanish).
- 2023: ‘How Does the Bilingual Brain Process Language?’ Public talk at NYUAD Institute ([here](#), in English).
- 2023: ‘Como funciona el cerebro bilingüe?’ Talk at San Telmo Museum *NanoNeuro* series ([here](#), in Spanish).
- 2022: TV Interview on the effects on multilingualism on the brain in EITB (available [here](#), in Basque).
- 2022: Interview on multilingualism and language policies in El Español newspaper (available [here](#), in Spanish).
- 2022: Interview at ‘Gure artean’ podcast, EITB.
- 2021: Panelist and Organizer, Early Career Event, Society for the Neurobiology of Language.
- 2021: Speaker, Doctoral Student Welcome Event, New York University.

- 2021: TED en Español Podcast episode (available [here](#), in Spanish).
- 2021: Interview in Archiletras bi-monthly scientific magazine (available [here](#), in Spanish).
- 2021: Baipasa: weekly contribution to science radio program (available [here](#), in Basque).
- 2020: Interview in a TV episode of ‘The brain hunter’ (available [here](#), in Spanish).
- 2020: TED Talk in Spain, 2020 (available [here](#), in Spanish).
- 2020: Interview on the Neurobiology of multilingualism on COPE radio (available [here](#), in Spanish).
- 2020: Interview on the architecture of the multilingual brain in RTVE Spanish radio (available [here](#), in Spanish).
- 2019: ‘How to build a career in Science’ panelist; Young Leaders of the America Initiative (YLAI).
- 2019: ‘How does switching between languages impact your body?’ Inspire series by Euronews ([here](#) in English).

## (TRANS)GENDER ADVOCACY

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- 2024: Interview on TODAY newspaper on gender affirming voice therapy (available [here](#), in English)
- 2022: University of Oslo: Intersectional Experiences in Academia workshop. Panelist and workshop leader.
- 2021: Spanish ministry for Gender Equality: advisory committee.
- 2021: ‘Identity, language, and the future’ Twitch interview for ‘The Future Game’ (available [here](#), in Basque).
- 2021: Bayer pharmaceutical Latin-American branch: Pride event panelist.
- 2021: ‘Non-binary’ feature documentary on trans experience (available [here](#), English subtitles).
- 2020: ELA Basque Trade Union: Pride event panelist.
- 2020: National Organization of Gay and Lesbian Scientists and Technical Professionals: Speaker, career panel.
- 2020: Harvard Women in STEM Initiative, Mentor.
- 2019: The Lesbian, Gay, Bisexual & Transgender Community Center: Panelist, ‘Being trans\* in Academia.’

## MEDIA COVERAGE (selected)

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- 2023: Newspaper interview in *Diario Vasco* on language and evolution ([here](#), in Spanish).
- 2023: Radio interview at *Radio Vitoria* on how the human brain processes language ([here](#), in Spanish).
- 2023: Interview on *Nius Diario* on the myths around bilingualism and the brain ([here](#), in Spanish).
- 2023: Interview in *The New York Times* on bilingualism and aging ([here](#), in English).
- 2023: Interview in *Berria* newspaper on the bilingual brain ([here](#), in Basque).
- 2023: Interview in *ARGIA* magazine on the bilingual brain ([here](#), in Basque).
- 2020: ‘Bilingual individuals’ interview in *El Pais* newspaper (available [here](#), in Spanish)
- 2020: ‘Genius of a thousand languages’ interview in *Deia* newspaper (available [here](#), in Spanish)
- 2020: Interview on Multilingualism and being a Forbes Scientist, on EITB radio (available [here](#), in Basque)
- 2020: ‘How does one become a Forbes Scientist?’ interview on ONDA CERO radio; [here](#) in Spanish)
- 2019: Coverage and Interview in the *Inspire* series by Euronews (available [here](#) in English)
- 2018: ‘When we sign, we build phrases with similar neural mechanisms as when we speak’ (American Association for the Advancement of Science, available [here](#) in English)
- 2018: ‘Uno stesso circuito per lingua parlata e lingua dei segni’, *Le Scienze* magazine, available [here](#), in Italian)
- 2018: ‘Four amazing discoveries you probably didn’t hear about this week’, NSF podcast, [here](#), in English)
- 2018: ‘How we turn on and off languages’, *Science Daily* (available [here](#), in English)
- 2017: ‘Chatting makes it easy to switch languages’, *Futurity* news (available [here](#), in English)

## LANGUAGES

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**Basque/Spanish:** Native speaker. **English:** Near native. **German:** Conversational.