

2022-2023 Annual Report to the Governing Committee of Deans

June 2023



THE UNIVERSITY OF BRITISH COLUMBIA

Language Sciences
Research Excellence Cluster

Executive Summary

Governance

In 2022-2023, the Language Sciences Institute continued its second year as a recognized GREx Institute, preceded by receiving five years of GCRC funding. The institute was led by Co-Directors Dr. Janet Werker, Dr. Christine Schreyer (Interim Co-Director) and Dr. Bryan Gick (on leave during this reporting period).

In alignment with GREx requirements, Language Sciences continued with a joint Academic Steering committee, and in 2022, Language Sciences established an International Academic Advisory Board with the first meeting scheduled for June 2023.

Institutional Priorities

Catalyzing Interdisciplinary Research Programs

The GREx proposal articulated five key research challenge areas of focus for interdisciplinary research: 1) Simulating Linguaging Bodies (SLaB), 2) Mapping Language Acquisition and Decline (MaLAD), 3) Supporting Community-Engaged Language Survivance (SCELS), 4) Enhancing Language and Literacy Education (ELLE), and 5) Reimagining Public Discourse (RePD). In this year, Bryan Gick and team submitted a CFI Innovation Fund grant in support of these themes. The proposal will establish a new research space in the Gateway Building, positioning UBC and Canada at the front line of the next generation of human communication while keeping the focus on the vital, natural human experience of communicating. Results are expected to be announced in June 2023.

Engaging Community and Industry Partners

- Masters of Data Science in Computational Linguistics capstone projects resulted in ongoing collaborations with industry partners.
- Language Sciences maintained relationships with over 25 SSHRC Partnership Grant partners from various non-profit organizations
- Continued work with DiverseCITY supporting practical digital literacy skills in the Language Instruction for newcomers to Canada Program (LINC)
- Ongoing work with iPALS (immigrant Parents as Learning Support) examining the efficacy of the iPAL intervention programs for new immigrant mothers

Sharing our findings to enrich public knowledge

Language Sciences:

- produced or supported the development of 11 media stories, 11 Q&A's, 12 announcements and seven member spotlights
- produced a monthly newsletter in 2022 with over 475 subscribers
- hosted eight talks as part of the Language Sciences Talks series
- hosted one public film screening as part of the Language Sciences Film Series

- co-sponsored an additional five events

Promoting equity, diversity, and inclusion within and beyond UBC

Language Sciences' objectives for promoting equity, diversity, and inclusion within and beyond UBC include: prioritizing the hiring of IBPOC scholars in joint faculty appointments; prioritizing leadership by Indigenous scholars in all areas of research, especially in Indigenous language survivance; prioritizing community and industry engagement in areas related to language and social justice; facilitating ongoing EDI training for LangSci Leadership; continuing consultations with the Equity and Inclusion office on improving EDI in LangSci and supporting IBPOC LangSci members (faculty and trainees), and holding LangSci publicly accountable to these goals (see GREx proposal, pgs 18 and 22).

In spring 2023, Language Sciences produced an internal summary report reviewing its progress on these priorities. Highlights include emphasizing collaborations with Indigenous faculty on projects relating to Indigenous languages with explicit commitments regarding mentorship and leadership development; highlighting research by IBPOC researchers and other marginalized people in our communications and events roster; and submitting a cluster hire proposal to the Faculty of Arts for the Black Faculty Cohort Hiring Initiative in collaboration with the Departments of Linguistics, Anthropology, and Psychology (unsuccessful).

Cementing global leadership in emerging international Language Science research network

- The Language Sciences International Advisory Board, established in 2022, is made up of board members from institutions in Canada, the United States and the United Kingdom. Board members are from disciplines ranging from neuroscience, language acquisition and natural language processing, to Native American language education and reclamation, applied linguistics and sociolinguistics.
- Language Sciences collaborated with Harvard University and both University of Tokyo Japanese International Research Centre for Neurointelligence, and Council for Science, Technology and Innovation.
- Language Sciences also supported the Killam Rhythm Initiative, through cinEXmedia: Ensuring Well-Being in the Screen Age, at Orford Music. The next workshop is scheduled to be hosted in Vancouver.

Cultivating the next generation of Language Science researchers

- Language Sciences co-sponsored the sixth annual undergraduate-led Language Sciences Undergraduate Research Conference in February 2023
- Language Sciences hosted the fourth annual Graduate Student and Postdoctoral Fellow Research Day in May 2023
- Many of our research grants have supported training opportunities for undergraduates, graduates and postdoctoral fellows - in particular the SSHRC Partnership Grant, which has supported a number of training opportunities. Most notably, it has resulted in a Mitacs Accelerate Program grant which supports a postdoctoral fellow in partnership with Immigrant Parents as Learning Support (IPALS) and Dr. Carla Hudson Kam, and a project examining the efficacy of Language Instructions for Newcomers to Canada (LINC) programs with DiverseCITY in collaboration with Dr. Mark Turin, Dr. Henny Yeung (SFU), and a graduate student.

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Letter from the Co-Directors

The 2022-2023 year held many successes for Language Sciences. Our members had an exceptional year demonstrating the impact of their multidisciplinary research, receiving recognition through NSERC Alliance grants, SSHRC Connection Grants, Mitacs grants and more. Additionally, our members continued to support the development of new and ongoing interdisciplinary language-related research programs through projects ranging from Avatar-Mediated Communication and Opera Training and Motor Learning, to Japanese Pronunciation Training Tutorials and Large Language Models and Low-Resource Languages, highlighting the importance of diverse approaches to language research and innovation.

In 2022, Language Sciences welcomed one new staff member: Diya Biswas, a UBC Political Sciences Alumna, who filled the newly established role of Program Assistant to meet the growing needs of the institute. We also welcomed Dr. Christine Schreyer, Associate Professor of Anthropology at UBC Okanagan, as Interim Co-Director. Dr. Schreyer's involvement has further strengthened the relationship between scholars and students at UBC Vancouver and UBC Okanagan and has encouraged collaboration between scholars at both campuses.

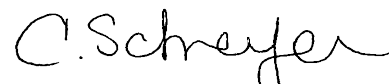
With changes to the ongoing COVID-19 pandemic and UBC's continuous efforts to prevent the spread of communicable diseases, we were glad to move towards engaging with our membership and broader community in-person again, and hosted our first in-person community event since 2020 with a turnout of over 225 members of the community. The COVID-19 pandemic highlighted the importance of connection through language, and we commit to keeping this front of mind in all our research and operational goals moving forward.

In 2021, Language Sciences became the third Global Research Excellence (GREx) Institute at UBC, and this past year we received operational funding through the GREx program to continue our work acknowledging the importance of language at every level of the human experience, from our inner lives to the relationships between our cultures and societies.

Sincerely,

Janet Werker
LangSci Co-Director
University Killam Professor, Psychology

Christine Schreyer
LangSci Interim Co-Director
Associate Professor, Anthropology



Overview

Research Themes

Language Sciences' research continues to align with three primary thematic areas: The Communicating Mind and Body (CoMBo), led by Janet Werker and Anthony Herdman; Evolving Language in an Information Economy (ELIE), led by Sidney Fels, Muhammad Abdul-Mageed (on leave) and Bryan Gick (on leave); and Language, Sustainability, and Transnationalism (LSTn), led by Daisy Rosenblum and Guofang Li.

UBC Language Sciences



Language Sciences' research theme framework

Membership

As of April 2023, Language Sciences' membership included 176 faculty members, 59 student members, 10 postdoctoral fellows, and 114 affiliate members from 63 different universities and colleges in 11 countries.

Language Sciences members at UBC come from 12 different faculties and 48 departments at the Vancouver and Kelowna campuses. The bulk of our members are from the Faculty of Arts (140), followed by the Faculty of Education (43) and the Faculty of Medicine (42).

Funding

Global Research Excellence Institute

Language Sciences received \$347,042.03 in operational funding through the Global Research Excellence Institute (GREx) program. From these funds, Language Sciences helped fund seven member projects and events (see [Appendix IV: Supported Member Projects on page 26](#) for more details).

Research Seed Funding

Language Sciences received \$30,000 in research seed funding from its governing faculties - \$10,000 each from Education, Science, and Medicine. From these, Language Sciences distributed \$14,000 in funding across three member projects, with two subsequent calls for proposals forthcoming in Fiscal Year 2023 - 2024. A summary of projects can be found in [Appendix IV: Supported Member Projects on page 26](#).

Other Support

As part of its commitments of support for Language Sciences' GREx bid, the Faculty of Education is hiring a new faculty member in Early Childhood Literacy.

Institutional Goals

Catalyzing new interdisciplinary research programs

Simulating Language Bodies

CFI Innovation Fund Grant Submitted - *'Face-to-Face' Communication*

PI Bryan Gick and team submitted a \$11,824,191 CFI Innovation Fund grant (\$3.96m from CFI and BCKDF, respectively). Results are expected to be announced in June 2023.

The proposal will establish a new research space in the Gateway Building, positioning UBC and Canada at the front line of the next generation of human communication while keeping the focus on the vital, natural human experience of communicating. This new space will enable the research team to (1) generate and analyze the world's most advanced communication data sets, documenting varied populations in varied tech-mediated and analog communications; (2) apply deep learning to extract useful knowledge from our complex data sets and use this knowledge to support richer and more naturalistic tools for multimodal communication; neural and biomechanical processes to simulated talkers and avatars to airspaces and environments. Together, this research will allow us to document and analyze in-person and tech-mediated communication - including underrepresented languages - as it naturally occurs. Mining and applying this data will help us interact in ways that advance our health, well-being, and ability to make informed decisions, while contributing to the development of new applications and technologies essential to an informed and engaged civil society. Ultimately, it will inform decision making in all sectors about what the future of human communication should look like.

Research in the proposed space will center on three themes: Communicative Contexts (led by Janet Werker), Mutlimodal Interaction and Deep Learning (Led by Muhammad Abdul-Mageed), and Brain2Speech Simulation (led by Sid Fels).

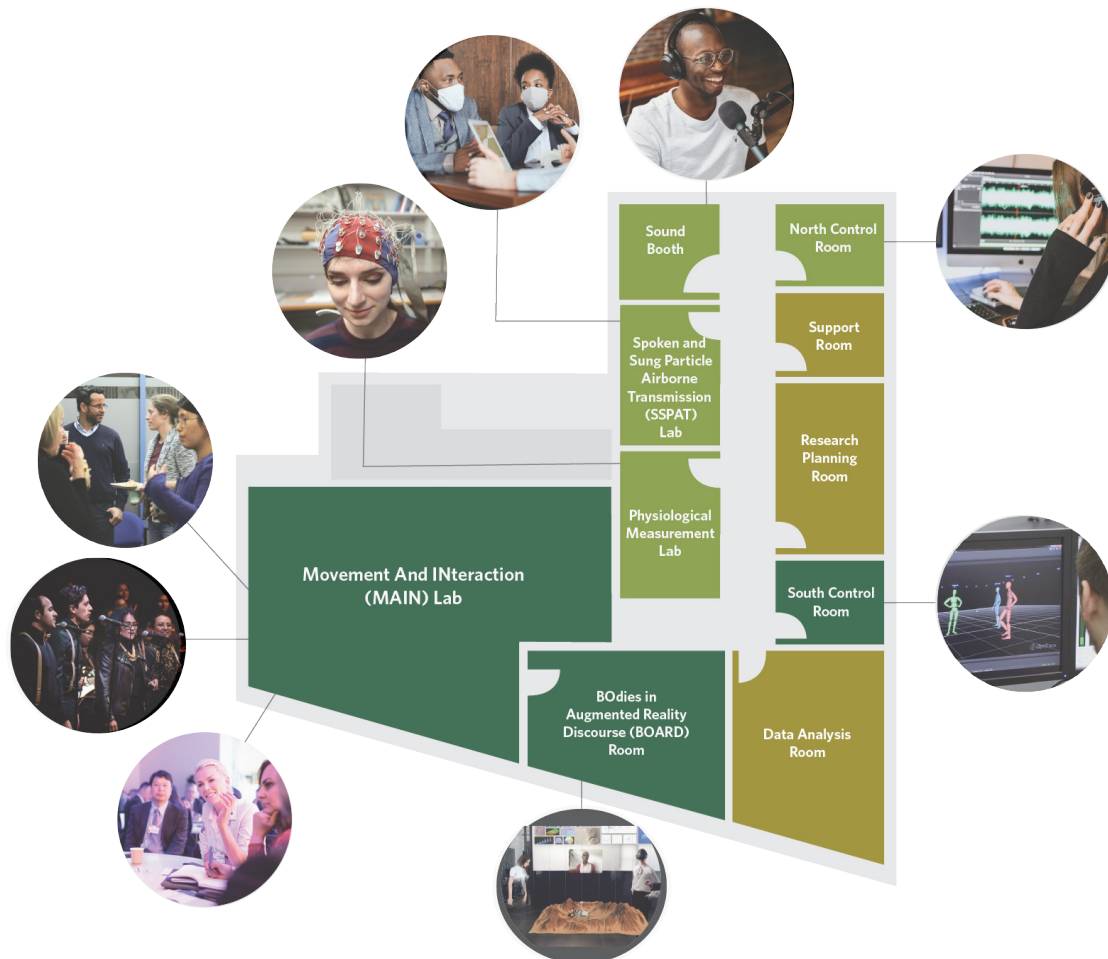


Diagram of the proposed Face-to-Face Communication Lab

Theme 1: Communicative Contexts (ComCon)

- Performer-Audience Communication Contexts (Hermiston) will use the MAIN Lab to study the dynamics of communicative interaction in large-group performative contexts created using the Context Building equipment suite, with a focus on opera performances, public lectures and classroom teaching.
- Child and Infant Language Development Contexts (Werker) designed to determine how different kinds of interaction partners, styles, and modalities facilitate spoken language acquisition in infants and children from different linguistic and cultural backgrounds.
- Indigenous Narrative and Teaching (INT) Contexts (Hammerly) will focus on how emerging communication systems – including technological systems – may be used to create spaces that respect Indigenous knowledge systems and support the vitality of Indigenous cultures, including language learning programs and storytelling events (connecting to CHILD and to PACC).

Theme 2: Multimodal Interaction and Deep Learning (MIDL)

- Interactive Technology for Opinion Change (ITOC; Zhao) investigates how technologically mediated face-to-face communication (i.e., virtual meetings, robot-embodied meetings, in-person meetings) impacts

consensus building and depolarization in group settings.

- Deep Learning of Multimodal Interaction (DeLMI; Abdul-Mageed) will develop and apply novel deep learning methods to draw discoveries from our richly multimodal data.
- Multimodal Interfaces for Communication and Collaboration (MIC2; Yoon) will seek ways to augment technologically mediated face-to-face communication with multimodal interactions.

Theme 3: Brain2Speech Simulation (B2SS)

- Brain to Communication (Boyd) - focuses on brain imaging and building neural data sets to feed into the simulation stream.
- Simulating Communicating Bodies (Fels) focuses on simulating biomechanics and “talking head” simulations. The primary contribution of this project is to create real-time, biomechanically-driven artificial face/head/vocal tract models customized to individual users.
- Multiphysics Modeling (Jaiman) focuses on large-scale simulations using computational fluid dynamics and finite element methods to (1) model fluid body interactions of vocal folds and vocal tract to generate voice from body simulations, and (2) model airborne pathogen transmission in a room during face-to-face communicative interactions.

Control Strategies for Articulatory / Avatar-Mediated Communication

The Brain2Speech group continues to meet weekly. In the past year, Language Sciences supported a student exchange with Dr. Peter Birkholz’s lab at the University of Dresden, who have submitted and published a number of papers (see [Appendix IV: Supported Member Projects on page 26](#)). The team also submitted an NSERC Discovery Horizon Grant application, ‘Deep Brain-Body Control of Speech Production Via Machine Learning’ (unsuccessful).

Opera Training and Motor Learning

In 2022, the Opera Training and Motor Learning team successfully presented their research at three conferences. Additionally, a publication about a project undertaken during Covid-19 titled ‘Opera (Training (Research)) During Lockdown’ was accepted for publication.

The team has two manuscripts titled ‘Opera Singers’ Cognitive Functioning is Associated With Physiological Stress During Performance’ was recently accepted, and ‘Resting-State Brain Connectivity Correlates of Musical Sophistication’ currently under review for publication. Recently, two abstracts were accepted for oral presentation at the 17th International Conference on Music Perception and Cognition, scheduled for late summer in Tokyo, Japan.

Currently, the team is finalizing data collection for a longitudinal protocol, and they are continuing their investigation into the physiological processes that occur during opera performances. One manuscript about the latter will be submitted this summer. Additionally, as a new project, they are exploring the influence of opera training on functional brain connectivity using EEG.

E-Nunciate

Strang Burton (principal director) lead the development of Japanese pronunciation training tutorial, with most of the work on the project done by Misuzu Kazama (UBC Asian Studies) and Bosung Kim (UBC CTLT), with support from the UBC OER fund and supplementary funding from UBC Worklearn. The team developed three Canvas modules for teachers and learners of Japanese, with extensive embedded media and interactivity, was released as open education resource under CC-BY-NC-SA license.

The modules have been used in Japanese Language courses JAPN 100-200 levels (all sections) and some of JAPN 300 courses in 2021 W2. They have also been used as a TA training in Japanese Language Program. Interest has been expressed for use of these materials for Japanese Language courses at multiple universities in Canada and Japan.

Mapping Language Acquisition and Decline

Collaboration with Takao Hensch (Harvard University) and the Japanese Council for Science, Technology, and Innovation (CSTI)

Language Sciences and the UBC Data Sciences Institute are collaborating with Takao Hensch and the Japanese Council for Science, Technology, and Innovation (CSTI) on projects relating to the interface between NLP, technology, and spoken language acquisition and decline.

As part of this partnership, UBC will receive new EEG equipment, including an ActiChamp EEG system for hyperscanning, to enable studies on the social interaction roots of language learning. This will allow deeper study of contingency in parent child and ultimately GBT interactions, on language learning and social cohesion. UBC users will also be included in use of new GPU servers.

The group is planning to submit a joint grant centering in part on the use of natural language processing on informal text (e.g. text messages, social media posts) in English and Japanese to monitor mental wellness.

Canada First Research Excellence Fund

Following the unsuccessful submission of a CFREF application in 2021, team members continue to develop projects outlined in that proposal. Raymond Ng has a joint project with Daniel Vigo (UBC Psychiatry) which develops a comprehensive online detection and intervention approach to university students' mental health and substance use. Raymond Ng's contribution relates to detection, with a particular focus on understanding informal text generated by students (e.g. reddit posts). In 2022-2023, the group hired a postdoctoral fellow and one MSc level data scientist, who have been developing tools to analyze reddit posts from five universities on sources of students' stress from 2020 - 2022.

Optimizing magnetoencephalography pipeline for studies with infants and children

Hee Yeon Im received a \$25,000 Health Innovation Funding Investment (HIFI) Award to optimize the MEG pipeline for studies with infants and children, with an emphasis on speech and language. Other team members from LangSci included Debbie Giaschi, Lauren Emberson, Tony Herdman, and Janet Werker.

Large language models and low-resource languages

Muhammad Abdul-Mageed's work on large language models for 500+ low resource African languages continues, including creating new language models - language varieties, machine translation and speech. Current demos online can readily detect 517 African languages, including recognition of both optical characters and handwriting.

Other streams of work include creating more efficient models (e.g., lower energy models, in collaboration with Microsoft), grammatical correction of language structure and spelling for use in education technology, and ongoing work with Indigenous languages.

Enhancing Language and Literacy Education

Ensuring Full Literacy in a Multicultural and Digital World

The Ensuring Full Literacy in a Multicultural and Digital World SSHRC partnership grant focused on research work in the third year of the project. Teams across the grant were able to reactivate projects that were delayed due to the pandemic. Language Sciences supported knowledge mobilization activities.

In year three of the grant, Alexis Black and Christopher Hammerly became Co-Applicants, and Xin Sun joined the PG as a Next Generation Scholar. Carla Hudson Kam's project with partner Decoda Literacy Solutions Society, Assessing Parent and Child Development in the IPALS Program, was approved for funding from Mitacs through the Mitacs-SSHRC joint initiative in April 2022, and the project began in September 2022. Mark Turin officially stepped down as a Co-Lead at the end of year three.

While much of the work on the Language and Literacy team had to be halted, or taken on-line, during the height of the pandemic, results from some on-line and interview studies are now complete, and laboratory studies have begun again. Many of the activities in this theme are linked as well to the SSHRC PG 'Ensuring Full Literacy'. While we can touch on only some of the work, studies in spoken language include:

1. Research on how lexical representations of meaning evolve in the preschool and early school years (including UBC Language Sciences Alexis Black, Lauren Emberson, Xin Sun, and Janet Werker – plus Associate members Alona Fyshe University of Alberta) and Suzanne Curtin (Brock University)
2. Studies of brain activation in naturalistic word learning and book reading activities between mother and infant (Lauren Emberson, Ola Dopilera and Janet Werker)
3. Studies of infants' understanding of words as labels for individuals (e.g. 'Mommy') vs categories (e.g. 'hand'), and whether that differs in bilinguals and monolinguals, and as a function of the properties of the languages being learned (Geoffrey Hall, Janet Werker, with affiliate member Sachiyo Suda, Tamagawa University).

Studies on early literacy include:

1. Studies comparing infant engagement and word learning when the e-book narrator reads to the infant, vs when a parent reads an e-book to their infant (Alexis Black, Janet Werker and affiliate member, Helene Deacon);
2. A partnership between Carla Hudson-Kam and iPALS (immigrant Parents as Learning Support) examining the efficacy of the iPAL intervention programs for new immigrant mothers;

3. Studies examining the use of online materials in promoting reading in both mainstream and indigenous populations (e.g. Alexis Black with affiliate member Carrie Demmans-Ep, University of Alberta);
4. Studies examining the relationship between the neural representations of pre-reading vs reading children from English, Chinese, and Chinese-English backgrounds when they process or read common vs uncommon new word constructions in their respective languages (e.g. Chinese languages use more compounding, as in 'bookstore' whereas English uses more derivations, as in 'walking'); and
5. A collaborative study (Guofang Li and Henny Yeung, Simon Fraser University) on the effectiveness and the impact of a university-community-school collaborative program, 'Racing Readers', on L2-English reading motivation and literacy engagement among grade 3-5 immigrant students who were predominantly from Punjabi-speaking families.

Global Storybooks and Storybooks Canada

Global Storybooks is a free multilingual literacy resource for language teachers and learners of all ages. During 2022-2023 the Global Storybooks team did a major revision to the website, <https://globalstorybooks.net/>. There are now three divisions to the site: Featured Sites, Language Resources, and Community Projects. New this year as well in the Community Projects, is Storybooks Ukraine, developed collaboratively with the Alberta Ministry of Education.

Early Childhood Literacies Position

There is an ongoing tenure-track assistant professor position search in Early Childhood Literacies in the Department of Language and Literacy Education, which is the result of the collaboration between Language Sciences Institute and Faculty of Education. At the time of this report, the search committee is concluding interviews.

Supporting Community-Endangered Language Survivance

At UBC Okanagan, Language Sciences members have been working to help expand the Indigenous Language Fluency degrees. The first cohort of nsylxcn students will graduate with their Bachelor's of Nsyilxcn Language Fluency degree in June 2023. The first cohorts of the nle'lepmxcin and st'át'imcets language fluency degree cohorts will begin at UBCO in fall of 2023. These programs have led to new hires, including Dr. John Lyon and Mandy Jimmie. The Institute for Community Engaged Research is also developing an nsylxcn language series for their open-access press. Finally, the faculty has been successful with both internal ISI (Indigenous Strategic Initiatives - Jimmie) and CUES (Community University Engagement Support - Lyon and Schreyer) grants, but also SSHRC Insight Development Grant (IDG) funding (Lyon, with Armstrong and Schreyer), while the SSHRC IDG on Relational Lexicography (Turin and Schreyer) has reached some project milestones.

At UBC Vancouver, the First Nations and Endangered Languages program is in its fifth year of providing support, skills, and training for students interested in learning diverse heritage languages and working in language revitalization and reclamation, from Sm'algyax and Dakelh to Michif and Maliseet. Their alumni include the founder of an accredited adult immersion language program in Bak'wa mk'ala (Kwak'wala) as well as three full-time paid language apprentices, the program manager of the First Peoples' Language Technology Program, and the developer for First Voices, and the creator of the first Pacheedaht language program based on archival documentation. They are completing a search for a new FNEL faculty member.

Language Sciences developed a [feature media story](#) in October 2022 about UBC's Pacific Northwest Language and Literatures Press (PNWLL), which has a mandate to provide language documentation for Indigenous languages and can be used for language revitalization and education, as well as for academic purposes. The story was developed with the support of Henry Davis, UBC Professor of Linguistics, John Lyon, UBC Okanagan, Assistant Professor of Nysilxcn Language Fluency, and Marianne Huijsmann, University of Alberta, Assistant Professor of Indigenous Language Sustainability.

Language Sciences members of the Department of Linguistics also continue to work closely with communities to support research on the revitalization of many Indigenous endangered languages. Faculty from CIS, Anthropology, Linguistics, and the School of Information have been successful as PIs, co-PIs, and collaborators on external grants from SSHRC, the First Peoples' Cultural Council, InnovateBC, and others.

CEDaR, a CFI-funded community-oriented new media and digital storytelling space within the Institute for Critical Indigenous Studies at UBC-V, opened its doors for research in 2022. The space accommodates audio and video recording, virtual and augmented reality production, 3D printing, video game design, photogrammetry, and other technologies in support of community-led knowledge production, stewardship, and mobilization. Their Relational Technologies research cluster focused on storytelling produced through gaming, mapping, and immersive installation, received a third year of renewed support from the VPRI and brings together community-engaged researchers from both campuses. Current projects include a geolocated platform for mobile devices that uses location tracking data and sensors to access audio recordings, improved optical character recognition for under-recognized orthographies, and a Sto:lo video game representing six nations engaged in treaty negotiations.

Future plans include connecting UBC Okanagan faculty and graduate students to the Relational Technologies research cluster to support the work of the grants listed above. With support from the cluster, they are planning a speaker series to feature Marlena Myles and her Dakota Land Maps. As well, they are making plans to host a workshop, led by Christine Schreyer, about the process involved in reclaiming Indigenous place names on BC maps.

Reimagining Public Discourse

Centre for the Study of Democratic Institutions (CSDI)

With support from the Knowledge Exchange Unit at VPRI, CSDI created 12 workshops on policy communications, six for the sciences and six for the humanities and social sciences. They are also offering individualized office hours for anyone with policy communications questions. People can find more details on the [CSDI website](#).

There are several other research projects related to Reimagining Public Discourse:

1. An ongoing project on online abuse of health communicators in Canada and how they can best be supported. Details on the project here: <https://democracy.ubc.ca/health/online-abuse-of-health-communicators/>
2. A grant from the Heritage Ministry to bring together scholars to write about platform governance in Canada. Details on the project here: <https://democracy.ubc.ca/platform-governance-in-canada/>

Language Latitudes Workshop

Amanda Cardoso, Molly Babel, and Marie-Eve Bouchard partnered with Erez Levon (University of Bern) to lead a SSHRC Connection Grant to host a workshop on language attitudes (peoples' attitudes towards speakers of different languages and dialects). The workshop was held on April 13th and 14th, 2023. Language Sciences provided matching funds and personnel to support the workshop. A follow-up event aimed at the general public (in particular, families in the lower mainland) is planned later in 2023.

Invited presenters included Marie-Eve Bouchard (UBC), Andrew Cheng (Simon Fraser University), Ethan Kutlu (University of Iowa), Naomi Nagy (University of Toronto), Kristin Snoddon (Toronto Metropolitan University), and Rachel Tatman (language technology educator). The workshop program can be viewed [here](#).

Engaging community and industry partners

Ensuring Full Literacy Partnerships

Ensuring Full Literacy community partnerships remained mostly the same from 2021-2022, with over 25 continuing partnerships with various non-profit organizations such as Decoda Literacy Solutions and Storybooks Canada, as well as local school districts, public libraries and government agencies. A new partnership with Vancouver Public Libraries is in the process of being finalized.

Masters of Data Science - Computational Linguistics

The Masters of Data Science in Computational Linguistics welcomed 36 students in their Winter 2022 cohort. New industry partners in this year's crop of capstone projects include Rio Tinto, Konect.ai, Rocketbrew, and Kai Analytics.

Sharing our findings to enrich public knowledge

CODA Film Screening

In March 2023, Language Sciences, in collaboration with [Douglas College's Sign Language Interpretation Program](#), hosted a film-screening of the 2021 Academy Award winning film, [CODA](#), at the Michael J. Fox Theatre in Burnaby. The screening was followed by an expert panel of CODAs (Children of Deaf Adults), moderated by ASL specialist and interpreter, Nigel Howard. The event was open to all UBC and Douglas College students and faculty, and all members of the local d/Deaf community, including various d/Deaf community organizations and non-profits.

At the moderated panel, panelists Amanda Zimmer, Lily Flanjak and Ursula Sargent shared their unique experiences as CODAs and responded to questions from the audience. Over 225 members of the community attended the event.

ABCs of Language Development

Language Sciences provided the BC Metis Nation with 500 copies of the book *The ABCs of Language Development* to support their early childhood and new parent initiatives, and committed to providing an additional 500 in 2023. Author Carla Hudson Kam presented at the Children's Book Bank of Toronto's Board of Directors meeting in September 2022, and gave two presentations at the International Conference on

Linguistics Communication in February 2023: a poster (The ABCs of Language Development: Discover Language with Your Child) and an invited panel talk (Activism through your day-job).

Language Science Talks

Language Sciences held seven feature talks with speakers from UBC Vancouver and UBC Okanagan faculties as well as internationally invited guests. Additionally, Language Sciences hosted a 'Flash Talks' event where six members shared mini presentations on their research. All talks were hosted in a hybrid format to ensure attendees could participate both in-person or virtually via Zoom. The full list of talks can be found in [Appendix I: Language Science Talks on page 20](#).

Communications

In 2022-2023, Language Sciences sent out 12 monthly newsletters to over 475 subscribers. Top clicks were generally stories about new work and research from members, with a 65 per cent average open rate.

This past year, the Institute published 11 media stories, 11 Q&A's, and 12 announcements throughout the year. Language Sciences also launched Member Spotlights in 2022 to highlight the work of our members, and a total of seven Member Spotlights were developed.

Language Sciences original content was shared through monthly newsletters and promoted using the institute's various social media channels. Stories were also re-published on various UBC departmental websites and external publications such as SASS Magazine, AMD and UBC Magazine.

In addition to the current suite of social media platforms, Language Sciences added a new social media channel: Instagram. The new account has grown to over 190 followers in less than 6 months. Language Sciences social media channels are used to promote stories, Q&A's and announcements, as well as to interact with members and engage with public audiences.

This past year, Language Sciences also developed an official Communications and Engagement Strategy to ensure a coordinated and consistent approach to communicating and engaging with key stakeholders and target audiences. The Communications and Engagement Strategy now encompasses the official Social Media Strategy which was developed in 2021. A list of stories and links can be found in [Appendix V: Language Sciences Communications on page 29](#).

Promoting equity, diversity, and inclusion within and beyond UBC

Language Sciences continues to link community engagement and knowledge mobilization activities to equity, diversity, and inclusion. The CODA screening in March 2023 involved members of the d/Deaf and Hard of Hearing community from the earliest planning stages, adhering to the principal 'nothing about us without us'. Because of the format and audience of the event, ASL was the primary mode of communication. This marks the second bilingual event that LangSci has hosted (the first being the film screening of 'je m'appelle humain' 'Call Me Human' in 2021, in French and English).

Language Sciences also supported member projects that promote EDI, such as Arts Multilingual Week in Fall 2022, which celebrated the many languages spoken by students and faculty across campus, and the Language Latitudes workshop in Spring 2023, and international workshop which focused on language, its intersections with race, class, and the impacts of attitudes towards groups of speakers on the speakers themselves.

Language Sciences also continues to make progress towards the actions and metrics outlined in our GREx proposal. In spring 2023, Language Sciences produced an internal summary report reviewing its progress on these priorities, to support the formation of a working group focused on matters relating to EDI within the Institute. The working group will focus especially on aligning LangSci practices with the [Indigenous Strategic Plan](#) and [Action Plan](#), as well as the recommendations from the [Anti-Racism and Inclusive Excellence Task Force](#).

A number of actions outlined in original GREx proposal have already been taken. In keeping with the commitment to hold open calls for leadership positions, Language Sciences worked with the Dean of Arts to establish a formal call for a new Co-Director (expected start date: January 1st, 2024), to replace Janet Werker, who plans to step down in July 2023. LangSci also held open calls for its graduate student and postdoctoral steering committee positions in Fall 2022.

Through our communications, we continue highlighting research by IBPOC researchers and other marginalized people in our monthly newsletter and events roster. Werker and colleagues submitted a cluster hire proposal to the Faculty of Arts for the Black Faculty Cohort Hiring Initiative in collaboration with the Departments of Linguistics, Anthropology, and Psychology, which was unfortunately unsuccessful but did help to strengthen our relationships with these departments and spotlighted our shared hiring interests.

Cementing global leadership in emerging international language sciences research network

Partnership with Harvard University and the Japanese Council for Science, Technology, and Innovation (CSTI)

See [Collaboration with Takao Hensch \(Harvard University\) and the Japanese Council for Science, Technology, and Innovation \(CSTI\) on page 10](#).

Killam Initiative on Rhythm

Language Sciences is thrilled to be a supporter of the Killam Initiative on Rhythm, a research project spearheaded by the five 2018 Killam Prize laureates, including Janet Werker (Psychology, UBC), André Gaudreault (Département d'histoire de l'art et d'études cinématographiques, Université de Montréal), Vladimir Hachinski (Neurology and Epidemiology, University of Toronto), Walter Herzog (Kinesiology, University of Calgary), and James Pinfeld (Physics, University of Alberta). The focus of this initiative came about through conversations among the 2018 Killamist cohort that surfaced rhythm as a concept that links their otherwise disparate fields. The first and second intersectoral meetings were held in 2019, and the third was held in May 2023 at Orford Music, funded by a SSHRC Partnership Grant to André Gaudreault. Language Sciences has committed to supporting a future meeting in 2024 or 2025 which will focus on Rhythm in Language.

Cultivating the next generation of language sciences researchers

Language Sciences Undergraduate Research Conference (LSURC)

The fifth annual Language Sciences Undergraduate Research Conference (LSURC) was held in February 2023 with the theme of, 'Mediums of Communication'. This year's conference was held in a hybrid format, allowing participants to attend both in-person and virtually.

The multidisciplinary conference had 27 presenters who shared oral and poster presentations. The presenters were from UBC Vancouver, UBC Okanagan, University of Calgary and Simon Fraser University. There was also support provided for the conference from the University of Victoria. A number of Language Sciences faculty and graduate student members from UBC assisted in reviewing abstracts and acting as adjudicators. The LSURC event program can be found [here](#).

Plenary speakers were Dr. Qi Cheng from the University of Washington's Department of Linguistics, Dr. Heather Bliss and Annette Fox-BruisedHead from SFU's Department of Linguistics, and Professor Nigel Howard from UBC's Department of Linguistics.

Language Sciences supported LSURC with event coordination, outreach and promotion by hosting planning meetings, highlighting event details in newsletters, conducting social media promotion, developing on-campus digital signage and producing a [feature media story](#) following the conference.

Language Sciences Graduate Student and Postdoctoral Fellow Events

Graduate Students and Postdoctoral Fellows gathered in-person for a social networking event presented by Language Sciences and Student Steering Committee members; Xin Sun and Suyuan Liu. The event can be found in more detail in [Appendix III: Graduate Student and Postdoctoral Events on page 25](#).

Language Sciences Graduate Student and Postdoctoral Fellow Research Day

The fourth annual Language Sciences Undergraduate Research Conference is planned for May 2023 with the theme of, 'Language Diversity'. A total of fifteen graduate students from both UBC Vancouver and UBC Okanagan and postdoctoral fellows will present their research as either oral or poster presentations either in-person, or virtually via Zoom, as the event will be hosted in a hybrid fashion.

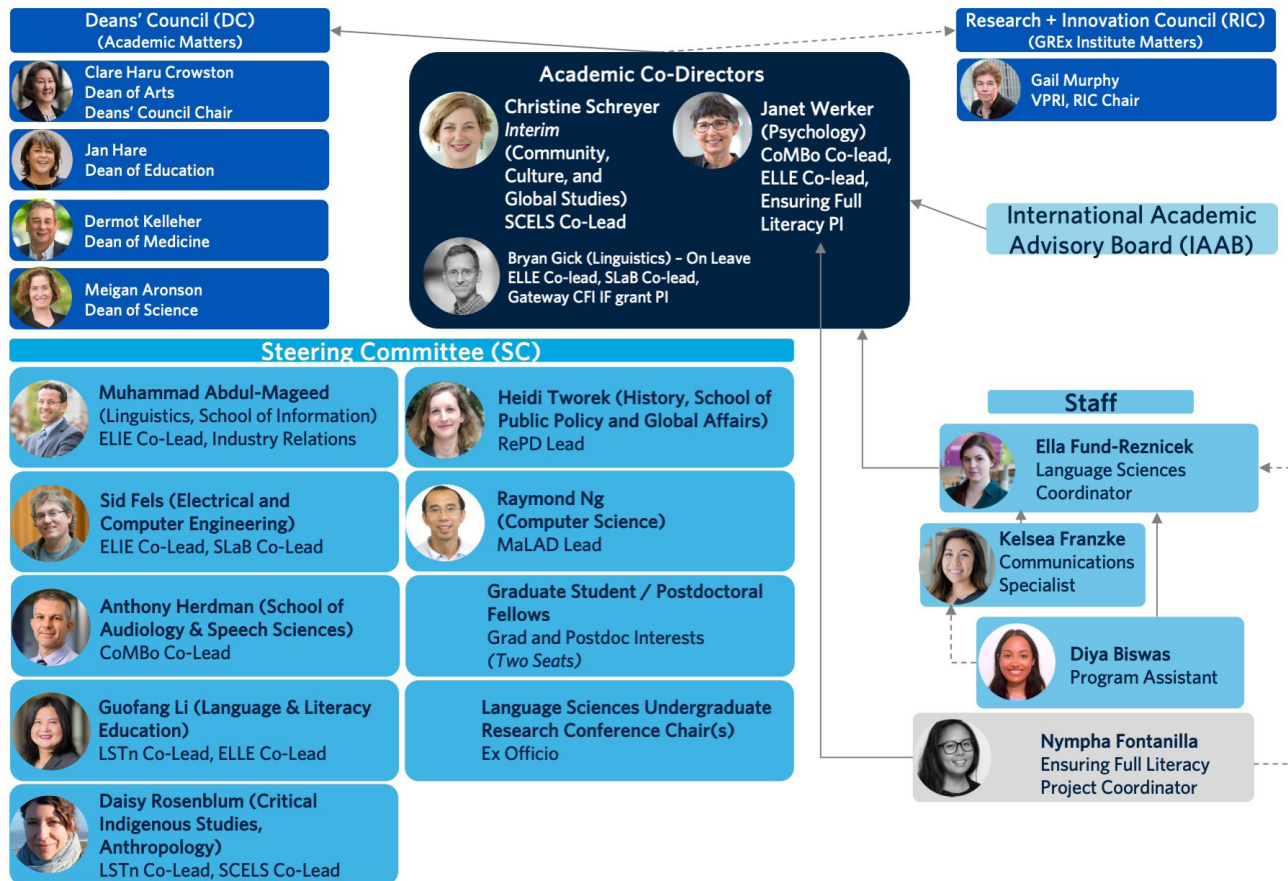
Keynote speakers will include Dr. Lee Gunderson (Professor, Language and Literacy Education), Ife Adebara (Ph.D. Student, Linguistics), Dr. Suzanne Huot (Assistant Professor, Occupational Science and Occupational Therapy), and Dr. Monica Good (Assistant Professor of Teaching, Languages and World Literatures, Spanish, UBCO).

Organization

Organizational Chart



Organizational Chart April 2023



Language Sciences organizational chart

Dean's Council

Language Sciences reports to its Deans Council, comprising the following Faculties and Deans, regarding academic matters:

- Arts - [Dean Clare Haru Crowston](#) (Chair)
- Education - [Dean Jan Hare](#) (*pro tem*)
- Medicine - [Dean Dermot Kelleher](#)
- Science - [Dean Meigan Aronson](#)

International Academic Advisory Board

Language Sciences' International Academic Advisory Board will meet for the first time in Summer 2023. Board members include:

- [Dr. Jenny Saffran](#), Psychology (University of Wisconsin) – Serving as Chair in year one.
- [Dr. Mona Diab](#), Responsible AI (Meta)
- [Dr. Wei Li](#), Applied Linguistics (University College London)
- [Dr. Christine Mallinson](#), Language Literacy & Culture, Gender and Women Studies (University of Maryland)
- [Dr. Robert Zatorre](#), Neuroscience (McGill University)
- [Dr. Wesley Leonard](#), Ethnic Studies (University of California Riverside)

Steering Committee

Language Sciences' steering committee includes faculty, postdoctoral fellows, and graduate and undergraduate students spanning the breadth of Language Sciences' research themes and challenges. In 2022-2023, we welcomed two new steering committee members: Suyuan Liu (Ph.D. student, Linguistics) and Xin Sun (Post-doctoral Fellow, Psychology).

Members and Affiliates

Member Events

Fall 2022 Member Event (September 2022)

Language Science members gathered virtually and in-person for a series of flash talks presented by six members on their research. The full list of flash talks can be found in [Appendix II: Member Events on page 23](#).

Wikipedia Edit-A-Thon - All Things Language (February 2023)

Language Science members from UBC Vancouver and UBC Okanagan gathered virtually to share their expertise and knowledge of language with the world at this event led by Dr. Christine Schreyer, Language Sciences Co-Director. Members learned how to improve the Wikipedia encyclopedia and upgraded Wikipedia pages relating to Language.

Appendix I: Language Science Talks

Harassment of Health Communicators & Language and Perception Through Mathematics' - June 28, 2022

'Harassment of Health Communicators in Canada'

Dr. Chris Tenove, Assistant Director, the Centre for the Study of Democratic Institutions; Research Associate, School of Public Policy and Global Affairs, UBC. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Abstract excerpt: Politicians, journalists, health officials, and other public figures often face incivility and abuse online. This toxic discourse produces challenges for democratic debate and public action on a wide range of issues, including the COVID-19 pandemic. Dr. Tenove will describe his current research on online abuse of health communicators in Canada, and compare it to his previous studies on politicians and journalists. [Click here for full abstract.](#)

'Exploring the Link Between Language and Perception Through Number Words and Perceptual Magnitudes'

Denitza Dramkin, Ph.D. Student, Developmental Psychology, UBC. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Abstract excerpt: We make quick, effortless judgments about quantity in our everyday lives. For example, we might guess that there are about "eight" people in front of us at the checkout line or that we are roughly "six" kilometers away from our next destination. Despite the apparent ease with which we can do this, reasoning about quantity in this way requires interfacing two distinct representational formats: linking intuitive perceptual dimensions with language (i.e., number words). How do we achieve this interface? [Click here for full abstract.](#)

'When Cows and Pencils Are Boys: English Speakers' Intuitions About the Gender of Things' - November 22, 2022

Dr. Elena Nicoladis, Department Head, Psychology, UBCO. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Abstract excerpt: There is mixed evidence as to whether the structure of the language that one speaks affects how one thinks. For example, if one speaks a language with grammatical gender, does one conceptualize objects according to that grammatical gender? For example, cows and pencils are boys, and cats and stars are girls. We have found that these gender intuitions can bolster or interfere with the acquisition of grammatical gender in French, depending on whether the gender intuitions from English are congruent or incongruent with French gender. One possible source of these gender intuitions is the associations between words. If so, then one way in which language might influence thought is through the associations between words. [Click here for full abstract.](#)

'Exit the Linguacene' - January 27, 2023

**Dr. David Gramling, Department head of Central, Eastern, & Northern European Studies, UBC.
Introduction by Dr. Ryuko Kubota, Professor, Language and Literacy Education, UBC.**

Abstract excerpt: This talk presents the concept of the linguacene, as introduced in Gramling's previous two monographs on monolingualism and multilingualism. Endemic to this age of the linguacene is the supply-side management of global multilingualism through pathways that primarily serve commercial clients, security and revenue agendas, and borderless-market strategems, by reducing the time and expense necessary for translation and other forms of cross-linguistic conviviality. [Click here for full abstract.](#)

***'Does meow convey who makes the sound? Onomatopoeia as "easy" input for young children.'* - February 10, 2023**

Dr. Sachiyo Suda. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC

Abstract excerpt: This presentation reports data from an interpretative study that explores a song signer's motivations and language ideologies as they emerge in mediating between languages and modalities. Signing songs, or translating popular music into American Sign Language (ASL) and other national sign languages, remains largely underexplored as an art form and an assemblage of semiotic repertoires. Semiotic repertoires include the different communicative resources that people have access to and that emerge from people's sensory "asymmetries". Such resources may be acquired, lost, or never emerge over the course of the individual's life trajectory and participation or non-participation in socio-cultural spaces. [Click here for the full abstract.](#)

'Signing Songs and the Mediation of Semiotic Repertoires' - March 3, 2023

Dr. Kristin Snoddon. Introduction by Dr. Janet Jamieson, Professor Emeritus

Abstract excerpt: This presentation reports data from an interpretative study that explores a song signer's motivations and language ideologies as they emerge in mediating between languages and modalities. Signing songs, or translating popular music into American Sign Language (ASL) and other national sign languages, remains largely underexplored as an art form and an assemblage of semiotic repertoires. Semiotic repertoires include the different communicative resources that people have access to and that emerge from people's sensory "asymmetries". Such resources may be acquired, lost, or never emerge over the course of the individual's life trajectory and participation or non-participation in socio-cultural spaces. [Click here for full abstract.](#)

'Signing Songs - Community Presentation' - March 4, 2023

Dr. Kristin Snoddon. Introduction by Nigel Howard, Adjunct Professor

Abstract excerpt: This presentation reports data from an interpretative study that explores a song signer's motivations and language ideologies as they emerge in mediating between languages and modalities. Signing songs, or translating popular music into American Sign Language (ASL) and other national sign languages, remains largely underexplored as an art form and an assemblage of semiotic repertoires. Semiotic repertoires

include the different communicative resources that people have access to and that emerge from people's sensory "asymmetries". Such resources may be acquired, lost, or never emerge over the course of the individual's life trajectory and participation or non-participation in socio-cultural spaces. [Click here for full abstract](#)

'What the Representational Format of Perceptual Magnitudes Tells Us About Language, Math, and Metacognition' - March 17, 2023

Dr. Darko Odic, Assistant Professor, Psychology. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC

Abstract excerpt: In this talk, Dr. Darko Odic will discuss a series of findings in his lab that shine a light on this issue, demonstrating that the format of perceptual representations of number allows for: (a) an early emergent sense and domain-general sense of magnitude metacognition; (b) a domain-general interface between perceptual magnitudes and number words; and (c) the ability for children and adults to rapidly extract the minimal and maximal element in a set, even beyond the typical limits of working memory. [Click here for full abstract.](#)

Appendix II: Member Events

Flash Talks - September 2022

'Scaffolding Disciplinary Development in a Supplementary Textbook Focused on Language and Multimodal Competencies in First-year Physics'

Dr. Alfredo A. Ferreira, Lecturer, Academic English Program, Vantage College, UBCV. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Speaker bio excerpt: Alfredo has a broad interest in academic literacy development in content-integrated English language instruction at the university level. His research in educational linguistics focuses on the development of apprentice scholars' capacities for varying levels of abstraction when they recontextualize disciplinary knowledge. Today, he is presenting on the Teaching & Learning Enhancement Fund-supported development of an online language-focused supplementary textbook to support disciplinary learning in 1st year physics, focusing on the relationships between language, math, and figures in developing multi-competent scientists.

'Sorry, Can't Talk, Too Busy Eating: A Cross-System and Cross-Species Aerodigestive Tract Framework'

Dr. Stacey Skoretz, Assistant Professor, School of Audiology & Speech Sciences. UBCV Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Speaker bio excerpt: Stacey is Director of the Swallowing Innovations Lab and Medical Speech-Language Pathologist. She is an associate member with the Centre for Heart Lung Innovation at St. Paul's Hospital/ UBC. Her research interests are in swallowing disorders, artificial airways, upper airway physiology and biomechanics. She is presenting on her work on swallowing and speech.

'Collaborative Work on Computational Approaches to the Decipherment of an Ancient Script from SW-Iran'

Dr. M. Willis Monroe, Research Associate, Philosophy, UBCV. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Speaker bio excerpt: New member [of Language Sciences], Willis Monroe is a Research Associate in the Department of Philosophy. His research uses cuneiform sources from ancient Mesopotamia to explain how Babylonian scribes conceived of their world in terms we would call both scientific and religious. Today, he is presenting on collaborative work on computational approaches to the decipherment of an ancient script from Southwest Iran.

'An Automatic Approach for Aligning Student Skills, Program Learning Outcomes, and Industry Demands'

Dr. Bowen Hui, Associate Professor of Teaching, Computer Science, UBCO. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Speaker bio excerpt: Bowen Hui is the Associate Head Undergraduate and Associate Professor of Teaching in Computer Science at UBCO. Her research interests include learning analytics, computer science education, decision making under uncertainty; probabilistic user modeling; human-computer interaction cost models;

experiment design and analysis.

'fMRI and Language'

Dr. Todd Woodward, Professor, Psychiatry, UBCV. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC.

Speaker bio excerpt: Todd Woodward is Director of the Cognitive Neuroscience of Schizophrenia Lab, Research Scientist at the BC Mental Health and Addictions Research Institute, and Centre Investigator at the UBC Brain Research Centre. His research focuses include cognitive neuropsychiatry and functional neuroimaging. Objectives of the latter are to gain a functional and anatomical understanding of the cognitive systems involved in psychosis and schizophrenia, and to develop new multivariate methods for analyzing fMRI data, with applications to integrating information from fMRI, EEG and MEG.

'The UBC Baby Learning Lab'

Dr. Lauren Emberson, Assistant Professor, Psychology, UBCV. Introduction by Dr. Janet Werker, Academic Co-Director and Professor, Psychology, UBC

Speaker bio excerpt: Lauren is Director of the Baby Learning Lab, part of the Early Developmental Research Group consortium. Her research focuses on how young babies learn and how their amazing learning abilities support their development (e.g., vision, language) studies focuses on infants from birth to 2 years of age, often using infant-friendly neuroimaging methods to get a glimpse of how learning and new experiences change the activity of their brains.

Appendix III: Graduate Student and Postdoctoral Events

2023 Language Sciences Social - January 24, 2023

This event was hosted after-hours from 5:30 to 7:00pm at the Audain Art Centre. The event was open to all graduate students and postdoctoral fellows and welcomed faculty members from various fields and disciplines working with language to get to know one another and build professional and/or personal connections. Attendees were provided with prompts to spark discussions and an opportunity to meet people outside of their regular circles and receive feedback on current or back-burner projects.

Appendix IV: Supported Member Projects

GREx Funds

Arts Multilingual Week (\$3,100)

Dr. Qian Wang (Asian Studies), Colleagues in Central, Eastern, and Northern European Studies; French, Hispanic, and Italian Studies; and Linguistics)

Summary excerpt: Arts Multilingual Week (October 31st to November 4th) is organized by the Arts Languages Maximum Working Group in collaboration with over a dozen units across campus. The week's events will feature students, scholars, and community members who will reflect on multilingualism as a practice, discuss career opportunities for multilingual graduates, and perform multilingualism through artistic means. More information about the event can be found at <https://blogs.ubc.ca/artsmultilingualweek/>.

SSHRC Connection Grant: Language Attitudes and Social Consequences in Diverse Contexts (\$4,800)

Dr. Amanda Cardoso (Linguistics), Dr. Marie-Eve Bouchard (French, Hispanic, and Italian Studies), Dr. Molly Babel (Linguistics), Dr. Erez Levon (University of Bern), Suyuan Liu (Linguistics), Sarah LaFleur (Linguistics)

Summary excerpt: The purpose of the SSHRC Connection Grant (May 2022 submission), for which this application provides matching funding, is to bring together a team of national and international scholars, community organisations, policy makers, and other public stakeholders interested in understanding language attitudes and the effects that these attitudes can have in a variety of contexts and to promote positive outcomes in the public sphere through research disseminations, public events, and engaging with relevant stakeholders. The SSHRC Connection Grant will also support two graduate academic assistants and two undergraduate academic assistants from the University of British Columbia, and provide partial funding support for a graduate academic assistant at the University of Bern.

Pacific Northwest Languages and Literatures (PNWLL) Press (\$15,000 in one-time funding)

Dr. Henry Davis (Linguistics, UBCV), Dr. John Lyon (Community, Culture and Global Studies, UBCO)

Summary excerpt: Pacific Northwest Languages and Literatures (PNWLL) Press is a UBC-based non-profit publishing initiative dedicated to the dissemination of materials on Pacific Northwest languages, with the goal of ensuring maximum accessibility for Indigenous speech communities as well as academics in the language sciences and others interested in First Nations languages. Originally UBCWPL was asked to publish a couple of one-off volumes on northwest languages under the UBC Occasional Papers in Linguistics (UBCOPL) banner (notably, Jan van Eijk's Dictionary of the Lillooet Language). However, it soon became clear that there was an urgent and growing demand for a publisher specializing in low-cost but high-quality volumes on northwest languages, with a fast turn-around from submission to publication. This need was – and is – fuelled by the current critical language situation in the northwest, where all indigenous languages have lost or are about to lose their last L1 speakers, but a growing number of L2 learners – and programs which support them – are hungry for primary linguistic documentation which can be used in the development of advanced curriculum material. ... For more information, including a description of our currently available volumes, see <https://lingpapers.sites.olt.ubc.ca/>. One of the tasks of the editorial staff in the coming year will be to identify external

funding sources and prepare grant applications.

Dr. Sinfree Makoni, Visiting Scholar (\$900)

Dr. Bonny Norton (Language and Literacy Education), Dr. Ron Darvin (Language and Literacy Education), Dr. Liam Doherty (Asian Studies), Dr. Joash Gambarage (Linguistics)

Summary excerpt: The main activity will be a scholarly visit from the internationally renowned scholar Dr. Sinfree Makoni of Penn State University. Dr. Makoni is Director of the African Studies Program and Professor of African Studies and Applied Linguistics. His public talk, co-organized with the Department of Language and Literacy Education, will be titled, "Language, decolonialism, and Southern epistemologies." The visit will take place after the annual meeting of the American Association of Applied Linguistics (AAAL), which takes place in Portland, Oregon in March, 2023. At AAAL, Dr. Makoni is participating in an invited colloquium organized by UBC Language Sciences members Dr. Ron Darvin and Dr. Bonny Norton. The research connections and scholarly conversations will continue during the UBC visit, and include both faculty and graduate students across UBC. Dr. Makoni will deliver his main address on Thursday, March 23, in the Multipurpose Room in Ponderosa Commons North. He will also lead a trainee luncheon meeting on Wednesday, March 22.

Research Seed Funds

Campus Resource for English as an Additional Language (EAL) International Student Teaching & Learning (CRISTL) - \$5,000

Dr. Reginald D'Silva (Language and Literacy Education), Dr. Ayaka Yoshimizu (Asian Studies), Dr. Melanie Wong (Language and Literacy Education), Dominique Bautista (Educational Studies)

Summary excerpt: A rapidly growing international student population on UBC campuses demands a greater focus on supporting their educational experiences in and out of the classroom. A growing body of research suggests that educational experiences for international students should include critical engagement with social justice issues in their host country, while other reports point to students' lack of knowledge and understanding of local socio-cultural realities. This project explores ways to promote international students' anti-racism and decolonization perspectives through raising awareness, and reinforcing understanding, of local histories and realities by providing background information on selected points of interest on UBC campuses through a walk-and-learn experiential learning approach. As arguably a majority of international students at UBC are from EAL backgrounds, a primary focus of this resource is to integrate content and language to support students' English language development.

Counselling During Real-Ear Measurements: The Clinician Perspective (\$4,400)

Dr. Lorraine Jenstad (School of Audiology and Speech Sciences), Dr. Brenda Poon (School of Population and Public Health), Sandra Baker (Fraser Health), Chris Atchison (School of Population and Public Health), Kaitlyn Angelozzi (School of Audiology and Speech Sciences)

Summary excerpt: This project seeks to understand the clinician's views on what information should be conveyed during real-ear measurement (REM), which is a procedure used to fit hearing aids. The study will involve asking clinicians to brainstorm ideas to a prompt, rate the ideas generated by the brainstorm, and ultimately have a discussion in focus groups about the best way to present the ideas generated by the

brainstorm. By the end of the project, we aim to have a prioritized list of what should be conveyed during REM, as well as modifiable scripts that clinicians can use when performing REM.

How do pretrained language models handle discourse markers? (\$5,000)

Dr. Miika Silfverberg (Linguistics), Dr. Vered Schwarz (Computer Science), Emily Sadlier-Brown (Linguistics), Millie Lou (SAP)

Summary excerpt: Pretrained language models (PLMs) such as BERT (Devlin et al., 2018), BART (Lewis et al., 2019), GPT-3 (Brown et al., 2020), ELECTRA (Clark et al., 2020) and T5 (Raffel et al., 2020) demonstrate impressive performance on many natural language processing tasks from machine translation (Lewis et al., 2019) to the generation of coherent essays (Lin et al., 2019). The strong performance demonstrated by PLMs implies that they are able to capture information about the meaning and structure of language at a hitherto unprecedented level (Goldberg, 2019). Previous work has demonstrated that PLMs learn syntactic information like subject-verb agreement (Goldberg, 2019) and semantic information like thematic roles (Rogers et al., 2020). However, the extent of linguistic knowledge captured by PLMs remains poorly understood. This is particularly true in the domain of discourse-pragmatics, where linguistic choices are especially determined by extra-linguistic, including social, context- information that PLMs has no access, or only very indirect access, to. Our proposed work sheds light on this question by investigating how pretrained English language models “understand” discourse markers such as “actually”, “just” and “apparently”. Specifically, we ask (1a) to what extent various PLMs can distinguish between discourse markers, (2a) what linguistic features carry the most influence in determining PLMs’ performance and (3a) whether the addition of extra-linguistic information not normally available to a PLM (such as pointing) affects PLMs’ performance...The answers to these questions will shed light on the processes underlying PLMs’ performance and generate predictions about factors that might be important for human discourse marker learning.

Appendix V: Language Sciences Communications

Stories

1. [School of Audiology and Speech Sciences Launch Student-Led Clinics](#)
2. [Communication Through Collaboration: Speech-Language Pathology and Physical Therapy Students Work Together to Enhance Communication Outcomes](#)
3. [LSURC: Providing Unique Opportunities for Undergraduates](#)
4. [Embracing Superdiversity: New Book Highlights the Importance of Students' Cultural, Linguistic and Racial Backgrounds](#)
5. [New Platform for Deep Learning Training Launches](#)
6. [Digital Media: Providing Opportunities for Language and Literacy Learning for Youth from Refugee Backgrounds](#)
7. [Introducing Turjuman: A Public Tool for Neural Arabic Machine Translation](#)
8. [A Future with AI Writing Companions: Changing the Landscape for Writers](#)
9. [Pacific Northwest Languages and Literatures Press Breaks Barriers for Documentation of Indigenous Languages](#)
10. [Local Student Wins Bronze at International Linguistics Olympiad](#)
11. [The Francophone Community as Third Space and its Importance for Immigrant Intergration in Metro Vancouver](#)

Q&A's

1. [One Letter That Links Sound and Touch Across Languages - Q&A with Dr. Marton Soskuthy](#)
2. [Exploring How Speech Air Flow May Impact the Spread of Airborne Diseases - Q&A with Dr. Donald Derrick](#)
3. [Exploring the Role of Talking in Airborne Disease Transmission - Q&A with Dr. Sima Asadi](#)
4. [Exploring How the COVID-19 Pandemic Highlighted Gaps in Research About the Transmission of Respiratory Diseases - Q&A with Dr. Nicole Bouvier](#)
5. [An Examination of French and English Reading Comprehension in Canadian French Immersion Programs - Q&A with Dr. Stefka H. Marinova-Todd](#)
6. [Good Night at 4pm?! Time Expressions in Different Cultures - Q&A with Dr. Vered Shwartz](#)

7. [Adaptation to Social-Linguistic Associations in Audio-Visual Speech – Q&A with Dr. Molly Babel](#)
8. [Is There a Correlation Between the Use of Representational Gestures and Self-Adaptors? – Q&A with Dr. Elena Nicoladis](#)
9. [Exposure to Stereotype-Relevant Stories Shapes Children’s Implicit Gender Stereotypes – Q&A with Dr. Andrew Baron and Dr. Antonya Gonzalez](#)
10. [Impacts of COVID-19 Disruption on the Language and Literacy Development of Monolingual and Heritage Bilingual Children in the United States – Q&A with Dr. Xin Sun](#)
11. [Intentional and Incidental Vocabulary Learning: The Role of Historical Linguistics in the Second Language Classroom – Q&A with Dr. James Stratton](#)

Member Spotlights

1. [Member Spotlight: Denitza Dramkin](#)
2. [Member Spotlight: Dr. Mark Turin](#)
3. [Member Spotlight: Ezra Yu](#)
4. [Member Spotlight: Nancy Hermiston](#)
5. [Member Spotlight: Asma Afreen](#)
6. [Member Spotlight: Dr. Lauren Emberson](#)
7. [Member Spotlight: Dr. Dallas Hunt](#)

Announcements

1. [UBC Language Science Members Make List of Top Scientists in the World](#)
2. [Language Sciences Members Awarded 2021-22 CUES Funding](#)
3. [Dr. Abdul-Mageed Named Canada Research Chair in Natural Language Processing and Machine Learning](#)
4. [Language Sciences Welcomes Dr. Christine Schreyer as Interim Co-Director](#)
5. [Language Sciences Welcomes New Program Assistant](#)
6. [Call for Applications: Graduate Student/Postdoctoral Fellow seat on Language Sciences Steering Committee](#)
7. [Call for Applications: Co-Instructors for 2024W1 Living Language-Science and Society Course](#)
8. [Call for Papers: Bilingualism and Multilingualism Conference](#)

9. [Dr. Janet Werker, Co-Director, to Depart from Language Sciences in 2023](#)
10. [Call for Search Committee Members: Language Sciences Co-Director](#)
11. [Call for Abstracts: Language Latitudes Workshop](#)
12. [LLED Graduate Student Conference - Call for Proposals](#)

Appendix VI: Language Sciences Partners

Ensuring Full Literacy (SSHRC Partnership Grant, PI Werker)

Organization	Type	Location
Wolf Creek Public Schools	School district	Ponoka, Alberta
uLearnify	Private company	Canada
Mango Languages	Private company	Farmington Hills, Michigan, United States
Decoda Literacy Solutions	Non-profit	Vancouver, BC
ABC Life Literacy Canada	Non-profit	Toronto, Ontario
Canadian Children's Literacy Foundation	Non-profit	Toronto, Ontario
DIVERSEcity Community Resources Society	Non-profit	Surrey, BC
Compute Canada	Government	Ottawa, Ontario
Delmore "Buddy" Daye Learning Institute	Non-profit	Halifax, Nova Scotia
Halifax Public Libraries	Library	Halifax, Nova Scotia
Shoelace Learning (formerly Eyeread Inc)	Private company	Halifax, Nova Scotia
Scholastic Inc.	Private company	New York, New York, United States
Alberta Machine Intelligence Institute	Government	Alberta
Mitacs	Non-profit	Toronto, Ontario
Storybooks Canada	Non-profit	Vancouver, BC
Access Alliance Multicultural Health & Community Services	Non-Profit	Toronto, Ontario
H.appi	Non-Profit	Vancouver, BC
West Vancouver Memorial Library	Public library	West Vancouver, BC
Brain Vision Solutions	Private Company	Montreal, Quebec
NIRx Medical Technologies, LLC	Private company	Glen Head, New York, United States
SMART Technologies	Private company	Calgary, Alberta
The Conversation Canada	Non-profit	Toronto, Ontario
West Vancouver Schools	School district	West Vancouver, BC
Pearson Clinical Assessment Publisher	Private company	Canada
Toronto District School Board (TDSB) Research & Development	School district	Toronto, Ontario
Vancouver School Board # 39	School district	Vancouver, BC

Masters of Data Science - Computational Linguistics

Organization	Type	Location
Seasalt.ai	Private company	Seattle, Washington, United States
Rio Tinto	Private Company	Internationally based
Konect.ai	Private company	Houston, Texas, United States
Rocketbrew	Private company	Vancouver, BC
Kai Analytics	Private company	Vancouver, BC
Allard School of Law	UBC Department	Vancouver, BC
University of Toronto	University	Toronto, ON
BC Stats	Government Agency	British Columbia
Calgary Police Department	Government Agency	Calgary, AB





THE UNIVERSITY OF BRITISH COLUMBIA

Language Sciences

Global Research Excellence Institute