

ADARSH PYARELAL

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CHRONOLOGY OF EDUCATION

<i>Duration</i>	<i>Degree</i>	<i>Major</i>	<i>Institution</i>	<i>Dissertation/Thesis Title</i>	<i>Advisor</i>
2011-08 – 2017-05	Ph.D.	Physics	University of Arizona	<i>Hidden Higgses and Dark Matter at Current and Future Colliders</i>	Shufang Su
2007-08 – 2011-05	B.A.	Physics	Reed College	<i>Contribution of the neutral pion Regge trajectory to the exclusive central production of $\eta(548)$ mesons in high energy proton/proton collisions</i>	Nelia Mann

CHRONOLOGY OF EMPLOYMENT

<i>Duration</i>	<i>Title</i>	<i>Department</i>	<i>Institution</i>
2023-08 –	Assistant Professor	School of Information	University of Arizona
2020-09 –	Affiliate Faculty	Cognitive Science GIDP	University of Arizona
2022-08 – 2023-08	Assistant Research Professor	School of Information	University of Arizona
2018-12 – 2022-08	Research Scientist	School of Information	University of Arizona
2017-10 – 2018-12	Postdoctoral Research Associate	School of Information	University of Arizona

HONORS AND AWARDS

<i>Year</i>	<i>Title & Amount (when applicable)</i>
2017	Dept. of Physics Publications/Presentations Award Outstanding Graduate Student Colloquium Presentation
2016	Dept. of Physics Publications/Presentations Award Galileo Circle Scholarship (\$1000)
2014	Outstanding Graduate Student Colloquium Presentation Graduate College Fellowship in Physics (\$1500)

SERVICE/OUTREACH

- Items with an \mathcal{R} to their left correspond to activities performed in rank.

National/International Service

Journal Reviewing

2021 Physics (MDPI) (1 paper)

Conference Reviewing

\mathcal{R} 2024 ACL ARR February 2024 Cycle (5 papers)

\mathcal{R} 2023 Neural Information Processing Systems (NeurIPS), Datasets and Benchmarks Track (3 papers)

National/International Outreach

Date	Venue	Talk Title	City	Type
2022-03-11	SXSW	<i>Building machines that understand humans</i>	Austin, TX	Invited

Local/State Outreach

Date	Venue	Talk Title	City	Type
2016-11-29	Tucson Data Science Meetup	<i>Machine Learning and Particle Physics</i>	Tucson, AZ	Invited

University-level Service

Dates	Role	University
2022	SensorLab Seed Grant Reviewer	University of Arizona
2015	Graduate and Professional Student Council (GPSC) Travel Grant Judge	University of Arizona
2012–13	Arizona Assurance Mentor	University of Arizona

Department-level Service

Dates	Role	Department	University
\mathcal{R} 2023-08–	Member, Faculty Peer Review Committee	School of Information	University of Arizona
2012–13	Member, Physics Grad Council	Physics	University of Arizona
2012–13	Member, Associated Graduate Council for the College of Science	Physics	University of Arizona
2012–13	Organizer, weekly departmental graduate student seminar series	Physics	University of Arizona

- Co-authors who are student advisees or postdoctoral mentees have a [◦] next to their names.
- Publications substantially based on work done as a graduate student have a * to their left.
- Items with an ^R to their left correspond to activities performed in rank.

Chapters in scholarly books and monographs

- B2. L. Zhang[◦], J. Lieffers[◦], and **A. Pyarelal**. 2022g. *Using Features at Multiple Temporal and Spatial Resolutions to Predict Human Behavior in Real Time*. In: Computational Theory of Mind for Human-Machine Teams. Ed. by N. Gurney and G. Sukthankar. Vol. 13775. Springer, Cham, pp. 205–219
- B1. **A. Pyarelal**, A. Banerjee[◦], and K. Barnard. 2022e. *Modular Procedural Generation for Voxel Maps*. In: Computational Theory of Mind for Human-Machine Teams. AAAI-FSS 2021. Ed. by N. Gurney and G. Sukthankar. Vol. 13775. Springer, Cham, pp. 85–101

Refereed journal articles

My journal articles are in the field of theoretical particle physics, where it is conventional to order authors alphabetically by last name.

- *J3. **A. Pyarelal** and S. Su. Jan. 2020. *Higgs Assisted Razor Search for Higgsinos at a 100 TeV pp Collider*. In: Science China Physics, Mechanics & Astronomy
h5-index of Science China Physics, Mechanics & Astronomy: 46 (as of 2024-02)
- *J2. F. Kling, H. Li, **A. Pyarelal**, H. Song, and S. Su. June 2019. *Exotic Higgs decays in Type-II 2HDMs at the LHC and future 100 TeV hadron colliders*. In: Journal of High Energy Physics 2019.6, p. 31
Google Scholar Ranking: JHEP ranked #2 in High Energy and Nuclear Physics as of 2024-02: (h5: 158)
- *J1. F. Kling, **A. Pyarelal**, and S. Su. Nov. 2015. *Light Charged Higgs Bosons to AW/HW via Top Decay*. In: Journal of High Energy Physics 11, p. 051
Google Scholar Ranking: JHEP ranked #2 in High Energy and Nuclear Physics as of 2024-02: (h5: 158)

Refereed conference articles

In my primary fields of machine learning, artificial intelligence, and computational linguistics, conference publications are generally ranked higher than journal articles. These are full papers that go through the normal peer review process, as in a journal. In general, work that is published as a conference paper may not be submitted for publication elsewhere. Google Scholar Rankings and h5-indices are provided where available. Note that the acceptance rates, rankings and h5-indices are provided for the venue at the time of publication—thus, you may see different rankings and h5-indices for the same publication venue for different years.

- ^RCS. **A. Pyarelal**, E. Duong[◦], C. J. Shibu[◦], P. Soares[◦], S. Boyd, P. Khosla, V. Pfeifer, D. Zhang, E. S. Andrews, R. Champlin, V. P. Raymond, M. Krishnaswamy[◦], C. Morrison, E. Butler, and K. Barnard. 2023d. *The ToMCAT Dataset*. In: Thirty-seventh Conference on Neural Information Processing Systems Datasets and Benchmarks Track
Acceptance rate for the Datasets and Benchmarks Track of NeurIPS 2023: 32.7%
Google Scholar Ranking: NeurIPS ranked #1 in Artificial Intelligence (h5: 309)

- ^RC4. A. Qamar^o, **A. Pyarelal**, and R. Huang. Dec. 2023. *Who is Speaking? Speaker-Aware Multiparty Dialogue Act Classification*. In: Findings of the Association for Computational Linguistics: EMNLP 2023. Ed. by H. Bouamor, J. Pino, and K. Bali. Singapore: Association for Computational Linguistics, pp. 10122–10135
Combined acceptance rate (Main + Findings) for long papers at EMNLP 2023: 46.2%
Google Scholar Ranking: EMNLP ranked #2 in Computational Linguistics (h5: 176)
- ^RC3. M. M. M. Miah^o, **A. Pyarelal**, and R. Huang. Dec. 2023. *Hierarchical Fusion for Online Multimodal Dialogue Act Classification*. In: Findings of the Association for Computational Linguistics: EMNLP 2023. Ed. by H. Bouamor, J. Pino, and K. Bali. Singapore: Association for Computational Linguistics, pp. 7532–7545
Combined acceptance rate (Main + Findings) for long papers at EMNLP 2023: 46.2%
Google Scholar Ranking: EMNLP ranked #2 in Computational Linguistics (h5: 176)
- C2. M. Alexeeva, R. Sharp, M. A. Valenzuela-Escárcega, J. Kadowaki, **A. Pyarelal**, and C. Morrison. May 2020. *MathAlign: Linking Formula Identifiers to their Contextual Natural Language Descriptions*. English. In: Proceedings of The 12th Language Resources and Evaluation Conference. Marseille, France: European Language Resources Association, pp. 2204–2212
Acceptance rate for LREC 2020: 60%
LREC ranked #4 (by h5-index) in Computational Linguistics as of 2019
- C1. R. Sharp[†], **A. Pyarelal**[†], B. Gyori, K. Alcock, E. Laparra, M. A. Valenzuela-Escárcega, A. Nagesh, V. Yadav, J. Bachman, Z. Tang, H. Lent, F. Luo, M. Paul, S. Bethard, K. Barnard, C. Morrison, and M. Surdeanu. June 2019. *Eidos, INDRA, & Delphi: From Free Text to Executable Causal Models*. In: Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics (Demonstrations). Minneapolis, Minnesota: Association for Computational Linguistics, pp. 42–47, [†] denotes equal contributions.
Google Scholar Ranking: NAACL-HLT ranked #3 in Computational Linguistics as of 2024-02: (h5: 133)

Refereed workshop articles

Workshop publications are peer-reviewed publications, but less competitive than conference articles. They are meant for authors to get early feedback on their manuscripts prior to submitting them to competitive conferences. In general, workshops are ‘non-archival’ venues, i.e., the research presented in a workshop paper can be submitted later to another venue (e.g., an ‘archival’ venue such as a conference).

- W8. R. Nitschke^o, Y. Wang^o, C. Chen^o, **A. Pyarelal**, and R. Sharp. Oct. 2022. *Rule Based Event Extraction for Artificial Social Intelligence*. In: Proceedings of the First Workshop on Pattern-based Approaches to NLP in the Age of Deep Learning. Gyeongju, Republic of Korea: International Conference on Computational Linguistics, pp. 71–84
Acceptance rate for PAN-DL 2022: 77%
Google Scholar Ranking: COLING ranked #5 in Computational Linguistics as of 2024-02: (h5: 73)
- *W7. F. Kling, H. Li, S. Li, **A. Pyarelal**, H. Song, S. Su, and W. Su. May 2022. *Exotic Higgs Decays in the Type-II 2HDMs at Current and Future pp Colliders*. In: 2022 Snowmass Summer Study
- W6. L. Zhang^o, J. Lieffers^o, and **A. Pyarelal**. Nov. 2021. *Using Features at Multiple Temporal and Spatial Resolutions to Predict Human Behavior in Real Time*. In: AAAI Fall Symposium on Computational Theory of Mind for Human-Machine Teams
- W5. P. Soares^o, **A. Pyarelal**, and K. Barnard. Nov. 2021. *Probabilistic Modeling of Human Teams to Infer False Beliefs*. In: AAAI Fall Symposium on Computational Theory of Mind for Human-Machine Teams

- W4. **A. Pyarelal**, A. Banerjee^o, and K. Barnard. Nov. 2021. *Modular Procedural Generation for Voxel Maps*. In: AAAI Fall Symposium on Computational Theory of Mind for Human-Machine Teams
- W3. **A. Pyarelal**, M. A. Valenzuela-Escárcega, R. Sharp, P. D. Hein^o, J. Stephens, P. Bhandari, H. Lim, S. Debray, and C. T. Morrison. May 2019. *AutoMATES: Automated Model Assembly from Text, Equations, and Software*. In: Modeling the World's Systems. Washington, DC
- W2. **A. Pyarelal**, R. Sharp, C. Morrison, and K. Barnard. May 2019. *Interpreting Causal Expressions with Gradable Adjectives to Assemble Dynamics Models*. In: Modeling the World's Systems. Washington, DC
- W1. R. Sharp, **A. Pyarelal**, B. Gyori, K. Alcock, E. Laparra, M. A. Valenzuela-Escárcega, A. Nagesh, V. Yadav, J. Bachman, Z. Tang, H. Lent, F. Luo, M. Paul, S. Bethard, K. Barnard, C. Morrison, and M. Surdeanu. May 2019. *Eidos, INDRA, & Delphi: From Free Text to Executable Causal Models*. In: Modeling the World's Systems. Washington, DC

OTHER SCHOLARSHIP

Open-source Software

- *Open-source software repositories which I have spearheaded or made significant contributions to. The entries in the 'Name' column are clickable links to the repositories.*
- *Repositories with an ^R to their left correspond to repositories contributed to in rank.*

ID	Name	Description
S10	ASIST Study 4 Testbed	The testbed used for ASIST Study 4. My contribution to the testbed was an updated version of the ASIST Study 3 Testbed's event extraction component that included a spellchecking system to meet the unique requirements of analyzing natural language in Study 4 (reproducibility, real-time output, high precision, and the ability to deal with domain-specific terms and new types of errors arising from the informal nature of text chat) that were not met by existing systems.
S9	ASIST Study 3 Testbed	The testbed used for ASIST Study 3. My contributions to the testbed were components that performed real-time analysis (real-time transcription, event extraction, and labeling of sentiment/emotion) of multi-party spoken dialog in remote experiments.
S8	SKEMA	Main repository for the SKEMA project, containing documentation and software for the text reading, structural alignment, and model role efforts.
S7	ToMCAT	Main repository containing documentation and software for physio experiments.
S6	ToMCAT DialogAgent	Real-time rule-based extraction of events from natural language.
S5	ToMCAT plan recognition	Multi-agent plan recognition
S4	ToMCAT ASR Agent	Real-time automatic speech recognition for multiple participants
S3	ToMCAT SpeechAnalyzer	Real-time extraction of vocalic features, sentiment and emotion detection, and personality trait labeling.
S2	AutoMATES	Automated Model Assembly from Text, Equations, and Software
S1	Delphi	Assembling causal, dynamic, probabilistic models from textual evidence and time series data.

WORKS IN PROGRESS

- Co-authors who are student advisees or postdoctoral mentees have a [◦] next to their names.
- Items with an ^R to their left correspond to activities performed in rank.

Manuscripts under review

- ^RMR4. J. A. Erikson, M. Alt, **A. Pyarelal**, and L. Kapa. 2024e. *Science Vocabulary and Science Achievement in Children with Developmental Language Disorder and typical Language Development*. In: Language, Speech, and Hearing Services in Schools
- ^RMR3. L. Zhang[◦], J. Lieffers[◦], P. Shivanna, and **A. Pyarelal**. 2024a. *Deep Reinforcement Learning with Vector Quantized Encoding*. In: RLC 2024
- ^RMR2. **A. Pyarelal**, J. Culnan[◦], A. Qamar[◦], M. Krishnaswamy[◦], Y. Wang[◦], C. Chen[◦], M. M. M. Miah[◦], S. Hormozi[◦], J. Tong[◦], and R. Huang. 2024b. *MultiCAT: Multimodal Communication Annotations for Teams*. In: ACL 2024
- ^RMR1. P. Soares[◦], **A. Pyarelal**, M. Krishnaswamy, E. Butler, and K. Barnard. 2024d. *Probabilistic Modeling of Interpersonal Coordination Processes*. In: ICML 2024

Manuscripts in preparation and preprints

Preprints are non-refereed papers that have been made public. They are also technically ‘manuscripts in preparation’, since they are earlier versions of manuscripts that are in the process of being revised and resubmitted. Manuscripts in preparation that have an associated preprint have names in blue, indicating they are clickable links that link to their corresponding arXiv page. For preprints, the listed year is the year that the preprint was uploaded. However, these papers are typically currently under preparation for resubmission.

- ^RMP3. D. KC, J. Lieffers[◦], D. Shahi[◦], **A. Pyarelal**, and C. Morrison. 2024c. *Neural Machine Translation for Code Generation*. In: ACM Computing Surveys
- ^RMP2. C. Basavaraj[◦], **A. Pyarelal**, and E. Carter. 2022f. [Multi-Timescale Modeling of Human Behavior](#)
- ^RMP1. L. Zhang[◦], J. Lieffers[◦], and **A. Pyarelal**. 2023c. *Generalized Skill Discovery in Video Games Based on Semantic Clustering*

MEDIA COVERAGE

ID	Date	Title	Publication
M2	2020-01-28	Desi scientist in US is building AI that ‘understands’ you	Times of India
M1	2020-01-22	Socially savvy artificial intelligence to be developed at UA	Arizona Daily Star

SCHOLARLY PRESENTATIONS

Entries are limited to the three years 2021, 2022, & 2023

Colloquia

ID	Date	Venue	Title	Type
CQ5	2023-03-16	University of Arizona School of Information	<i>From Tools to Teammates: Building machines that understand humans</i>	Invited
CQ4	2023-01-27	University of Arizona School of Information	<i>Artificial Social Intelligence</i>	Research Blitz
CQ3	2021-12-09	University of Arizona School of Information	<i>Theory of Mind-based Cognitive Architecture for Teams</i>	Research Blitz
CQ2	2020-10-08	University of Arizona Systems and Industrial Engineering	<i>Building machines that understand humans</i>	Invited
CQ1	2020-09-04	University of Arizona Cognitive Science Colloquium Series	<i>Building machines that understand humans</i>	Invited

Conferences

ID	Date	Venue	Title	City	Type
CP6	2019	TRIPODS 2nd Southwest Summer Conference	<i>Eidos, INDRA, & Delphi: From Free Text to Executable Causal Models</i>	Tucson, AZ	Submitted
CP5	2016	Joint Meeting of the Four Corners and Texas Sections of the American Physical Society	<i>A Razor Search for Dark Matter at a Future 100 TeV Collider</i>	Las Cruces, NM	Submitted
CP4	2015	Phenomenology 2015 Symposium	<i>Light Charged Higgs Bosons in Single-Top Production</i>	Pittsburgh, PA	Submitted
CP3	2015	Annual Meeting of the APS Four Corners Section	<i>Light Charged Higgs Bosons in Two Higgs Doublet Models</i>	Tempe, AZ	Submitted
CP2	2014	Annual Meeting of the APS Four Corners Section	<i>Light Charged Higgs Bosons in Single-Top Production</i>	Orem, UT	Submitted
CP1	2014	23 rd International Conference on Supersymmetry and Unification of Fundamental Interactions	<i>Light Charged Higgs Bosons to AW/HW via Top Decay</i>	Lake Tahoe, CA	Submitted

Posters

- P5. J. A. Erikson, M. Alt, and **A. Pyarelal**. Nov. 2022. *Science Vocabulary and Language Skills Predict Science Achievement in Students with and without DLD*. in: American Speech & Hearing Association (ASHA) Convention. New Orleans, Louisiana, USA
- P4. J. A. Erikson, M. Alt, and **A. Pyarelal**. June 2022. *Science vocabulary knowledge and science achievement for children with and without developmental language disorder*. In: Symposium on Research in Child Language Disorders (SRCLD). University of Wisconsin-Madison
- P3. J. Erikson Pyarelal, S. Schoelen^o, M. Alt, and **A. Pyarelal**. June 2021. *A Low-Language Alternative for Measuring Academic Science Vocabulary Depth*. In: Symposium on Research in Child Language Disorders (SRCLD). University of Wisconsin-Madison
- P2. S. Schoelen^o, **A. Pyarelal**, J. Erikson Pyarelal, and M. Alt. Jan. 2021. *Sci-Vocab: An open-source web app for studying scientific vocabulary*. In: Annual University of Arizona Undergraduate Biology Research Program (UBRP) Conference. Tucson, Arizona, USA
- P1. C. T. Morrison, P. D. Hein^o, **A. Pyarelal**, G. Hoogenboom, and C. Porter. Feb. 2020. *Tools to Support Computational Crop Model Analysis and Comparison*. In: Proceedings of the Second International Crop Modelling Symposium (iCROP2020). Montpellier, France

AWARDED GRANTS AND CONTRACTS

- The funding amount, period of performance, effort level, and list of co-PIs are based on the original awarded contract. In practice, these can vary over the course of the project.
- Grants are ordered in reverse chronological order based on the date of receipt of the notice of award.
- For federal grants, total, direct, and indirect funding amounts have been provided. The indirect funding amount is obtained by subtracting the direct funding amount from the full funding amount.
- Items with an \mathcal{R} to their left correspond to grants whose period of performance overlaps with time in current rank.

ID	Title, Funding source and amounts, Role, Effort, co-PIs, and Dates	
\mathcal{R} G11	<i>Title</i>	Next-Generation Teams
	<i>Source</i>	United States Army Contracting Command
	<i>Amount</i>	Full \$882,546
		Direct \$592,852
		Indirect \$289,654
	<i>Role</i>	PI
	<i>Effort</i>	35% during the academic year & 1 summer month
	<i>Period of Performance</i>	2023-12 – 2025-11
	<i>Co-PIs</i>	Kobus Barnard, Clayton Morrison, Winslow Burleson
\mathcal{R} G10	<i>Title</i>	SKEMA: Scientific Knowledge Extraction and Model Analysis
	<i>Source</i>	Defense Advanced Research Projects Agency
	<i>Amount</i>	Total \$9,345,747
		UArizona subaward \$3,253,997
		UArizona direct funding amount \$2,175,514
		UArizona indirect funding amount \$1,078,483
	<i>Role</i>	PI on UArizona subaward
	<i>Effort</i>	50% until 2024-04, then 100% for the remainder of the project.
	<i>Period of Performance</i>	2022-07 – 2025-12
	<i>Co-PIs</i>	PI on prime award (Lum.AI): Clayton Morrison PI on SIFT subaward: Daniel Bryce co-PIs on UArizona subaward: Enrique Noriega, Mihai Surdeanu, Katherine Isaacs
G9	<i>Title</i>	Development of an open-source dashboard for team communication experiments
	<i>Source</i>	UArizona SensorLab
	<i>Amount</i>	\$27,288
	<i>Role</i>	PI
	<i>Effort</i>	N/A (PI salary was not allowed on this intramural seed grant.)
	<i>Period of Performance</i>	2021-01 – 2022-06

G8	<p><i>Title</i> Automated real-time detection of closed-loop communication in spoken dialogue</p> <p><i>Source</i> UArizona SensorLab</p> <p><i>Amount</i> \$13,540</p> <p><i>Role</i> PI</p> <p><i>Effort</i> N/A (PI salary was not allowed on this intramural seed grant.)</p> <p><i>Period of Performance</i> 2021-01 – 2022-06</p>
\mathcal{R} G7	<p><i>Title</i> ToMCAT: Theory of Mind-based Cognitive Architecture for Teams</p> <p><i>Source</i> Defense Advanced Research Projects Agency</p> <p><i>Amount</i> Full \$7,497,548</p> <p style="padding-left: 20px;">Direct \$5,301,783</p> <p style="padding-left: 20px;">Indirect \$2,195,765</p> <p><i>Role</i> PI</p> <p><i>Effort</i> 100%</p> <p><i>Period of Performance</i> 2019-11 – 2023-10</p> <p><i>Co-PIs</i> Clayton Morrison, Kobus Barnard, Mihai Surdeanu, Rebecca Sharp, Marco Valenzuela-Escárcega</p>
G6	<p><i>Title</i> AutoMATES: Automated Model Assembly from Text, Equations, and Software</p> <p><i>Source</i> Defense Advanced Research Projects Agency</p> <p><i>Amount</i> Full \$961,959</p> <p style="padding-left: 20px;">Direct \$643,834</p> <p style="padding-left: 20px;">Indirect \$318,125</p> <p><i>Role</i> Co-PI</p> <p><i>Effort</i> 65%</p> <p><i>Period of Performance</i> 2018-11 – 2020-05</p> <p><i>Co-PIs</i> PI: Clayton Morrison</p> <p style="padding-left: 20px;">Other Co-PIs: Saumya Debray, Rebecca Sharp, Marco Valenzuela-Escárcega</p>
G5	<p><i>Title</i> American Physical Society 4CS Student Travel Grant</p> <p><i>Source</i> American Physical Society</p> <p><i>Amount</i> Not available (awarded a long time ago, could not find the amount in my email inbox)</p> <p><i>Year</i> 2016</p>
G4	<p><i>Title</i> American Physical Society 4CS Student Travel Grant</p> <p><i>Source</i> American Physical Society</p> <p><i>Amount</i> \$105</p> <p><i>Year</i> 2015</p>
G3	<p><i>Title</i> GPSC Travel Award</p> <p><i>Source</i> Graduate and Professional Student Council (GPSC)</p> <p><i>Amount</i> \$750</p> <p><i>Year</i> 2015</p>

SUBMITTED GRANTS AND CONTRACTS

- Grants are ordered in reverse chronological order based on the date of submission.
- For federal grants, total, direct, and indirect funding amounts have been provided. The indirect funding amount is obtained by subtracting the direct funding amount from the full funding amount.
- Items with an \mathcal{R} to their left correspond to grants whose period of performance overlaps with time in current rank.

ID	Title, Funding source and amounts, Role, Effort, & co-PIs	Status
\mathcal{R} SG3	<p><i>Title</i> STRONG: Hierarchical Knowledge Integration for Swift Command and Control in Dynamic Environments</p> <p><i>Source</i> Army Research Lab</p> <p><i>Amount</i> Full \$99,409 Direct \$64,762 Indirect \$34,647</p> <p><i>Role</i> Co-PI</p> <p><i>Effort</i> 0.5 summer months</p> <p><i>Period of Performance</i> 2024-06 – 2025-05</p> <p><i>Co-PIs</i> PI: Liang Zhang</p>	Pending
SG2	<p><i>Title</i> Multi-player Video Gaming, Sleep, & Cognition Among Individuals with Developmental Disabilities</p> <p><i>Source</i> UArizona SensorLab</p> <p><i>Amount</i> \$49,055</p> <p><i>Role</i> Co-PI</p> <p><i>Effort</i> N/A (Faculty salary was not allowed on this intramural seed grant.)</p> <p><i>Period of Performance</i> 2023-07 – 2024-06</p> <p><i>Co-PIs</i> PI: Payal Khosla. Other Co-PIs: Kobus Barnard</p>	Unawarded
SG1	<p><i>Title</i> Exploring Semantic Clustering in the Human Brain during Video Game Tasks using EEG Signals</p> <p><i>Source</i> UArizona SensorLab</p> <p><i>Amount</i> \$47,728</p> <p><i>Role</i> Co-PI</p> <p><i>Effort</i> N/A (Faculty salary was not allowed on this intramural seed grant.)</p> <p><i>Period of Performance</i> 2023-07 – 2024-06</p> <p><i>Co-PIs</i> PI: Liang Zhang</p>	Unawarded

TEACHING & MENTORING

Research Staff: Primary Supervisor

Start	End	Name	Position
Fall 2023	–	Liang Zhang	Research Scientist III

Postdoctoral: Primary Supervisor

Start	End	Name	University
Fall 2022	–	Justin Lieffers	University of Arizona
Spring 2022	Spring 2023	John Culnan	University of Arizona
Fall 2020	Fall 2023	Liang Zhang	University of Arizona

Postdoctoral: Co-Supervisor

Start	End	Name	Notes
Fall 2021	Fall 2023	Chinmai Basavaraj	Primary supervisor: Evan Carter (ARL)

Doctoral: Co-Advisor

Start	End	Name	University
Spring 2024	–	Deepsana Shahi	University of Arizona

Doctoral: Member of Comprehensive Exam Committee

Start	End	Name	University
Spring 2024	Spring 2024	Salena Torres Ashton	University of Arizona
Spring 2024	–	Kadir Bulut Ozler	University of Arizona

Doctoral: Research Project Mentor

Start	End	Name	University
Fall 2022	Fall 2023	Deepsana Shahi	University of Arizona
Spring 2022	Spring 2023	Chen Chen	University of Arizona
Fall 2021	Spring 2023	Remo Nitschke	University of Arizona
Fall 2021	Spring 2023	Yuwei Wang	University of Arizona
Fall 2021	–	Meghavarshini Krishnaswamy	University of Arizona
Fall 2019	–	Salena Torres Ashton	University of Arizona
Fall 2019	Spring 2024	Paulo Soares	University of Arizona
Summer 2019	–	Loren Champlin	University of Arizona
Spring 2018	Fall 2018	Tanya Jeffries	University of Arizona
Fall 2018	Spring 2022	Manujinda Wathugala	University of Arizona

Masters: Member of Committee

Start	End	Name	University
Fall 2023	Fall 2023	Caleb Shibu	University of Arizona

Undergraduate: Research Project Mentor

Start	End	Name	University
Spring 2023	Spring 2023	Zach Keyes	University of Arizona
Spring 2020	Fall 2021	Shreeya Jain	University of Arizona
Spring 2020	Fall 2020	Da Long	University of Arizona
Fall 2020	Spring 2021	Siena Schoelen	University of Arizona
Fall 2019	Summer 2020	Runnan Zhou	University of Arizona
Fall 2019	Spring 2020	Jiangfeng Li	University of Arizona
Fall 2019	Spring 2023	Aditya Banerjee	University of Arizona

Awards won by mentored students

Year	Name	Student type	Award
2023	Aditya Banerjee	Undergraduate	Computer Science outstanding researcher for his graduating class
2021	Aditya Banerjee	Undergraduate	Galileo Circle Scholarship in Computer Science
2021	Paulo Soares	Doctoral	Outstanding research in Cognitive Science Award
2021	Siena Schoelen	Undergraduate	Outstanding senior in Speech, Language, and Hearing Sciences

Courses Taught

Year	Term	Course No.	Course Title	Role
2024	Spring	ISTA 421/INFO 521	Introduction to Machine Learning	Instructor
2023	Fall	ISTA 421/INFO 521	Introduction to Machine Learning	Instructor
2017	Spring	PHYS 105A	Introduction to Scientific Computing	Lab instructor
2015	Fall	PHYS 381/382	Methods in Experimental Physics I/II	Lab instructor
	Spring	PHYS 381/382	Methods in Experimental Physics I/II	Lab instructor
2014	Fall	PHYS 381/382	Methods in Experimental Physics I/II	Lab Instructor
	Summer	PHYS 141	Introductory Mechanics	Lab Instructor
	Spring	PHYS 381/382	Methods in Experimental Physics I/II	Lab instructor
2013	Fall	PHYS 381/382	Methods in Experimental Physics I/II	Lab instructor
	Spring	PHYS 241	Introductory Electricity and Magnetism	Lab instructor
2012	Fall	PHYS 102	Introductory Physics I	Lecturer
	Summer	PHYS 181	Introductory Laboratory I	Lab Instructor
	Spring	PHYS 241/261H	Introductory Electricity and Magnetism	Lab instructor
2011	Fall	PHYS 261H	Honors Introductory Electricity and Magnetism	Lab instructor

Organizer, IVILab Summer Programming Bootcamp

Summers of 2017 & 2020 Organized the IVILab Summer Programming Bootcamp. Prepared syllabi and instructional materials, gave lectures, graded assignments, and recruited and coordinated other lecturers.