List of research topics for NII International Internship Program 2014 2nd Call

No.	Research area	Title of the research	Name of supervisor	Title of the supervisor	Requirements for applicants : Master's / Ph.D. Student	Numbers of acceptance	Duration : 2-6months (less than 180days)	Comments
1. Principles of Informatics Research Division								
1	AI	Formalization of Legal Reasoning	Ken Satoh	Professor	MSc/PhD	2	up to 4 months	knowledge of logic programming and legal reasoning is required
2	AI	Formalization and Implementation of Speculative Computation	Ken Satoh	Professor	MSc/PhD	1	up to 4 months	knowledge of logic programming and default reasoning is required
3	AI	Formalization of Argumentation System	Ken Satoh	Professor	MSc/PhD	1	up to 4 months	knowledge of logic programming and argumentation semantics is required
4	Principles of Informatics	Semantic Web / Linked Data / Linked Open Data http://www-kasm.nii.ac.jp/~takeda/	Hideaki Takeda	Professor	Master's or PhD students	3	3-6months	
5	Principles of Informatics	Semantic Web for Academic Publication, Library and Museum http://www-kasm.nii.ac.jp/~takeda/	Hideaki Takeda	Professor	Master's or PhD students		3-6months	
6	Principles of Informatics	Social Web / Social Media Analysis / Social Network Analysis http://www-kasm.nii.ac.jp/~takeda	Hideaki Takeda	Professor	Master's or PhD students		3-6months	
7	Principles of Informatics	Lambda-Calculus and Type Theory http://research.nii.ac.jp/~tatsuta/index-e.html	Makoto Tatsuta	Professor	Master's or Ph.D students	1	2-6 months	It would be better to know lambda-calculus, type theory, or mathmaticallogic.
8	Quantum information	Quantum algorithm development using Bose-Einstein condensates (http://nii.timbyrnes.net/research/quantum-information-using-bose-einstein-condensates/)	Tim Byrnes	Assistant Professor	Master's or Ph.D students	5	2-6 months	
9	Quantum information + Condensed matter physics	Exciton-polariton condensates for novel light sources(http://nii.timbyrnes.net/research/novel-light-sources-using-exciton-polariton-condensates/)	Tim Byrnes	Assistant Professor	Master 's or Ph.D students	5	2–6 months	
10	Quantum technology	Simulation of atomic BECs for quantum processor (http://nii.timbyrnes.net/research/quantum-information-using-bose-einstein-condensates/)	Tim Byrnes	Assistant Professor	Master 's or Ph.D students	5	2–6 months	
11	Quantum technology + Condensed matter physics	Investigation of exciton-polaritons for superfluid polaritronic technologies (http://nii.timbyrnes.net/research/exciton-polariton-condensates-and-new-quantum-technologies/)	Tim Byrnes	Assistant Professor	Master's or Ph.D students	5	2–6 months	
12	Quantum information + Biology	Biological aspects of quantum mechanics (http://nii.timbyrnes.net/research/)	Tim Byrnes	Assistant Professor	Master's or Ph.D students	5	2–6 months	

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13	Numerical Linear Algebra	Iterative solution of least squares problems, systems of linear equations, eigenvalue problems etc. http://researchmap.jp/KenHayami/	Ken Hayami	Professor	Master's or Ph.D students	1	2-6 months	Knowledge of (numerical) linear algebra and skill in programming required.
14	Inverse Problems	Extension of the Cluster Newton method for parameter identification in pharmakokinetics, its application to other fields e.g. systems biology, finance, etc. http://www.nii.ac.jp/TechReports/11-002E.html	Ken Hayami	Professor	Master's or Ph.D students	1	2-6 months	Basic knowledge in numerical analysis and skill in MATLAB required.
15	Airtificial Intelligence	Data mining methods for large scale data http://ri-www.nii.ac.jp/	Ryutaro Ichise	Associate Professor	Master's or Ph.D students	3	3-6 months	
16	Airtificial Intelligence	Machine learning methods for data integration http://ri-www.nii.ac.jp/	Ryutaro Ichise	Associate Professor	Master's or Ph.D students		3-6 months	
17	Quantum computation and communication	Chip based quantum optical circuits for quantum information processing http://www.qis.ex.nii.ac.jp/	Kae Nemoto	Professor	Master's or Ph.D students	2	2-6 months	
18	Quantum computation and communication	Hybrid quantum information devices http://www.qis.ex.nii.ac.jp/	Kae Nemoto	Professor	Master's or Ph.D students		2-6 months	
19	Computational physics	Modeling and solving large scale quantum information systems	Kae Nemoto	Professor	Master's or Ph.D students	1	2-6 months	
20	Abduction / Inductive Logic Programming	Discovery by (Meta-Level) Abduction (http://research.nii.ac.jp/il/)	Katsumi Inoue	Professor	Master's or Ph.D students	4	3 -6 months	Basic knowledge of Artificial Intelligence or Machine Learning is required. Additionally, some background in Biology, Chemistry, Physics or Social Science is useful. Contact Prof. Inoue in advance.
21	Automated Reasoning / Logic Programming	Answer Set Programming, Constraint Programming, and Satisfiability Testing (http://research.nii.ac.jp/il/)	Katsumi Inoue	Professor	Master's or Ph.D students			Basic knowledge of ASP/CP/SAT and Computer Programming is required. Contact Prof. Inoue in advance.
22	Boolean Networks / Cellular Automata / Dynamic Systems	Learning, Modeling and Reasoning of Dynamic Systems (http://research.nii.ac.jp/il/)	Katsumi Inoue	Professor	Master's or Ph.D students			Basic knowledge of Artificial Intelligence is required. Additionally, some background in Discrete Event Systems, Knowledge Representation and Reasoning, Machine Learning or Model Checking is useful. Contact Prof. Inoue in advance.
23	Constraint Satisfaction / (Distributed) Constraint Optimization	Algorithms and Simulation for Adaptable and Robust Agent Systems (http://research.nii.ac.jp/il/)	Katsumi Inoue	Professor	Master's or Ph.D students			Basic knowledge of Artificial Intelligence and Computer Programming is required. Additionally, some background in Control Theory, Multi-Agent Simulation, Probabilistic Modeling or RoboCup Rescue is useful. Contact Prof. Inoue in advance.
24	Multi-Agent Systems	Game Theory and Mechanism Design (http://research.nii.ac.jp/il/)	Katsumi Inoue	Professor	Master's or Ph.D students			Some background in Artificial Intelligence and Multi-Agent Systems is mandatory. Contact Prof. Inoue in advance.

No.	Research area	Title of the research	Name of supervisor	Title of the supervisor	Requirements for applicants : Master's / Ph.D. Student	Numbers of acceptance	Duration : 2-6months (less than 180days)	Comments
25	Data mining, Computational neuroscience, Mathine learning, brain simulation	Data mining in neuroscience, Computer simulation of the brain activity: http://research.nii.ac.jp/~r-koba/en/index.html	Ryota Kobayashi	Assistant Professor	Master's or Ph.D students	1	3-6 months	Applicants should have a strong interest in applications of information sciences to neuroscience. Basic knowledge of statistics, machine learning, or mathematical engineering is appreciated.
26	acoustic signal processing	Source separation or localization based on microphone array http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master's or Ph.D students	1~4	2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
27	acoustic signal processing	Audio information hiding based on phase modification in time-frequency domain http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master's or Ph.D students		2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
28	acoustic signal processing	Spectrogram-based audio coding http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master's or Ph.D students		2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
29	acoustic signal processing	Development of real system or interactive tool for audio signal processing http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master's or Ph.D students		2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
30	Intelligent Robotics	Immersive Virtual Reality System for Human-Robot Interaction http://www.sigverse.org/	Tetsunari Inamura	Associate Professor	Master's or Ph.D students	3	3-6 months	
31	Artificial Intelligence	AI system that solve physics problems of entrance exam for university http://21robot.org/?lang=english	Tetsunari Inamura	Associate Professor	Master's or Ph.D students		3-6 months	
2. Information Systems Architecture Science Research Division								
32	Security and Privacy	Security and Privacy Software Engineering http://sse-project.org/CFP-SSE-internship.html	Nobukazu Yoshioka	Associate Professor	Master's or PhD students	1	3-6 months	
33	Engineering Dependable Software Systems	Automatic Fault Localization of Imperative Programs	Shin Nakajima	Professor	Master's or Ph.D students	2	2-6 months	Contact the supervisor before applying the internship program (see http://research.nii.ac.jp/~nkjm/en/interns.html)
34	Engineering Dependable Software Systems	Refinement-based System Modeling with Event-B	Shin Nakajima	Professor	Master's or Ph.D students		2-6 months	
35	Engineering Dependable Software Systems	Model Checking of Weighted Timed Automata	Shin Nakajima	Professor	Master's or Ph.D students		2-6 months	
36	Engineering Dependable Software Systems	Socio Dependability	Shin Nakajima	Professor	Master's or Ph.D students		2-6 months	

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37	Parallel Programming	Parallel Computing and Bridging Models (https://sites.google.com/site/niiinterntopics/, http://research.nii.ac.jp/~hu)	Zhenjiang Hu	Professor	Master's or Ph.D students	4	2-6months	Has experiences of writing parallel programs
38	Software Engineering	Bidirectional Transformation and Its Application (http://research.nii.ac.jp/~hu, https://www.birs.ca/events/2013/5-day-workshops/13w5115)	Zhenjiang Hu	Professor	Master's or Ph.D students		2-6months	Intereted in developing practical software systems
39	Programming Languages	Design and Implementation of Bidirectional Functional Languages (http://research.nii.ac.jp/~hu/)	Zhenjiang Hu	Professor	Master's or Ph.D students		2-6months	Familiar with functional languages such as Haskell or Ocaml
40	wireless networks	resource management and quality of service in wireless networks http://klab.nii.ac.jp/	Yusheng Ji	Professor	Master's or Ph.D students	2	3 or 6 months	Basic knowledge on infrastructure-based and/or ad hoc wireless communication systems required
41	Wireless networks and temporal data mining	Trend mining for situation recognition. https://sites.google.com/site/olgastreibel/research-projects	Yusheng Ji	Professor	Master's or Ph.D students (Master preferable)	1	3-6 months	Basic knowledge in wireless networks required. Interests in trend mining, data mining and signal processing.
42	computer network	Internet traffic anomaly detection and classification. http://www.fukuda-lab.org/mawilab	Kensuke Fukuda	Associate Professor	Master's/Ph.D students	1〜2	5-6months	Solid programming skills in C, C++, or Java. Start on feb-mar.2015
43	computer network	Internet traffic simulation. http://www.fukuda-lab.org	Kensuke Fukuda	Associate Professor	Master's/Ph.D students	1〜2	5-6months	Solid programming skills in C, C++, or Java. Start on feb-mar.2015
44	computer network	Internet traffic visualization. http://www.fukuda-lab.org	Kensuke Fukuda	Associate Professor	Master's students	1〜2	5-6months	Programming skills in D3.js. Start on feb-mar.2015
45	Computer Science	Bidirectional Graph Transformations and its Applications to Model Transformations http://research.nii.ac.jp/~hidaka/internship	Soichiro Hidaka	Assistant Professor	Master's or Ph.D students	2	2-6 months	

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46	Wireless sensor network	Self-adaptive management of wireless sensor network software (http://www.honiden.nii.ac.jp/en/research/self-adaptive-wsn)	Kenji Tei	Assistant Professor	Master's or PhD students	2	2-6 months	See the web site (http://www.honiden.nii.ac.jp/en/research/self-adaptive-wsn)
47	Self-adaptive Software	Model-driven development for self-adaptive software (http://www.honiden.nii.ac.jp/en/research/mdd-for-sas)	Kenji Tei	Assistant Professor	Master's or PhD students	2	2-6 months	See the web site (http://www.honiden.nii.ac.jp/en/research/mdd-for-sas)
48	Gamification, Web Mining, Motivation	WillingRing: A Motivation System using Gamified Precommitment based on Life Log Analysis (Web site: http://goo.gl/xMePpN)	Kazunori Sakamoto	Assistant Professor	Master's or PhD students	4	2-6 months	We welcome students who love programming and creative activities. You can see my profile via LinkedIn (http://goo.gl/em22I4).
3. Digital Content and Media Sciences Research Division								
49	Content security	Fundamental techniques and systems for content security http://research.nii.ac.jp/~iechizen/official/research-e.html	Isao Echizen	Professor	Master's or Ph.D Students	3	3 to 6 months	
50	Content security	Privacy in business process http://research.nii.ac.jp/~iechizen/official/research-e.html http://research.nii.ac.jp/~iechizen/official/content_e_sven.html	Isao Echizen	Professor	Master's or Ph.D Students		3 to 6 months	
51	Natural Language Processing	Syntactic Parsing of Natural Language http://kmcs.nii.ac.jp/mylab/	Yusuke Miyao	Associate Professor	Master's or Ph.D Students	1	6 months	Fundamental knowledge about one of the following areas is required: 1. statistical parsing methods (e.g. PCFG parsing, dependency parsing), or 2. syntactic theory (e.g. HPSG, CCG)
52	Natural Language Processing	Recognition of Textual Entailment http://kmcs.nii.ac.jp/mylab/	Yusuke Miyao	Associate Professor	Master's or Ph.D Students	1	6 months	Fundamental knowledge about one of the following areas is required: 1. structured machine learning methods (e.g. CRF, tree kernel methods), or 2. theory of natural language semantics (FOL, DRT, natural logic)
53	Natural Language Processing	Machine Translation http://kmcs.nii.ac.jp/mylab/	Yusuke Miyao	Associate Professor	Master's or Ph.D Students	1	6 months	Fundamental knowledge about one of the following areas is requested: 1. statistical machine translation tools (e.g. GIZA++, Moses, etc.), or 2. syntactic parsing tools (Stanford parser, Berkeley parser, etc.)
54	content-based image and video analysis	video and image semantic analysis and classification (esp. TRECVID SIN task. see: http://www-nlpir.nist.gov/projects/trecvid/)	Shin'ichi Satoh	Professor	Master's or Ph.D (Ph.D preferable)	5	more than 90 days	
55	content-based image and video analysis	identification of specific object in video and image (esp. TRECVID instance search. see: http://www-nlpir.nist.gov/projects/trecvid/)	Shin'ichi Satoh	Professor	Master's or Ph.D (Ph.D preferable)		more than 90 days	
56	content-based image and video analysis	Event detection and action recognition (esp. TRECVID multimedia event detection task. see: http://www-nlpir.nist.gov/projects/trecvid/)	Shin'ichi Satoh	Professor	Master's or Ph.D (Ph.D preferable)		more than 90 days	
57	content-based image and video analysis	Face Sequence Indexing and Matching for Broadcast Videos	Shin'ichi Satoh	Professor	Master's or Ph.D (Ph.D preferable)		more than 90 days	
58	content-based image and video analysis	3D video analysis (esp. obtained by Kinect) for human action recognition	Shin'ichi Satoh	Professor	Master's or Ph.D (Ph.D preferable		more than 90 days	

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59	Speech information processing	Controllable, flexible, and enjoyable speech synthesizer for audiobook http://researchmap.jp/read0205283/?lang=english	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	1	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with statistical parametric speech synthesis. • Familiarity with software tools including HTK, HTS, SPTK, and Festival is preferable
60	Speech information processing	Acoustic modelling for noise-robust or noise-adaptive speech synthesis http://listening-talker.org	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	1	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with statistical parametric speech synthesis. • Familiarity with software tools including HTK, HTS, SPTK, and Festival is preferable
61	Speech information processing	User-feedback learning for speech synthesis http://simple4all.org	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	1	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with statistical parametric speech synthesis. • Familiarity with software tools including HTK, HTS, SPTK, and Festival is preferable
62	Speech information processing	Prosody modelling for speech-to-speech translation and text-to-speech synthesis http://www.idiap.ch/project/siwis/	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	1	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with statistical parametric speech synthesis. • Familiarity with software tools including HTK, HTS, SPTK, and Festival is preferable
63	Speech information processing	Speech synthesis for assistive technologies http://www.smart-mnd.org/voicebank/about/home.html	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	2	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with statistical parametric speech synthesis. • Familiarity with software tools including HTK, HTS, SPTK, and Festival is preferable
64	Speech information processing	Expressive speech synthesis and cross-lingual speaking-style adaptation http://www.emime.org	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	1	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with statistical parametric speech synthesis. • Familiarity with software tools including HTK, HTS, SPTK, and Festival is preferable
65	Speech information processing	Voice anti-spoofing http://www.signalprocessingsociety.org/technical-committees/list/sl-tc/spl-nl/2013-05/spoofing/	Junichi Yamagishi	Associate Professor	Master's or Ph.D students	1	2-6 months	The successful candidate should be a Master or PhD student in speech processing, computer science, engineering, linguistics, mathematics, or a related discipline. He or she should have strong programming skills and experience with speaker recognition/verification
66	computer vision	One of the following topics. -3D Scene reconstruction using RGB-D cameras -Recognizing human activities from video -image categorization and segmentation - Gaze sensing and gaze naviation http://www.dgcv.nii.ac.jp/	Akihiro Sugimoto	Professor	Master's or Ph.D students	3	Up to 6 months (at least 3 months; a longer period is better)	Rigorous background on mathematics is required. 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. Students who are willing to pursuit ph D at NII are preferable as well. Potential applicants should send your CV and research interests/proposals directly to Prof. Sugimoto before your application.

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67	discrete geometry	- Discretization model of geometric shape - Discrete shape fitting to noisy integer points http://www.dgcv.nii.ac.jp/	Akihiro Sugimoto	Professor	Master's or Ph.D students	1	Up to 6 months (at least 3 months)	Rigorous background on mathematics as well as computer vision is required. In particular, sufficient knowledge of linear algebra, graph theory and number theory are 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.
68	text mining	Text mining based on latent topics http://www.ldear.nii.ac.jp/~takasu/en/	Atsuhiro Takasu	Professor	Master's or Ph.D students	3	3-6 months	
69	Big Data	data analysis and mining methods for big data http://www.ldear.nii.ac.jp/~takasu/en/	Atsuhiro Takasu	Professor				
70	Text media	Mining and semantic analysis of text http://www-al.nii.ac.jp/ http://kmcs.nii.ac.jp/	Akiko Aizawa	Professor	Master's or PhD students	1 or 2	4-6months	
71	Text media	Gaze-based natural language processing http://www-al.nii.ac.jp/	Akiko Aizawa	Professor	Master's or PhD students	1 or 2	4-6months	
72	Bioimage Informatics	Bioimage analysis and machine learning for mouse phenotyping and zebrafish neural activity analysis http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Master's or PhD students	4	3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
73	Crisis Informatics	Big data analytics (esp. image processing, natural language processing, and temporal prediction) to respond natural disasters and crisis. http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Master's or PhD students		3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
74	Earth Environmental Informatics	Big data analytics (esp. image processing and simulation data analysis) for climate change and agriculture http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Master's or PhD students		3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
75	Digital Humanities	Geographic information systems (GIS), semantic Web, face recognition, and 3D CG modeling for cultural heritage and museums http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Master's or PhD students		3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
76	Software Engineering (Formal Methods, Assurance Case, Goal Models)	Engineering of Formal Refinement and Assurance http://research.nii.ac.jp/~f-ishikawa/internships/	Fuyuki Ishikawa	Associate Professor	Master's or PhD students	4	2-6 months	
77	Software Engineering (Formal Methods, Testing, Agile Development)	Tools for Lightweight Usages of Formal Specification http://research.nii.ac.jp/~f-ishikawa/internships/	Fuyuki Ishikawa	Associate Professor	Master'sor PhD students		2-6 months	
78	Service-Oriented Computing, Cloud Computing, Internet of Things	Smart Service Compositions/Mashups in the City and the Web http://research.nii.ac.jp/~f-ishikawa/internships/	Fuyuki Ishikawa	Associate Professor	Master'sor PhD students		2-6 months	
79	Database Programming Languages	Context-Preserving XQuery Fusion http://research.nii.ac.jp/~kato	Hiroyuki Kato	Assistant Professor	Master's or PhD students	1	2-6 months	

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80	3D Internet and Virtual Worlds (Foundations)	R&D in the foundations of networked massively multi-user 3D virtual environments, based on our original framework (DiVE) and Unity3D. Topics include networking, prediction models, smoothness algorithms, and scaling techniques for large numbers of simultaneous users. https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master's or PhD students	10	3-6 months	Solid programming background (e.g. C++ or C Sharp). Longer stay preferred for good result (some interesting software). Paper writing will be encouraged and actively supported.
81	3D Internet and Real World (Cyber-Physical Systems)	Application-oriented research based on 3D virtual environments (Unity3D) integrated to real-world settings, incl. "serious games" and Social Mobile Gaming for eco-friendly driving, disaster evacuation, smart cities, etc. Target platform is mobile devices, such as Smartphon or wearables. Such projects will use techniques from Artificial Intelligence and Intelligent User Interface. https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master's or PhD students		3-6 months	Solid programming background (e.g. C++ or C Sharp). Knowledge of Unity3D is desirable, but not necessary. Longer stay preferred for good result (some interesting software). Paper writing will be encouraged and actively supported.
82	Content Creation for the 3D Internet (3D City Map)	Implementation of Artifical Intelligence techniques for automated content creation immersive (simplified) 3D city maps for mobile devices. This work is complementary to Google Earth or Street view https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master's or PhD students		3-6 months	Solid programming background (e.g. C++ or C Sharp) Longer stay preferred for good result (some interesting software). Paper writing will be encouraged and actively supported.
83	Data Mining of Human Behavior (Data Analytics)	Analysis of original large-scale data collected from real-world and virtual world studies on driving (iCO2), disaster evacuation, etc.; predictive analytics (Markov chain, kNN, etc) https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master's or PhD students		3-6 months	Solid programming background (e.g. C++ or C Sharp) Longer stay preferred for good result (some interesting software). Paper writing will be encouraged and actively supported.
84	Sentiment Recognition from Text and Discourse Analysis (NLP)	Recognition of emotion and attitude from text with Machine Learning and rule based approaches; discourse relation analysis http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master's or PhD students		3-6 months	Solid programming background (e.g. C++ or C Sharp) Longer stay preferred for good result (some interesting software). Paper writing will be encouraged and actively supported.
85	Computer Vision and Computer Graphics	Computational Photography: Image-based rendering, Image processing, Color analysis, Spectral imaging http://research.nii.ac.jp/~imarik	Imari Sato	Associate Professor	Master's or PhD students	2	5-6 months	A basic knowledge of computer graphics and good programming skills are required
86	Signal Processing	Graph-based Image Restoration & Processing (http://research.nii.ac.jp/~cheung/intern.html)	Gene CHEUNG	Associate Professor	Master's or PhD students	1	3 months minimum	knowledge in low-level image processing and a strong background in mathematics (linear algebra, combinatorial & convex optimization)

4. Information and Society Research Division

No.	Research area	Title of the research	Name of supervisor	Title of the supervisor	Requirements for applicants	Numbers of acceptance	Duration	Comments
87	Computational Social Science	Human communication analysis using mobile phone log http://nk3.nii.ac.jp/content_en/intro.html	Tetsuro Kobayashi	Associate Professor	Master's and PhD Students	1	6 months	Statistics and data mining skill is required. Strong interst in social science is desired.

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5. Management and Outside Collaboration on R&D								
88	Databases / Data Mining	Similarity Search and Intrinsic Dimensionality (http://typhoon.nii.ac.jp/~meh/internship/proj-simsearch.pdf)	Michael Houle	Visiting Professor	Master's or PhD students	6	3-6 months	Priority given to PhD students, and for internships of 5-6 months.
89	Data Mining	Outlier Detection and Data Dimensionality (http://typhoon.nii.ac.jp/~meh/internship/proj-outlier.pdf)	Michael Houle	Visiting Professor	Master's or PhD students		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
90	Data Mining	Clustering and Data Dimensionality (http://typhoon.nii.ac.jp/~meh/internship/proj-clust.pdf)	Michael Houle	Visiting Professor	Master's or PhD students		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
91	Data Mining / Machine Learning	Unsupervised Feature Selection (http://typhoon.nii.ac.jp/~meh/internship/proj-features.pdf)	Michael Houle	Visiting Professor	Master's or PhD students		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
92	Data Mining / Machine Learning	KNN Classification and Applications (http://typhoon.nii.ac.jp/~meh/internship/proj-classification.pdf)	Michael Houle	Visiting Professor	Master's or PhD students		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
93	Theory (Algorithmics, Statistics, Machine Learning)	Theory of Intrinsic Dimensionality (http://typhoon.nii.ac.jp/~meh/internship/proj-id-theory.pdf)	Michael Houle	Visiting Professor	Master's or PhD students		3-6 months	Priority given to PhD students, and for internships of 5-6 months.