

List of research topics for NII Intenational Internship Program 2013 2nd Call

No.	Research area	Title of the research	Name of supervisor	Title of the supervisor	Requirements for applicants : Master / Ph.D. Student	Numbers of acceptance	Duration : 2-6months (less than 180days)	Comments
1. Principles of Informatics Research Division								
1	Data Structures	Data Structures for Big Data http://researchmap.jp/sada	Kunihiko Sadakane	Associate Professor	Ph.D Students	2	3-6 months	Basic knowledge of algorithms and data structures is required.
2	Artificial Intelligence	Juris-informatics, research.nii.ac.jp/~ksatoh/juris-informatics-papers/	Ken Sato	Professor	Master or Ph.D Students	2	3 months at the longest	
3	Artificial Intelligence	Logical Foundations of Multi-agent Systems	Ken Sato	Professor	Master or Ph.D Students	2	3 months at the longest	
4	Abduction and Induction / Cellular Automata / Systems Biology	Inference and Learning for Adaptive, Biological and Dynamical Systems http://research.nii.ac.jp/il/	Katsumi Inoue	Professor	Master or Ph.D students	3	3-6 months	Basic knowledge of Artificial Intelligence, Bioinformatics or Network Science is required. Contact Prof. Inoue in advance.
5	Automated Reasoning / Logic Programming	Answer Set Programming, Constraint Programming, and Satisfiability Testing http://research.nii.ac.jp/il/	Katsumi Inoue	Professor	Master or Ph.D students		3-6 months	Basic knowledge of Logic and/or Computer Programming is required. Contact Prof. Inoue in advance.
6	Artificial Intelligence / Dynamic Modeling	Robustness Analysis of Dynamic Models http://systemsresilience.org/	Katsumi Inoue	Professor	Master or Ph.D students		3-6 months	Basic knowledge of Artificial Intelligence is required. Contact Prof. Inoue in advance.
7	Constraint Satisfaction / Multi-Agent Systems	DCOP and DisCSP http://systemsresilience.org/	Katsumi Inoue	Professor	Master or Ph.D students		3-6 months	JAVA and basic knowledge of Artificial Intelligence are required. Contact Prof. Inoue in advance.
8	Knowledge Representation and Reasoning	Reasoning with Space and Time, Reasoning about Action and Change http://research.nii.ac.jp/il/	Katsumi Inoue	Professor	Master or Ph.D students		3-6 months	Some background on Artificial Intelligence, Knowledge Representation and Reasoning is mandatory. Contact Prof. Inoue in advance.
9	Computational Linguistics	Implementing Natural Language Semantics with Functional Programming http://research.nii.ac.jp/~kanazawa/Courses/2011/Seminar/index.html	Makoto Kanazawa	Associate Professor	Master's or Ph.D. students	2	3-6 months	This internship involves implementing in a functional programming language semantic rules for some fragments of English (and possibly other languages) that have recently been put forward by various researchers. Candidates should have rudimentary knowledge of natural language semantics, as found in, e.g., Heim and Kratzer's textbook. Previous experience with at least one programming language (not necessarily functional) is required. The goal is to contribute toward establishing a useful environment in which to develop and test linguistic theories. See also http://okmij.org/ftp/gengo/NASSLLI10/index.html for some examples.

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10	Quantum information	Quantum information using Bose-Einstein condensates (http://nii.timbyrnes.net/research/quantum-information-using-bose-einstein-condensates/)	Tim Byrnes	Assistant Professor	Any	5	2-6 months	
11	Quantum information technology	Simulation of exciton-polariton condensates for new quantum technologies (http://nii.timbyrnes.net/research/novel-light-sources-using-exciton-polariton-condensates/)	Tim Byrnes	Assistant Professor	Any	5	2-6 months	
12	Knowledge Processing	Data mining methods for large scale data http://ri-www.nii.ac.jp/	Ryutaro Ichise	Associate Professor	Master and Ph.D students	4	3-6 months	
13	Knowledge Processing	Machine learning methods for semantic integration http://ri-www.nii.ac.jp/	Ryutaro Ichise	Associate Professor	Master and Ph.D students		3-6 months	
14	Knowledge Processing	Data integration methods for linked data http://ri-www.nii.ac.jp/	Ryutaro Ichise	Associate Professor	Master and Ph.D students		3-6 months	
15	Numerical Linear Algebra	Iterative solution of constrained least squares problems. http://researchmap.jp/KenHayami/	Ken Hayami	Professor	Master/Ph.D.	1	2-6 months	Skill in numerical linear algebra and programming required.
16	Inverse Problems	Parameter identification in pharmacokinetics and systems biology. http://www.nii.ac.jp/TechReports/11-002E.html	Ken Hayami	Professor	Master/Ph.D.	1	3-6 months	Basic knowledge in numerical analysis and skill in MATLAB required.
17	Artificial Intelligence / Web Informatics	Semantic Web / Linked Data / Linked Open Data http://lod.ac http://www-kasm.nii.ac.jp/	Hideaki Takeda	Professor	Master/Ph.D	3	3-6 months	
18	Artificial Intelligence / Web Informatics	Social Web / Social Media Analysis / Social Network Analysis http://www-kasm.nii.ac.jp/	Hideaki Takeda	Professor	Master/Ph.D		3-6 months	
19	Artificial Intelligence / Web Informatics	Semantic Web for Academic Publication, Library and Museum http://www-kasm.nii.ac.jp/ http://lod.ac	Hideaki Takeda	Professor	Master/Ph.D		3-6 months	
20	Theoretical Computer Science	Sublinear-time Algorithms Constraint Satisfaction Problems	Yuichi Yoshida	Assistant Professor	Ph.D	1	3 months	
21	Database / Data mining	Efficient Algorithms for Large graphs	Yuichi Yoshida	Assistant Professor	Ph.D		3 months	Better if familiar with theoretical computer science or network science.

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22	Networkis	Resilient Wireless Access Networks for Disaster Recovery http://researchmap.jp/shigeki/?lang=english	Shigeki Yamada	Professor	Master or Ph.D Students	2	6 months	Knowledge and skills in wireless access networks including MANET, mesh network, disruption/delay tolerant network (DTN), etc., are preferable Contact quangtran@nii.ac.jp
23	Networks and information systems	Crisis Mitigation Systems http://researchmap.jp/shigeki/?lang=english	Shigeki Yamada	Professor	Master or Ph.D Students	1	6 months	This work aims at proposing a framework/architecture for crisis mitigation systems. Knowllege in System analysis and skills in software development are preferable. Contact quangtran@nii.ac.jp
24	Future Internet / Resilient Backbone	Disaster-resilient Internet System integrating Cloud Computing and Software-Defined Networking technologies http://researchmap.jp/shigeki/?lang=english	Shigeki Yamada	Professor	Master or Ph.D Students	3	3-6 months	Basic knowledge and skills about SDN/OpenFlow or Cloud computing are preferable. Skills on Linux/Unix systems are required. Contact: kiengng@nii.ac.jp
25	Intelligent Robotics	Immersive Virtual Reality System for Human-Robot Interaction http://www.sigverse.org/	Tetsunari Inamura	Associate Professor	Master or Ph.D	3	3-6 months	Internship program shoud be started between 17th and 28th March 2014.
26	Artificial Intelligence	AI system that solve physics problems of entrance exam for university http://21robot.org/?lang=english	Tetsunari Inamura	Associate Professor	Master or Ph.D		3-6 months	Internship program shoud be started between 17th and 28th March 2014.
27	acoustic signal processing	Source separation and localization based on asynchronous recordings http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master / Ph.D Student	1 ~ 3	2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
28	acoustic signal processing	Acoustic Scene Analysis with Microphone Arrays http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master / Ph.D Student		2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
29	acoustic signal processing	Spectrogram-based audio coding http://www.onn.nii.ac.jp/recruitment-e.html	Nobutaka Ono	Associate Professor	Master / Ph.D Student		2-6 months	Basic knowledge of signal processing and programming skill on Matlab are required.
30	Quantum computation and communication	Computer architecture for quantum information processing http://www.qis.ex.nii.ac.jp	Kae Nemoto	Professor	Master/Ph.D Student	2	2-6 months	
31	Quantum computation and communication	Quantum devices http://www.qis.ex.nii.ac.jp	Kae Nemoto	Professor	Master/Ph.D Student		2-6 months	
32	Crowd sourcing and quantum computation	Game development, QUBIT: the quantum computing game http://www.youtube.com/watch?v=N_d8jih_4ng	Kae Nemoto	Professor	Master/Ph.D Student	1	2-6 months	also visit www.qis.ex.nii.ac.jp . This project will be a collaboration with Prof. Prendinger.

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2. Information Systems Architecture Science Research Division								
33	Computer System Architecture	Interconnection Networks for Many-core Computing Systems http://research.nii.ac.jp/~koibuchi/english/index.html	Michihiro Koibuchi	Associate Professor	Ph.D Student	2	4-6 months	
34	Software Engineering	Automated Diagnosis of C Programs http://research.nii.ac.jp/~nkjm/en/interns.html	Shin Nakajima	Professor	Master / Ph.D Student	1	2-3 months	see the Web page
35	Software Engineering	Automated Error Localization of UML/OCL http://research.nii.ac.jp/~nkjm/en/interns.html	Shin Nakajima	Professor	Master / Ph.D Student	1	2-3 months	see the Web page
36	Software Engineering	Model-based Analysis of Android App http://research.nii.ac.jp/~nkjm/en/interns.html	Shin Nakajima	Professor	Master / Ph.D Student	1	2-3 months	see the Web page
37	Software Engineering	Refinement-based Modeling with Event-B http://research.nii.ac.jp/~nkjm/en/interns.html	Shin Nakajima	Professor	Master / Ph.D Student	1	2-3 months	see the Web page
38	computer network	Internet traffic anomaly detection and classification, http://www.fukuda-lab.org	Kensuke Fukuda	Associate Professor	Master / Ph.D student	1 or 2	5-6months	Solid programming skills in C, C++, or java
39	computer network	Internet traffic modeling and simulation, http://www.fukuda-lab.org	Kensuke Fukuda	Associate Professor	Master / Ph.D student	1 or 2	5-6months	Solid programming skills in C, C++, or java
40	computer network	Smartphone traffic measurement and analysis, http://www.fukuda-lab.org	Kensuke Fukuda	Associate Professor	Master / Ph.D student	1 or 2	5-6months	Solid smartphone programming skills (Android or iOS)
41	Parallel Programming	Systematic Parallel Programming using MapReduce (http://research.nii.ac.jp/~hu/project/intern.html)	Zhenjiang Hu	Professor	Master/Ph.D Student	4	4-6 months	
42	Software Engineering	Bidirectional Transformation in Software Engineering (http://research.nii.ac.jp/~hu/project/intern.html)	Zhenjiang Hu	Professor	Master/Ph.D Student		4-6 months	
43	Functional Programming / Programming Languages	Adaptive (Incremental) Bidirectional Transformation (http://research.nii.ac.jp/~hu/project/intern.html)	Zhenjiang Hu	Professor	Master/Ph.D Student		4-6 months	

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44	Information Systems Architecture Science Research Division	Data management on cloud computing	Ichiro Satoh	Professor	Master / Ph.D students	2	3-6 months	Principle and implemetation of data management, e.g., data processing, data replication, transaction on distributed systems, in particular cloud computing.
45	Information Systems Architecture Science Research Division	Self-adaptive distributed systems	Ichiro Satoh	Professor	Master / Ph.D students	2	3-6 months	Self-adaptation is needed in large-scale distributed systems for availability and performance. This project addresses self-adaptive engines in distributed systems.
46	Information Systems Architecture Science Research Division	Large-scale data processing at the edges of networks/IoTs	Ichiro Satoh	Professor	Master / Ph.D students	2	3-6 months	This project addresses data processing at the edges of networks, e.g., sensor networks and embedded computers.
47	Self Adaptive Behaviors in Wireless Sensor Networks	Research and Implementation regarding Self Adaptive Behaviors in WSNs. Self Adaptive Behavior is one of the key success factors in WSNs which have limited computational resource and unstable environment.	Shinichi Honiden	Professor	Master or Ph.D student	2 (Maximum)	2-6 months	See the web site (http://www.honiden.nii.ac.jp/en/research/self-adaptive-behavior-wsns)
48	Software Model Checking	Implementation of a fast state space exploration technique for software model checking, using Java Pathfinder. For details, refer to http://www.honiden.nii.ac.jp/en/research/fast-state-space-exploration	Shinichi Honiden	Professor	Master or Ph D Student	1	3-6 months	Java programming experience, including multithreaded programming is required. Familiarity with model checking is desired, but not mandatory. (If you do not have it, we recommend 6 months.)
49	Computer Science	Bidirectional Graph Transformations and its Applications to Model Transformations http://research.nii.ac.jp/~hidaka/internship	Soichiro Hidaka	Assistant Professor	Master and Ph.D Students	2	2-6 months	
50	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 or Ph.D student	2	2-6 months	See the web site (http://www.honiden.nii.ac.jp/en/research/self-adaptive-wsn)
51	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 or Ph.D student	2	2-6 months	See the web site (http://www.honiden.nii.ac.jp/en/research/mdd-for-sas)

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3. Digital Content and Media Sciences Research Division								
52	Natural Language Processing	Syntactic Parsing of Natural Language http://kmcs.nii.ac.jp/mylab/	Yusuke Miyao	Associate Professor	Master or Ph.D Student	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)
53	Natural Language Processing	Recognition of Textual Entailment http://kmcs.nii.ac.jp/mylab/	Yusuke Miyao	Associate Professor	Master or Ph.D Student	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 (DRT, natural logic)
54	Natural Language Processing	Machine Translation http://kmcs.nii.ac.jp/mylab/	Yusuke Miyao	Associate Professor	Master/Ph.D Student	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.)
55	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/Ph.D Student	2	5-6 months	A basic knowledge of computer graphics and good programming skills are required
56	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 or Ph.D (Ph.D preferable)	5	more than 90 days	
57	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 or Ph.D (Ph.D preferable)		more than 90 days	
58	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 or Ph.D (Ph.D preferable)		more than 90 days	
59	content-based image and video analysis	Face Sequence Indexing and Matching for Broadcast Videos	Shin'ichi Satoh	Professor	Master or Ph.D (Ph.D preferable)		more than 90 days	
60	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 navigation http://www.dgcv.nii.ac.jp/	Akihiro Sugimoto	Professor	Master or Ph.D Student	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 can send your CV and research interests directly to Prof. Sugimoto before your application.
61	discrete geometry	- Discretization model of geometric shape - Discrete shape fitting to noisy integer points http://www.dgcv.nii.ac.jp/	Akihiro Sugimoto	Professor	Master or Ph.D Student	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 can send your CV and research interests/proposals directly to Prof. Sugimoto before your application.

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62	text mining	Text mining based on latent topics http://www.ldear.nii.ac.jp/~takasu/en/	Atsuhiko Takasu	Professor	Master /Ph.D student	1	more than 120 days	
63	Signal Processing	Graph-based Image Interpolating & Processing (http://research.nii.ac.jp/~cheung/intern.html)	Gene Cheung	Associate Professor	Master or Ph.D Student	1	3 months minimum	knowledge in low-level image processing and a strong background in mathematics (linear algebra, combinatorial & convex optimization)
64	Speech information processing	Controllable, flexible, and enjoyable speech synthesizer for audiobook http://researchmap.jp/read0205283/?lang=english	Junichi Yamagishi	Associate Professor	Master or PhD 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	Acoustic modelling for noise-robust or noise-adaptive speech synthesis http://listening-talker.org	Junichi Yamagishi	Associate Professor	Master or PhD 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
66	Speech information processing	User-feedback learning for speech synthesis http://simple4all.org	Junichi Yamagishi	Associate Professor	Master or PhD 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
67	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 or PhD 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
68	Speech information processing	Speech synthesis for assistive technologies http://www.smart-mnd.org/voicebank/about/home.html	Junichi Yamagishi	Associate Professor	Master or PhD 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

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69	Speech information processing	Expressive speech synthesis and cross-lingual speaking-style adaptation http://www.emime.org	Junichi Yamagishi	Associate Professor	Master or PhD 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
70	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 or PhD 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
71	Text media	Mining and semantic analysis of scientific papers http://www-al.nii.ac.jp/ http://kmcs.nii.ac.jp/	Akiko Aizawa	Professor	Master / Ph.D Student	1	4-6months	
72	Text media	Gaze-based natural language processing http://www-al.nii.ac.jp/	Akiko Aizawa	Professor	Master / Ph.D Student	1	4-6months	
73	Text media	Math formula search http://www-al.nii.ac.jp/ http://ntcir-math.nii.ac.jp/	Akiko Aizawa	Professor	Master / Ph.D Student	1	4-6months	
74	Content security	Fundamental techniques and systems for content security http://research.nii.ac.jp/~iechizen/official/research-e.html	Isao Echizen	Associate Professor	Master / Ph.D Student	3	3 to 6 months	
75	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	Associate Professor	Master / Ph.D Student		3 to 6 months	
76	Service-Oriented Computing, Cloud Computing, Ubiquitous Computing	Smart Service Compositions/Mashups in the City and the Web http://research.nii.ac.jp/~f-ishikawa/internships/	Fuyuki Ishikawa	Associate Professor	Master / Ph.D	4	2-6 months	
77	Software Engineering, Formal Methods	Exploring Practical Usages of Formal Specifications http://research.nii.ac.jp/~f-ishikawa/internships/	Fuyuki Ishikawa	Associate Professor	Master / Ph.D		2-6 months	
78	Software Engineering, Jurisprudence, Requirements Engineering, Privacy	Leveraging Software Engineering Techniques for and by Legal Analysis http://research.nii.ac.jp/~f-ishikawa/internships/	Fuyuki Ishikawa	Associate Professor	Master / Ph.D		2-6 months	

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79	Database Programming Languages	Context-Preserving XQuery Fusion http://research.nii.ac.jp/~kato	Hiroyuki Kato	Assistant Professor	Master/Ph.D Student	1	2-6 months	
80	Database Programming Languages	Optimization for Iterative MapReduce http://research.nii.ac.jp/~kato	Hiroyuki Kato	Assistant Professor	Master/Ph.D Student	1	2-6 months	
81	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. http://www.prendingerlab.net/globallab/ (project website) https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master and Ph.D. 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 supported.
82	3D Internet and Virtual Worlds (Artificial Intelligence)	Application-oriented research based on 3D virtual environments (Unity3D), incl. "serious games" and Social Mobile Gaming for practicing eco-friendly driving with multi-user driving simulator, disaster evacuation, smart cities, etc. Topics include machine learning for training "opponents", optimization and adaptation techniques, and dynamic challenge balancing. http://www.prendingerlab.net/globallab/ (project website) https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master and Ph.D. 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 supported.
83	Artificial Intelligence based Content Creation for the 3D Internet	Implementation of Artificial Intelligence techniques for automated content creation in 3D virtual worlds. Topics include traffic simulation, pedestrian simulation, 3D city generation, dialogue generation, multi-agent systems, verbal and non-verbal behavior of embodied animated agents, and narrative control. http://www.prendingerlab.net/globallab/ (project website) https://sites.google.com/site/ico2globallab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master and Ph.D. 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 supported.

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84	Data mining of human (driving) behavior data	Analysis of large-scale data collected from our studies on eco-driving, disaster evacuation, traffic congestion; predictive analytics in our iCO2 game http://www.prendingerlab.net/globalab/ (project website) https://sites.google.com/site/ico2globalab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master and Ph.D. students	4	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 supported.
85	Real-time Calibration of Traffic Simulation	Calibration of a traffic simulator based on real-time driving behavior data collected in the virtual environment http://www.prendingerlab.net/globalab/ (project website) https://sites.google.com/site/ico2globalab/ (iCO2 website) http://research.nii.ac.jp/~prendinger/ (personal website)	Helmut Prendinger	Professor	Master and Ph.D. 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 supported.
86	Bioimage Informatics	Image processing and machine learning for biological imaging, phenotyping and neural activity analysis http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Ph.D / Master		3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
87	Crisis Informatics	Event detection, natural language processing and visualization for severe weather and natural disasters http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Ph.D / Master		3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
88	Earth Environmental Informatics	Image processing, machine learning and geo-informatics for climate, agriculture and biodiversity http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Ph.D / Master		3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.
89	Digital Humanities	3D CG modeling, Geographic information systems (GIS), Semantic Web, and multilingual processing for cultural heritage and museums http://agora.ex.nii.ac.jp/~kitamoto/education/internship/	Asanobu Kitamoto	Associate Professor	Ph.D / Master	3-6 months	Programming skill is required. An interdisciplinary topic, possibly working with domain experts.	

List of research topics for NII International Internship Program 2013 2nd Call

No.	Research area	Title of the research	Name of supervisor	Title of the supervisor	Requirements for applicants : Master / Ph.D. Student	Numbers of acceptance	Duration : 2-6months (less than 180days)	Comments
4. Information and Society Research Division								
90	SIT of ITeS The Social Implications of Technology in IT-enabled Services	Comparative analysis on social impact and cultural influence of ITeS http://researchmap.jp/hokada/english/	Hitoshi Okada	Associate Professor	Master / Ph.D Student	1	less than 88 days	The knowledge of methodologies such as TAM, SEM, AHP, DEA, Conjoint Analysis are highly appreciated, but not limited to these.
91	Information Retrieval	GLASE (Gaze-based Learning for Access and Search Engine) Project. The project developed an exploratory search user interface for image retrieval using eye-gaze of the users as input. Internship opportunity is available for (1) Developing new features for 1a) combining multiple-modes of input (Eye tracking and any other input mode), or 1b) multiple indexing (metadata- and content-based), (2) Evaluating system 2a) by analysis of eye-gaze data of the users, or 2b) by building test-collections usable for test search effectiveness of the system and IR models behind considering relevance and diversity of the search results in each iteration, and evaluate them using the collection, or (3) new search user interface design proposal and tests	Noriko Kando	Professor	Master / Ph D	3	3 - 6 months	Recommendation letters from academic advisors are preferable. The prototype system was presented at SIGIR 2012 Poster. Garkavijs, Toshima, Kando. "Eyes Tell More than Mice"
92	Information Retrieval/NLP	UIMA-based Advanced Factoid and Complex QA system and IR. Using University entrance examinations, 1) propose a strategy and build a component to answer the questions for the subjects of "history", "political studies and economics", and "biology", or evaluate, 2) improve the GUI for the system including archiving the past runs and graph display of the test results. Todai Robot Project: http://21robot.org/?lang=english QA-Lab: http://ntcir.nii.ac.jp/QA-Lab/	Noriko Kando	Professor	Master / Ph D	3	3 - 6 months	Recommendation letters from academic advisors are preferable.
93	Information Retrieval	Analysis of Client-side log and concept maps written by users pre- and post search tasks to 1) build a model of user behaviour, predicting task difficulty, or estimating whole-session relevance, 2) propose a search function to support users in difficulty and test. (the internship task is related to the CRES project, http://cres.jpn.org/?FrontPage)	Noriko Kando	Professor	Master / Ph D	2	3 - 6 months	Recommendation letters from academic advisors are preferable.

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5. Management and Outside Collaboration on R&D								
94	Data Mining	Similarity Search and Intrinsic Dimensionality (http://typhoon.nii.ac.jp/~meh/internship/proj-simsearch.pdf)	Michael Houle	Visiting Professor	Either	6	3-6 months	Priority given to PhD students, and for internships of 5-6 months.
95	Data Mining	Outlier Detection and Data Dimensionality (http://typhoon.nii.ac.jp/~meh/internship/proj-outlier.pdf)	Michael Houle	Visiting Professor	Either		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
96	Data Mining	Unsupervised Feature Selection (http://typhoon.nii.ac.jp/~meh/internship/proj-features.pdf)	Michael Houle	Visiting Professor	Either		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
97	Data Mining	KNN Classification and Applications (http://typhoon.nii.ac.jp/~meh/internship/proj-classification.pdf)	Michael Houle	Visiting Professor	Either		3-6 months	Priority given to PhD students, and for internships of 5-6 months.
98	Data Mining	Distributed Data Clustering (http://typhoon.nii.ac.jp/~meh/internship/proj-pclust.pdf)	Michael Houle	Visiting Professor	Either		3-6 months	Priority given to PhD students, and for internships of 5-6 months.