List of research topics for NII International Internship Program 2026 2nd Call

No.	Research Area	Title of the Research	Website	Name of supervisor	Title of the supervisor	Requirements for Applicants: Master / Ph.D. Student	Total Number of Acceptance per Supervisor	Duration : 2-6months (less than 165days)	Comments
1. Principles of Informatics Research Division									
P01101	Machine learning	Geometric analysis of machine learning models	https://mahito.nii.ac.jp	Mahito Sugiyama	Associate Professor	Ph.D.	2	3-6 months	Legendre decomposition (information geometric tensor decomposition; NeurIPS 2018): https://arxiv.org/abs/1802.04502 Many-body approximation for tensors (NeurIPS 2023): https://openreview.net/forum?id=5yedZXV7wt Data augmentation (ICLR 2026): https://arxiv.org/abs/2410.00718
P01102	Machine learning	Geometric approaches to SAT	https://mahito.nii.ac.jp	Mahito Sugiyama	Associate Professor	Ph.D.	2	3-6 months	Legendre decomposition (information geometric tensor decomposition; NeurIPS2018): https://arxiv.org/abs/1802.04502 FourierSAT: https://arxiv.org/abs/1912.01032 , https://www.sciencedirect.com/science/article/pii/S0004370221001107
P01103	Machine learning/Data mining	Machine learning for graphs	https://mahito.nii.ac.jp	Mahito Sugiyama	Associate Professor	Ph.D.	2	3-6 months	Molecular Graph Generation by Decomposition and Reassembling: https://doi.org/10.1021/acsomega.3c01078 When Graph Language Models Go Beyond Memorization https://arxiv.org/abs/2605.06239
P01201	Artificial Intelligence	Knowledge Graph Applications	http://www-kasm.nii.ac.jp/~takeda	Hideaki Takeda	Professor	Either	3	3-6 months	
P01202	Artificial Intelligence	Building and Applications for Academic Knowledge Graph		Hideaki Takeda	Professor	Either	3	3-6 months	
P01203	Legal Informatics	Applying AI in the legal information processing	https://ds.rois.ac.jp/en_center7/	Hideaki Takeda	Professor	Either	3	3-6 months	
P02001	Theoretical Computer Science	Sensitivity Analysis/Lipschitz Continuous Algorithms	https://arxiv.org/abs/2211.04674 https://arxiv.org/abs/2111.02657 https://arxiv.org/abs/2411.02744 https://arxiv.org/abs/2604.02582	Yuichi Yoshida	Professor	Ph.D.	3	2-6 months	
P02002	Data Mining	Sensitivity Analysis/Lipschitz Continuous Algorithms	https://openreview.net/forum?id=VM7u8ecLrZV https://openreview.net/forum?id=boik01yhssB https://openreview.net/forum?id=VhohI7EcvO	Yuichi Yoshida	Professor	Ph.D.	3	2-6 months	
P02003	Theoretical Computer Science	Spectral Graph Theory for Directed Graphs and Hypergraphs	https://arxiv.org/abs/2106.02353 https://arxiv.org/abs/2201.07289 https://arxiv.org/abs/2604.27651	Yuichi Yoshida	Professor	Ph.D.	3	2-6 months	
P02004	Theoretical Computer Science	Sublinear-time Algorithms	https://arxiv.org/abs/2204.08404 https://arxiv.org/abs/2210.12601 https://arxiv.org/abs/2605.17760	Yuichi Yoshida	Professor	Ph.D.	3	2-6 months	
P02101	Computational Complexity Theory	Meta-complexity, average-case complexity, pseudorandomness, and the Minimum Circuit Size Problem	https://eccc.weizmann.ac.il/report/2022/119/ https://eccc.weizmann.ac.il/report/2021/058/	Shuichi Hirahara	Associate Professor	Either	2	2-6 months	It is desirable that applicants have a conference publication in complexity theory.
P03401	Robotics	Real-world robot learning		Taisuke Kobayashi	Assistant Professor	Ph.D.	2	4-6 months	Knowledge and experience of reinforcement learning and/or imitation learning are required. The details of the research contents will be decided by prior discussion.
P03402	Robotics	Optimisation and Optimal Control for Robotic Systems		Taisuke Kobayashi	Assistant Professor	Ph.D.	2	3-6 months	Requirements: Master's degree or equivalent experience in control theory, learning theory, optimisation, or robotics
P03501	Quantum information	Theoretical and/or numerical research on quantum information processing	https://quantum.nii.ac.jp/	Akihito Soeda	Associate Professor	Either	1	3-6 months	
P03601	Robotics olfaction, Mechatronics, System control engineering, Computational Neuroscience, Ethology	Real-world implementation of robotic olfaction	https://sshigaki.jimdofree.com/research/	Shunsuke Shigaki	Assistant Professor	Ph.D.	1	2-6 months	
P03701	Theoretical Computer Science	Parameterized Algorithms/Complexity	See e.g. https://arxiv.org/abs/2211.04278.	Philip Wellnitz	Assistant Professor	Ph.D.	2	4-6 months	At least one ESA-level paper (or better) is desirable.
P03702	Theoretical Computer Science	Fine-Grained Complexity Theory/Algorithm Design	See e.g. https://arxiv.org/abs/2305.06659 or https://arxiv.org/abs/2010.09096	Philip Wellnitz	Assistant Professor	Either	2	4-6 months	At least one ESA-level paper (or better) is desirable.
P03703	Theoretical Computer Science/Algorithm Engineering	Fast Approximate String Matching in Practice		Philip Wellnitz	Assistant Professor	Either	2	4-6 months	Preference is given to longer stays; applications from strong and highly motivated Master students are welcome. For PhD students, at least one ESA-level paper (or better) is desirable.

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P03704	Theoretical Computer Science	Theoretical Foundations of Graphical Neural Networks and related topics	See e.g. https://arxiv.org/abs/2004.06595 or https://arxiv.org/abs/2311.08988	Philip Wellnitz	Assistant Professor	Ph.D.	2	5-6 months	At least one ESA-level paper (or better) is desirable.
P03901	Combinatorial Optimization	Research on Search Algorithms for Combinatorial Optimization		Ryo Kuroiwa	Assistant Professor	Either	4	2-6 months	
P03902	Combinatorial Optimization	Applying Optimization Solvers to Combinatorial Optimization Problems		Ryo Kuroiwa	Assistant Professor	Either	4	2-6 months	
P03903	Combinatorial Optimization	Development of Combinatorial Optimization Solvers		Ryo Kuroiwa	Assistant Professor	Either	4	2-6 months	

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2. Information Systems Architecture Science Research Division									
A00301	Software Engineering, Formal Methods, Generative AI, AI4SE	Generative AI for Trustworthy Software Engineering	https://research.nii.ac.jp/~f-ishikawa/en/call.html	Fuyuki Ishikawa	Professor	Either	5	2-6 months	
A00302	Software Engineering, Testing, Autonomous Driving Systems, Generative AI, SE4AI	Testing and Trust Exploration for AI Systems	https://research.nii.ac.jp/~f-ishikawa/en/call.html	Fuyuki Ishikawa	Professor	Either	5	2-6 months	
A00601	Wireless and Mobile Networks, Sensing, Signal Processing, AI/ML for wireless communications	Energy-efficient edge AI-based wireless networks design for Beyond 5G	https://research.nii.ac.jp/~megkaneko/	Megumi Kaneko	Professor	Either	3	4-6 months	Required programming skills: Matlab, Python. Basic knowledge in wireless/digital communications and signal processing is required.
A00602	Wireless and Mobile Networks, Sensing, Signal Processing, AI/ML for wireless communications	Integrated Sensing and Communication (ISAC)	https://research.nii.ac.jp/~megkaneko/	Megumi Kaneko	Professor	Either	3	4-6 months	Required programming skills: Matlab, Python. Basic knowledge in wireless/digital communications and signal processing is required.
A00603	Wireless and Mobile Networks, Sensing, Signal Processing, AI/ML for wireless communications	Integrated terrestrial and spatial wireless communications for 6G	https://research.nii.ac.jp/~megkaneko/	Megumi Kaneko	Professor	Either	3	4-6 months	Required programming skills: Matlab, Python. Basic knowledge in wireless/digital communications and signal processing is required.
A01201	Programming Language Theory, Program Verification	Type-Based Temporal Verification and Its Automation	https://skymountain.github.io/	Taro Sekiyama	Associate Professor	Either	3	4-6 months	This topic aims to develop an advanced type-based approach to verification of temporal properties, a class of properties about sequences of events, called traces. Real-world programs involve not only pure computation but also side effects, and many side effects have certain disciplines to be met. For example, file resources need to be opened first, and reading from and writing to them should be done before closing them, and opened files should be closed eventually. In this example, "open", "read", "write", and "close" are regarded as events on files, and the discipline of files to be met can be described as temporal properties about traces of such events. In this topic, we study 1) theory of temporal verification for higher-order programs and 2) implementation of verifiers to automate the temporal verification. Reference - T. Sekiyama et al. Temporal Verification with Answer-Effect Modification. POPL'23. - T. Sekiyama et al. Algebraic Temporal Effects. POPL'25
A01202	Programming Language Theory, Program Verification	Advanced Type Systems for Computational Effects	https://skymountain.github.io/	Taro Sekiyama	Associate Professor	Either	3	4-6 months	Real-world programs involve side effects, such as memory, file, nondeterminism, and probability. This topic aims to study advanced type systems for uniformly verifying programs with such effects. As a means to express side effects in a uniform manner, we plan to focus on algebraic effect handlers, a programming construct able to model a variety of side effects. The expressivity of algebraic effect handlers comes from the ability to manipulate the notion of (delimited) continuations. Therefore, type systems to be studied need to effectively verify the use of continuations in programs. There are many directions and potentials to advance such type systems for algebraic effect handlers (the details will be discussed with applicants). Reference -F. Kawamata et al. Answer Refinement Modification. POPL'24. -T. Sekiyama et al. Signature restriction for polymorphic algebraic effects. ICFP'20, JFP'24. - T. Yoshioka et al. Abstracting Effect Systems for Algebraic Effect Handlers. ICFP'24.
A01203	Programming Language Theory, Program Verification	Program Verification for Concurrency, Parallelism, and Distributed Computing	https://skymountain.github.io/	Taro Sekiyama	Associate Professor	Either	3	4-6 months	Concurrency, parallelism, and distributed computing are techniques to distribute the computation over multiple processes or agents that interact with each other. They are fundamental to process big data or a large number of queries, but, on the other hand, they also make the systems complex, which hinders understanding and reasoning about the systems. The aim of this topic is to study a fundamental computational model of concurrent, parallel, or distributed systems and to develop verification techniques based on it. This is at an early stage of research, but there are a number of open questions worth exploring.

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A01204	Program Verification, Program Logics	Program Verification of System Software	https://skymountain.github.io/	Taro Sekiyama	Associate Professor	Either	3	4-6 months	This topic aims to study program logics for verifying system software, such as firmware, hypervisor, and OS. Unlike user applications, these systems rely on specific features such as exception handling and CPU-specific instructions. Successful candidates will study program logics−especially, separation logic−to directly verify system code with such features. Furthermore, the advanced topics include applications to security verification, verification of software stacks, and bridging higher- and lower-level specifications. Reference - Deep Specifications and Certified Abstraction Layers. Ronghui Gu, et al. POPL'15.
A01701	Theoretical Computer Science	Categorical Foundation of Model Checking	https://group-mmm.org/~ichiro/	Ichiro Hasuo	Professor	Either	2	3-6 months	Fixed-point specifications (such as in LTL and modal \mu-calculus) have been conventionally studied in terms of finitary and combinatory structures (automata, games, etc.). These observations are recently being transferred to more abstract settings, opening up algorithms and proof methods for new application domains (esp. probabilistic, metric, etc.). There are a number of research questions waiting to be answered, both theoretical and algorithmic. References (you'll work on one line): - Fibrational line: [Komorida, Katsumata, Hu, Klin, Hasuo, LICS'19], [Komorida, Katsumata, Kupke, Rot, Hasuo, LICS'21], [Kori, Hasuo, Katsumata, CONCUR'21] - PDR line: [Kori+, CAV'22], [Kori+, CAV'23] - compositionality line: [Watanabe+, CAV'23] ## Desired: familiarity with mathematical and abstract reasoning used in logic, lattice theory and (possibly) category theory ## Interested? Please first consult https://group-mmm.org/eratommsd/internship-students/ (don't write an email to me)
A01702	Theoretical Computer Science	Logical safety for automated driving	https://group-mmm.org/~ichiro/	Ichiro Hasuo	Professor	Either	2	3-6 months	Responsibility-sensitive safety (RSS) is a recently proposed methodology for devising mathematically-guaranteed safety rules for automated driving. The candidate will work on its logical foundations and its application to various driving scenarios. The work is much like interactive theorem proving, but with unique theoretical challenges (e.g. continuous dynamics) and a hot application (automated driving). References: [Hasuo, Eberhart, Haydon, et al., IEEE Trans. Intelligent Vehicles, '23 (available at arXiv)] [Shalev-Shwartz, Shammah, Shashua, arXiv'17] Desired: familiarity with formal logic and interactive theorem proving, passion for bringing theory to practice Interested? Please first consult https://group-mmm.org/eratommsd/internship-students/ (don't write an email to me)
A01703	Theoretical Computer Science	Logic and semantics for safe AI	https://group-mmm.org/~ichiro/	Ichiro Hasuo	Professor	Either	2	3-6 months	We are interested in logical, semantical, and programming language techniques for safe AI. Most importantly, we will be combining discrete/symbolic/algebraic/logical structures with smooth/numeric/differentiable/fuzzy machine learning algorithms. References: [Zhang, Hasuo, Arcaini, CAV'19], [Hasuo, Eberhart, Haydon, et al., IEEE Trans. Intelligent Vehicles, '23 (available at arXiv)] Desired: familiarity with, or eagerness to learn, 1) formal logic, 2) statistical machine learning Interested? Please first consult https://group-mmm.org/eratommsd/internship-students/ (don't write an email to me)
A01801	Computer networks	Network security measurement and analysis	http://www.flab.nii.ac.jp/internship	Kensuke Fukuda	Professor	Either	3	5-6 months	Solid programming and machine learning skills
A01802	Computer network	LLMs and network configuration/operation	http://www.flab.nii.ac.jp/internship	Kensuke Fukuda	Professor	Either	3	5-6 months	Solid network operation and programming skills
A01803	Computer network	Traffic anomaly detection	http://www.flab.nii.ac.jp/internship	Kensuke Fukuda	Professor	Either	3	5-6 months	Solid programming and machine learning skills

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3. Digital Content and Media Sciences Research Division									
K00101	Natural language processing	Reasoning and Representation for Natural language understanding	http://www-al.nii.ac.jp/en	Akiko Aizawa	Professor	Either	4	3-6 months	
K00102	Natural language processing	Deep analysis of scientific papers in the era of AI for Science	http://www-al.nii.ac.jp/en	Akiko Aizawa	Professor	Either	4	3-6 months	
K00401	Education Science	Campus Resilience Commander	http://research.nii.ac.jp/~andres/official/intern2026_2nd_topic_1.htm	Frederic ANDRES	Associate Professor	Either	5	3-5 months	cooperation with AIT (Thailand)
K00402	Applied Mathematics	Parallel Sparse Low-Rank Compression of Deep Neural Networks for Efficient Edge AI	http://research.nii.ac.jp/~andres/official/intern2026_2nd_topic_2.htm	Frederic ANDRES	Associate Professor	Either	5	6 months	Collaboration with British University of Egypt and HBC (India)
K00403	Data Science	Ontology-Driven AI Learning Service	http://research.nii.ac.jp/~andres/official/intern2026_2nd_topic_3.htm	Frederic ANDRES	Associate Professor	Either	5	6 months	cooperation with the CNRS French Laboratory
K00404	Molecular biology	GeoPharma3D: Customizable Geometric Deep Reinforcement Learning for Precision Pharmacotherapy	http://research.nii.ac.jp/~andres/official/intern2026_2nd_topic_4.htm	Frederic ANDRES	Associate Professor	Either	5	6 months	cooperation with the Japanese National Institute of Health Sciences (NIHS), The British University in Egypt, and the University of Nebraska at Omaha and IRISA
K00405	Data Science	Belief-Driven Reinforcement Learning for Hazard Prediction, Analysis, and Gamified Risk Awareness	http://research.nii.ac.jp/~andres/official/intern2026_2nd_topic_5.htm	Frederic ANDRES	Associate Professor	Either	5	3-6 months	Cooperation with IRISA Lab (France) and AIT (Thailand)
K00406	Data Science	CiboLingua Revolution: The FusionFormer Challenge for Next-Generation Cooking Language Creation"	http://research.nii.ac.jp/~andres/official/intern2026_2nd_topic_6.htm	Frederic ANDRES	Associate Professor	Either	5	6 months	Cooperation with CRWB project
K00407	Automation Control	Carbon-Conscious Production PLANning (C2PLAN)	http://research.nii.ac.jp/~andres/official/intern2025_2nd_topic_7.htm	Frederic ANDRES	Associate Professor	Either	5	6 months	Cooperation with IRISA and Osaka University
K00501	3D Computer Vision, 3D Computer Graphics	1) 3D Computer Vision Algorithms (e.g., Photometric Stereo, Feedforward 3D Reconstruction Model, NeRF/3DGS and so on) 2) 3D Computer Vision on 360 degree images (Joint research with University of Tokyo) 3) Auroral 3D Reconstruction (Joint resaerch with National Institute of Polar Research) 4) Others related to Computer Vision/Graphics	https://satoshi-ikehata.github.io/	Satoshi Ikehata	Associate Professor	Either	2	4-6 months	Please visit my website for details on potential research topics, the internal contact deadline, and the interview request form. Please refrain from contacting me by email. Desired qualifications: - Excellent scientific communication and presentation skills - Strong AI programming skills - Ability to read and write academic papers - Research experience in machine learning and/or computer vision - Candidates with publications at top AI conferences such as CVPR, ICCV, ECCV, NeurIPS, ICLR, ICML, or AAAI are highly preferred. However, highly motivated students without publications who intend to submit papers to these conferences are also very welcome!
K01001	Digital Humanities	Machine learning for visual information, geographic information, linked data, metadata management, and data infrastructure for cultural big data	https://agora.ex.nii.ac.jp/~kitamoto/education/internship/index.html.en	Asanobu Kitamoto	Professor	Either	4	3-6 months	Programming skills are required, and collaboration with domain experts is recommended for an interdisciplinary theme.
K01002	Earth Environmental Informatics	Big data analytics and machine learning on geographic data or remote sensing data for solving environmental and societal problems	https://agora.ex.nii.ac.jp/~kitamoto/education/internship/index.html.en	Asanobu Kitamoto	Professor	Either	4	3-6 months	Programming skills are required, and collaboration with domain experts is recommended for an interdisciplinary theme.
K01003	Crisis Informatics	Big data analytics and machine learning on computer vision and natural language processing for natural disasters and crisis	https://agora.ex.nii.ac.jp/~kitamoto/education/internship/index.html.en	Asanobu Kitamoto	Professor	Either	4	3-6 months	Programming skills are required, and collaboration with domain experts is recommended for an interdisciplinary theme.
K01004	Open Science	Research on a new trend in science, such as open data, data citation, citizen science, and open innovation	https://agora.ex.nii.ac.jp/~kitamoto/education/internship/index.html.en	Asanobu Kitamoto	Professor	Either	4	3-6 months	Programming skills are required, and collaboration with domain experts is recommended for an interdisciplinary theme.
K01301	Computer Vision and Computer Graphics	Computational Photography: Deep learning, Image-based rendering, Image processing, Color analysis, Spectral imaging	http://research.nii.ac.jp/~imarik/ http://research.nii.ac.jp/pbv/	Imari Sato	Professor	Either	3	5-6 months	A basic knowledge of Image Analysis and/or Machine learning, and good programming skills are required
K01302	Computer Vision and Application	3D medical image analysis, Deep learning, Image processing, Color analysis, Spectral imaging	http://research.nii.ac.jp/~imarik/ http://research.nii.ac.jp/pbv/	Imari Sato	Professor	Either	3	5-6 months	A basic knowledge of Image Analysis and/or Machine learning, and good programming skills are required
K01401	Content-Based Image and Video Analysis	General image analysis topics, e.g., image semantic analysis, semantic segmentation, classification, image captioning, image retrieval, and so on. Landmark image retrieval can be considered, e.g., Google Landmark Image Retrieval https://www.kaggle.com/competitions/landmark-retrieval-2021	http://www.satoh-lab.nii.ac.jp/	Shin'ichi Satoh	Professor	Either	3	2-6 months	
K01402	Content-Based Image and Video Analysis	General video analysis topics, e.g., video semantic analysis, video segmentation, classification, video captioning, video retrieval, and so on. TREC Video Question Answering (VQA), can be considered. https://trecvid.nist.gov/	http://www.satoh-lab.nii.ac.jp/	Shin'ichi Satoh	Professor	Either	3	2-6 months	

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K01601	computer vision	One of the following topics (but not limited to):(1) 3D vision, (2) Human activity recognition, (3) Vision and language, (4) Object detection and segmentation from video using deep learning, (5) Image/video generation using deep learning, (6) Any proposed topic related with computer vision.	http://www.dgcv.nii.ac.jp	Akihiro Sugimoto	Professor	Either	5	4-6 months	Longer duration is better. Rigorous background on mathematics is required. Strong programming skills on image processing and computer vision are also required. In the case of Master course students, highly motivated students who can stay for 6 months are preferable. Ph D students who have already publications are more preferrable. Potential applicants should send your CV and research interests/proposals directly to Prof. Sugimoto before your application.
K01602	digital geometry	(1) Discretization model of geometric shape, (2) Discrete shape fitting to noisy integer points,(3) Any proposed topic related with digital geometry.	http://www.dgcv.nii.ac.jp	Akihiro Sugimoto	Professor	Either	5	3-6 months	Rigorous background on mathematics as well as computer vision is required. In particular, strong knowledge on linear algebra, graph theory, and number theory is important requirements. Programming skills on image processing or computer vision are also required. Potential applicants should send your CV and research interests/proposals directly to Prof. Sugimoto before your application.
K02001	Financial Time Series Forecasting	Reliability Estimation in a Two-State Learning Framework for Stock/Crypto Market Prediction	http://research.nii.ac.jp/~prendinger/papers/FY2026(2)_Topics.html	Helmut PRENDINGER	Professor	Either	3	4-6 months	Financial time series forecasting is inherently challenging because of non-stationarity and a low signal-to-noise ratio. Our approach builds on the concept of a two-stage learning framework, in which a primary model forecasts market movements (up, down) and a secondary model estimates the reliability of these predictions (Isufaj et al., 2026). Primary models include financial time series foundation models such as FinCast (Zhu et al., 2025) or Kronos (Shi et al. 2026). We investigate the potential of Deep Learning (Chaffard et al., 2025) and tabular methods (Hollmann et al., 2023) to develop a model that can select reliable directional predictions and enables profitable swing trading. Please check the references in the link provided.
K02002	Financial Time Series Forecasting	Development of Adaptive and Interpretable Models for Stock/Crypto Market Prediction	http://research.nii.ac.jp/~prendinger/papers/FY2026(2)_Topics.html	Helmut PRENDINGER	Professor	Either	3	4-6 months	Financial time series forecasting is inherently challenging because of non-stationarity and a low signal-to-noise ratio. Our approach builds on the concept of a two-stage learning framework, in which a primary model forecasts market movements (up, down) and a secondary model estimates the reliability of these predictions (Isufaj et al., 2026). To address non-stationarity, we investigate methods that can handle and adapt to distribution shifts (Fan et al., 2025). To address interpretability, we also plan to complement data-driven reliability estimation with human-readable probabilistic rules. Please check the references in the link provided.
K02101	Natural Language Processing	Sign Language Recognition/Translation	https://research.nii.ac.jp/~bono/	Mayumi Bono	Associate Professor	Either	2	2-6 months	Please note that computers and GPU resources are not available for loan. If your project requires such resources, we recommend arranging them through your home institution prior to your visit to Japan.
K02102	Computer Vision	Sign Language Recognition/Translation	https://research.nii.ac.jp/~bono/	Mayumi Bono	Associate Professor	Either	2	2-6 months	Please note that computers and GPU resources are not available for loan. If your project requires such resources, we recommend arranging them through your home institution prior to your visit to Japan.
K02103	Sign Language Linguistics and Multimodal Interaction	Applied Conversation Analysis for Sign Language Interaction	https://research.nii.ac.jp/~bono/	Mayumi Bono	Associate Professor	Either	2	2-6 months	
K02301	Speech and audio processing	Deepfake Detection	Relevant but not limited to [1] Large-scale deepfake speech detector training: [1] https://arxiv.org/pdf/2506.21090 [2] https://arxiv.org/pdf/2507.00324 [3] https://arxiv.org/pdf/2512.18210	Junichi Yamagishi	Professor	Ph.D.	3	4-6 months	The successful candidate should be a PhD student in speech processing, computer science, or a related discipline. Familiarity with DNN tools (e.g., Pytorch) and speech/audio tools are preferable. Supervision teams include Dr. Wanying Ge and Xin Wang.
K02302	Speech and audio processing	Voice Privacy Protection	For background, please check https://www.voiceprivacychallenge.org/	Junichi Yamagishi	Professor	Ph.D.	3	4-6 months	The successful candidate should be a PhD student in speech processing, computer science, or a related discipline. Familiarity with DNN tools (e.g., Pytorch) and speech/audio tools are preferable. Supervision teams include Dr. Xin Wang and Zhe Zhang.
K02303	Speech and audio processing	Automatic Quality Assessment of Speech	For background, please check https://sites.google.com/view/voicemos-challenge For related methods, please check https://arxiv.org/abs/2308.15203 https://arxiv.org/abs/2204.02152	Junichi Yamagishi	Professor	Ph.D.	3	4-6 months	The successful candidate should be a PhD student in speech processing, computer science, or a related discipline. Familiarity with DNN tools (e.g., Pytorch) and speech/audio tools are preferable. Supervision teams include Dr. Yusuke Yasuda.

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K02304	Music processing	Audio Effect Understanding	https://arxiv.org/abs/2504.14735 https://arxiv.org/abs/2502.14405 https://arxiv.org/abs/2308.16177 https://arxiv.org/abs/2306.00107 https://arxiv.org/abs/2207.06405	Junichi Yamagishi	Professor	Ph.D.	3	4-6 months	The successful candidate should be a PhD student in music information processing, computer science, or a related discipline. Familiarity with DNN tools (e.g., Pytorch) and audio tools are preferable. Supervision teams include Dr. Zhe Zhang.
K02305	Image processing	Explainable Deepfake Detection	https://arxiv.org/abs/2511.00181 https://arxiv.org/abs/2511.23158 https://arxiv.org/pdf/2509.19841 https://arxiv.org/abs/2411.04125	Junichi Yamagishi	Professor	Ph.D.	3	4-6 months	The successful candidate should be a PhD student in computer vision, image forensics, computer science, or a related discipline. He or she should have strong programming skills. Familiarity with MLLMs and DNN tools (e.g., Pytorch) are preferable. Supervision teams include Dr. Surbhi Madan.
K02901	Natural Language Processing	Better evaluation of large language models: evaluation methods and task design	https://cl.nii.ac.jp	Saku Sugawara	Assistant Professor	Either	2	4-6 months	https://aclanthology.org/2024.emnlp-main.905/ https://aclanthology.org/2023.emnlp-main.9/ https://aclanthology.org/2023.acl-short.53/ https://aclanthology.org/2023.findings-acl.861/ When you reach out to me, please attach your CV and mention what kind of tasks or linguistic phenomena you are interested in for evaluation (e.g., by referring to recent papers).
K02902	Natural Language Processing	Understanding language models through the lens of human language acquisition	https://cl.nii.ac.jp	Saku Sugawara	Assistant Professor	Either	2	4-6 months	https://aclanthology.org/2024.emnlp-main.1146/ https://aclanthology.org/2024.findings-acl.865/ https://aclanthology.org/2024.findings-acl.913/ When you reach out to me, please attach your CV and mention what aspect of language modeling or human language acquisition you are interested in (e.g., by referring to recent papers).
K03501	Audio Processing	Physics-informed machine learning for spatial audio processing	https://www.ap.nii.ac.jp/	Shoichi Koyama	Associate Professor	Either	3	3-6 months	Knowledge of deep learning, signal processing, and acoustics is required. Programming skills in Python or Julia are also required. Reference: Koyama et al., IEEE SPM 2025, Ribeiro et al. IEEE/ACM TASLP 2024.
K03502	Audio Processing	Spatial active noise cancelling	https://www.ap.nii.ac.jp/	Shoichi Koyama	Associate Professor	Either	3	3-6 months	Knowledge of adaptive signal processing and acoustics is required. Programming skills in Python are also required. Reference: Koyama et al. IEEE TASLP 2021, Arikawa et al. APSIPA TSIP 2025.
K03503	Audio Processing	Head-related transfer function personalization for VR/AR/XR audio	https://www.ap.nii.ac.jp/	Shoichi Koyama	Associate Professor	Either	3	3-6 months	Knowledge of deep learning, signal processing, and acoustics is required. Programming skills in Python are also required. Reference: Niu et al. WASPAA 2025, Ito et al. IEEE OJSP 2025.
K03701	Generative AI, Computer Vision, Large Language Models	One of the following topics for Computer Vision and Language Modeling: 1) Efficient architectures (e.g., auto-regressive models and diffusion models), 2) Efficient training and/or inference of the foundation models.	https://layneh.github.io/	Lang HUANG	Assistant Professor	Either	3	3-6 months	Please send me your (i) CV, (ii) a summary of your background, and (iii) a document specifying the topic(s) you want to explore with me and your initial thoughts/approaches. Reference: https://arxiv.org/abs/2606.27282 https://arxiv.org/abs/2205.13515 https://arxiv.org/abs/1907.12273 https://arxiv.org/abs/2207.05557
K03702	Generative AI, Computer Vision, Large Language Models	Data Efficient Learning for Computer Vision and Language Modeling, with its applications to visual and multi-modal understanding and generation	https://layneh.github.io/	Lang HUANG	Assistant Professor	Either	3	3-6 months	Please send me your (i) CV, (ii) a summary of your background, and (iii) a document specifying the topic(s) you want to explore with me and your initial thoughts/approaches. Reference: https://arxiv.org/abs/2606.03971 https://arxiv.org/abs/2601.14671 https://arxiv.org/abs/2002.10319 https://arxiv.org/abs/2203.14898 https://arxiv.org/abs/2502.20008

No.	Research Area	Title of the Research	Website	Name of supervisor	Title of the supervisor	Requirements for Applicants: Master / Ph.D. Student	Total Number of Acceptance per Supervisor	Duration : 2-6months (less than 165days)	Comments
K03703	Deep Learning, Weight Space Learning	Analysis, Composition, and Generation in the Weight Space	https://layneh.github.io/	Lang HUANG	Assistant Professor	Either	3	3-6 months	This is an emergent (and exciting) topics in the Deep Learning and Machine Learning community. The candidates can refer to the Weight Space Learning workshop at ICLR for a general sense of the research: https://openreview.net/pdf?id=Bz6wEdobY7 For example, we are interested in the specific applications like model merging and model generation: https://arxiv.org/pdf/2203.05482 https://arxiv.org/abs/2402.13144 https://arxiv.org/abs/2405.07987 Please send me your (i) CV, (ii) a summary of your background, and (iii) a document specifying the topic(s) you want to explore with me and your initial thoughts/approaches.

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4. Information and Society Research Division									
J00301	AI Security	Fake Information Generation Technology and Attack Technology Using Fake Information (e.g., Fraudulent human perception and cognition, Attacks on biometric and large-scale AI models)	https://research.nii.ac.jp/~iechizen/synthetiq-x/en/research.html	Isao Echizen	Professor	Either	8	6 months	Our laboratory assigns independent research topics to all internship students and encourages them to submit papers to international conferences by the end of their internship period. Therefore, a six-month duration is desirable.
J00302	AI Security	Technology to Protect Spread of Fake Information (e.g., Authenticity judgment, Estimation of tampering area, Provenance management, Cross-modal judgment)	https://research.nii.ac.jp/~iechizen/official/research/research5-e.html	Isao Echizen	Professor	Either	8	6 months	Our laboratory assigns independent research topics to all internship students and encourages them to submit papers to international conferences by the end of their internship period. Therefore, a six-month duration is desirable.
J00303	AI Security	Technology to Prevent Spread of Fake Information (e.g., Makes collection of training data difficult, Disables generation of fake information, Purification of training data)	https://www.colorlessgreen.info/social-ai	Isao Echizen	Professor	Either	8	6 months	Our laboratory assigns independent research topics to all internship students and encourages them to submit papers to international conferences by the end of their internship period. Therefore, a six-month duration is desirable.
J00304	AI Security and Social Sciences/Cognitive Sciences	Innovative Methodologies to Prevent Deception in Human Perception and Cognition (Joint research with Media Bias Group)	https://research.nii.ac.jp/~iechizen/synthetiq-x/en/research.html https://media-bias-research.org/ https://www.colorlessgreen.info/social-ai	Isao Echizen	Professor	Either	8	6 months	Our laboratory assigns independent research topics to all internship students and encourages them to submit papers to international conferences by the end of their internship period. Therefore, a six-month duration is desirable.
J02401	Information Retrieval, Natural Language Processing	On-Device Information Retrieval	https://www.mpkato.net/	Makoto Kato	Associate Professor	Either	2	2-6 months	This research aims to design a novel information retrieval system that operates entirely on laptops, leveraging on-screen information to enable highly personalized retrieval. The system will integrate capabilities from both LLMs and VLMs. Applicants are expected to have a basic understanding of LLMs and VLMs.
J02402	Information Retrieval, Natural Language Processing	Information Retrieval for Science	https://www.mpkato.net/	Makoto Kato	Associate Professor	Either	2	2-6 months	This project explores information retrieval methods that help researchers find, verify, and use scientific knowledge more effectively. The intern will develop and evaluate neural retrieval models for scientific literature, including LLM-based and dense retrieval approaches, and fine-tune them on domain-specific corpora such as research papers, abstracts, citation contexts, and scientific claims. Possible topics include scientific paper retrieval, evidence retrieval for question answering, and retrieval-augmented generation for scientific tasks. Applicants are expected to have experience fine-tuning language models such as BERT or LLaMA, as well as basic familiarity with information retrieval tasks, neural ranking models, and evaluation using benchmark datasets.

No.	Research Area	Title of the Research	Website	Name of supervisor	Title of the supervisor	Requirements for Applicants: Master / Ph.D. Student	Total Number of Acceptance per Supervisor	Duration : 2-6months (less than 165days)	Comments
J02601	Computational Social Science, Human-Agent Society, Natural Language Processing	Computational Discovery of Social Phenomena from Large-Scale Social Interactions	https://aclanthology.org/2025.ijcnlp-long.69/ https://haalab.github.io/	Chung-Chi CHEN	Assistant Professor	Either	3	2-6 months	This topic develops an agent-based framework for discovering socially meaningful phenomena from large-scale interaction data, such as online discussions, debates, negotiation records, conversational logs, and multi-agent interaction datasets. The project aims to extract structured phenomenon cards and generate evidence-grounded social science research questions and hypotheses. Applicants should have programming skills and interest in NLP, LLMs, computational social science, or human-agent interaction.
J02602	Human-Agent Interaction, Responsible AI, Computational Social Science	Societal Alignment for Sustainable Human-LLM Decision-Making	https://aclanthology.org/2025.findings-naacl.22/ https://aclanthology.org/2025.ijcnlp-long.69/ https://haalab.github.io/	Chung-Chi CHEN	Assistant Professor	Either	3	2-6 months	This topic studies how locally helpful LLM advice may create long-term individual and societal externalities in sustainable purchasing and green-investment decisions. Possible work includes modeling changes in human judgment and reliance, analyzing how individual effects aggregate into population-level outcomes, and developing externality-aware response policies that preserve autonomy, evidence evaluation, and viewpoint diversity. Applicants should have programming skills and interest in LLMs, human-agent interaction, causal inference, or computational social science.
J02603	Human-Agent Interaction, AI Safety, Decision Support, Longitudinal AI	Verification-Guided Human-Agent Co-Optimization for Multi-Horizon Utility	https://aclanthology.org/2025.emnlp-main.1028/ https://haalab.github.io/	Chung-Chi CHEN	Assistant Professor	Either	3	2-6 months	This topic investigates AI agents that plan, track, and retrospectively verify decision-support interventions across short-, medium-, and long-term horizons. Possible work includes risk-aware intervention selection, utility-trajectory memory, delayed-regret measurement, autonomy preservation, reliance calibration, and longitudinal evaluation using low- and medium-risk decision scenarios. Applicants should have programming skills and interest in LLM agents, human-computer interaction, decision support, or responsible AI.
J02604	Agentic AI, Information Retrieval, Knowledge Graphs, Innovation Analytics	Agentic AI for Cross-Domain Technology Reuse and Innovation Opportunity Discovery	https://aclanthology.org/2026.acl-industry.61/ https://haalab.github.io/	Chung-Chi CHEN	Assistant Professor	Either	3	2-6 months	This topic develops an evidence-grounded agentic AI system that integrates patents, product information, and corporate disclosures to discover cross-domain technology reuse, collaboration candidates, and new product opportunities. Possible work includes patent-specific retrieval, knowledge-graph construction, GraphRAG, multi-agent hypothesis generation and critique, and evaluation of novelty, feasibility, and evidence quality. Applicants should have programming skills and interest in information retrieval, knowledge graphs, LLM agents, or patent analytics.
J02605	Personalized Alignment, Model Editing, Human-Agent Decision-Making	Data-Efficient Personalized Decision Alignment via Model Editing	https://arxiv.org/abs/2605.04972 http://haalab.github.io/	Chung-Chi CHEN	Assistant Professor	Either	3	2-6 months	This topic develops model-editing methods for personalized decision alignment using minimal individual-level data. Possible work includes locating decision-relevant representations, selecting informative personalization queries, constructing minimal question sets, and evaluating cross-question generalization and stability. Applicants should have programming skills and interest in model editing, personalization, or human-agent decision-making.
J02606	Human-Agent Interaction, High-Fidelity Interaction, Multimodal Learning	AI Sports Coaching High-Fidelity AI Coaching with Multimodal Commentary and Physical Feedback	https://haalab.github.io/	Chung-Chi CHEN	Assistant Professor	Either	3	2-6 months	This topic develops an AI coaching system that combines multimodal perception, AI-generated coaching commentary, and physical feedback devices to support embodied sports learning. Possible work includes analyzing motion or rally data, generating personalized coaching comments, aligning language feedback with physical actions, and integrating commentary with haptic or embodied feedback devices. The project aims to move beyond text-based coaching toward a high-fidelity interactive coaching experience in which learners can receive feedback that is both explanatory and physically grounded. Applicants should have programming skills and interest in human-agent interaction, multimodal learning, sports AI, natural language generation, HCI, or embodied interaction.