



**10 Years of the international center for
Advanced Communication Technologies:
A Global Partnership among the Best**

interACT – 10 years in a nutshell

From two founding partners to eight, current partners in interACT are:

- Karlsruhe Institute of Technology (Germany, 2004)
- Carnegie Mellon University (USA, Pittsburgh & Silicon Valley, 2004)
- Hong Kong University of Science and Technology (China, 2007)
- Waseda University (Japan, 2008)
- National Institute of Information and Communications Technology (Japan, 2010)
- University of Southern California (USA, 2010)
- Italian Institute of Technology (Italy, 2010)
- Nara Institute of Science and Technology (Japan, 2012)

Within 10 years, interACT has:

- Established about 75 permanent contacts between professors of the partners
 - Organised more than 25 distinguished lectures
 - Supported about 150 exchange students
 - Organised several press conferences, taken part in many exhibitions and conferences and given key-note speeches
 - Organised six summer academies and co-organised 10 evaluation workshops and
 - Brought the partners' presidents together and organised an interACT presidential summit
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Preface

With the turn of the 21st century, scientific and academic pursuits have irreversibly changed from activity at predominantly local institutions, to a global collaboration of many dispersed players and organisations scattered around the planet. United by ideas more than by locality they converge and disband as needed and connect using modern communication technologies (internet, video conferencing, social media, etc.). This poses new challenges to educators in their efforts to prepare young scientists and professionals to be ready and effective as they enter the work force: How do scientists acquire knowledge and skill in their field, while at the same time becoming adept at navigating and interacting in an international community of peers? How do scientists learn to be effective in their scientific discipline, but also in the various cultural environments of their peers?

The International Center for Advanced Communication Technologies (interACT) was formed with a mission to respond to this challenge. Founded in 2004, it set two goals for its activities:

- Train students in an international environment by the promotion of cross-national student and faculty exchange, student stipends, academies, distinguished lectures, and scientific collaborations.
- Build better communication technologies that supports collaboration and mutual understanding through advanced perceptual interfaces, translation, communication and robotic technologies.

It began at first, half-hazardly, through a scientific collaboration between Carnegie Mellon University, Pittsburgh, USA and Karlsruhe University, Karlsruhe, Germany, in computer science and language technologies. Both universities ranked #1 in computer science in their respective countries, and so it generated a ferment for fertile exchange and a platform for collaboration between students and faculty at these top institutions in the two countries.

The concept rapidly attracted like minded partners at top institutions in other parts of the world: Since the establishment of the center in 2004, eight top universities in five countries are now joined in this endeavor (and more have indicated an interest to join!): Carnegie Mellon University (CMU), Karlsruhe Institute of Technologies (KIT), Hong Kong University of Science and Technology

(HKUST), Waseda University, National Institute of Information and Communication Technology (NICT), University of Southern California (USC), Italian Institute of Technology (IIT), and Nara Institute of Science and Technology (NAIST). The areas of research also grew beyond computer science to other disciplines. With interACT as a platform, many individual collaborations were launched between the institutional partners. Their work together is based on partnership and team building among equals rather than educational import/export.

The center has also generated numerous technical breakthroughs in speech sciences, language technologies, robotics, and computer science. These technologies have improved communication and supported international understanding in tangible ways. From automatically simultaneously translated lectures, to humanitarian missions in the developing world, to connected humanoid robots: interACT technologies have contributed to the way we interact and communicate with each other and with machines.

In 2014, interACT celebrates its 10th anniversary. In this report, we look back in gratitude at the many accomplishments, breakthroughs, highlights and insights that were reached, and the lives that our cooperations have touched. InterACT was made possible by generous support in each of the partner institutions and countries: Most notably, we thank the State of Baden-Württemberg for student stipends and infrastructure support; Commerzbank for its stipends and travel grants. We thank the presidents, provosts and deans of our partner universities, CMU, KIT, HKUST, Waseda, IIT, NICT, USC, NAIST, who provided financial infrastructure support and stipends and enthusiastically guided and encouraged our program.

Looking back, we are amazed about what was possible in 10 years by the joint efforts of so many. We thank the federal and local funding agencies in each of the partner countries that supported our joint research activities. Their vision and support made interACT possible and the many friendships and enthusiastic collaborations we could build. We look forward to another decade of international education and research.

Alex Waibel
Director interACT



interACT – 10 YEARS OF COOPERATION

distinguished lectures

academies

cross-national projects

joint research

student exchange



interACT – 10 Years of Cooperation

InterACT was established in 2004, initially as a cooperation between Carnegie Mellon University and the former University of Karlsruhe. It has since expanded to include eight leading research universities and research and development labs in major regional economies of the world.

The eight current members are:

EUROPE:

- Karlsruhe Institute of Technology (Germany)
- Italian Institute of Technology (Italy)

UNITED STATES:

- Carnegie Mellon University (USA, Pittsburgh & Silicon Valley)
- University of Southern California (USA)

ASIA:

- Hong Kong University of Science and Technology (Hong Kong, China)
- Waseda University (Japan)
- National Institute of Information and Communications Technology (Japan)
- Nara Institute of Science and Technology (Japan)

InterACT serves as a microcosm of globalization, exemplifying the way corporations, government bodies and organisations work, where research, development, innovation, technology transfer, marketing, sales, deployment, all happen on a global scale in a globally interconnected fashion. InterACT and the participating universities and research institutes build technologies that improve global communication and collaboration. InterACT also provides training opportunities for students, faculty and scientists to expand interpersonal and intercultural skills that make human cooperation and team building on a global scale easier.

INTERACT'S HISTORY:

FEBRUARY 2004

Carnegie Mellon University (Pittsburgh, PA, USA) and the former University of Karlsruhe (TH, Karlsruhe, Germany, UKA) signed the first cooperation agreement. The President of the University of Karlsruhe Prof. Dr. H. Hippler travelled to Pittsburgh for the ceremonial signing. At CMU, UKA-president Horst Hippler and CMU-president Jared L. Cohon signed the cooperative agreement.



President Hippler (*left*) and president Cohon (*right*) sign the agreement in the presence of interACT director Alex Waibel (*middle*)

SEPTEMBER 2005

Carnegie Mellon President Prof. Dr. J.L. Cohon made a return visit to Karlsruhe. After a meeting with UKA-president Hippler, President Cohon visited the labs of Prof. Alex Waibel and of Prof. Rüdiger Dillmann at UKA.



Discussed the future cooperation, president Hippler (*left*) and president Cohon (*right*) in Karlsruhe.



President Cohon visiting the lab of Prof. Dillmann



Speech demos to president Cohon at Prof. Waibel's lab

JUNE 2006

Prof. Waibel's interactive systems labs celebrated its 15 years of existence in a symposium in Karlsruhe. President Prof. Dr. H. Hippler, UKA, and President J.L. Cohen from CMU spoke about the honor and capability of the collaboration. Dr. D. Nahamoo, IBM, Yorktown Heights, USA gave the keynote with the title: "A world without borders – future communication technologies". Hong Kong University of Science and Technology (HKUST), which at that time was not an interACT member but became the third member in 2007, was represented by Prof. P. Fung, who later

became an associate professor at HKUST. President Cohon also honored the interACT students by handing each student an interACT certificate and a Pittsburgh-guidebook.



President Cohon giving a key note



Certificates for the interACT students by president Cohon



President Cohon and interACT-students

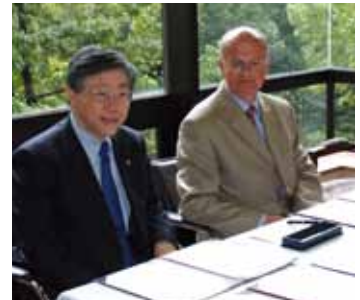
FEBRUARY 2007

InterACT opened a third center at the Hong Kong University of Science and Technology in Hong Kong, China. Prof. P. Frankenberg, Minister for Research, Science and the Arts, Baden-Württemberg, Germany, attended the signing ceremony in Hong Kong. UKA-President Hippler, HKUST-president Paul Chu and Dr. G. Hambrick, director of international affairs at CMU, signed the agreement at HKUST.

SEPTEMBER 2008

Waseda University in Tokyo, Japan joined interACT. Prof. P. Frankenberg, Minister for Research, Science and the Arts, Baden-Württemberg, Germany, attended the signing ceremony in Tokyo. The agreement was signed by Waseda-president Shirai and UKA-president Hippler.

After the signing in Tokyo, Minister Frankenberg, President Hippler, and interACT-director A. Waibel travelled to Hong Kong where a conference between the presidents of the universities from Baden-Württemberg took place. Part of this meeting was the visit to several universities in Hong Kong, including HKUST by the German presidents. During this occasion, the new interACT agreement was signed by HKUST-vice-president Tony Eastham.



Waseda-president Shirai (*left*) and Minister Frankenberg during the signing ceremony

APRIL 2009

Waseda-president Shirai visits the University of Karlsruhe for the first time. President Shirai, UKA-President Hippler and the interACT Advisory Board discussed future cooperation. Their visits to interACT partners' research labs provided insight into research activities at KIT.



interACT Advisory Board together with president Shirai (*middle left*) and president Hippler (*middle right*)

FEBRUARY 2010

Three new partners joined interACT:

- The Italian Institute of Technology (Genoa, Italy)
- The National Institute of Information and Communications Technology (Tokyo, Japan)
- The University of Southern California (Los Angeles, CA, USA)

Representatives of the new partners signed the agreement during a ceremony at Karlsruhe Institute of Technology.

NOVEMBER 2010

Meeting of the interACT presidents at the interACT summit, CMU - Silicon Valley, CA, USA (see section "the interACT Presidential Summit", page 13)

APRIL 2012

The Nara Institute of Science and Technology (Nara, Japan) joined interACT. KIT-president Hippler and NAIST-president Isogai signed the agreement at NAIST in Nara. KIT-president Hippler also took the opportunity to visit the interACT-partners National Institute of Information and Communication Technology (NICT) and Waseda University.



THE interACT PRESIDENTIAL SUMMIT

The interACT Presidential Summit

The Globalized University Mobility, Communication and their Impact on Education & Research: Forum for Discussion between interACT-Presidents, Industry Leaders, and a Workshop for Scientists

Carnegie Mellon Silicon Valley, Nov. 8-9, 2010

On Nov. 8-9, 2010 a first Presidential Summit was held at Carnegie Mellon University SV-Campus. Right in the heart of Silicon Valley, CMU-SV is located at the NASA Ames Research Parc on Moffett Field, right off of 101. The Presidential Summit brought together the presidents of seven universities and research institutes which form the global network called "interACT", as well as a select group of interACT members and invited guests. The workshop served as a forum for discussion between the presidents and industry leaders, and as a workshop for the scientists at the participating institutions that focused on the topic of globalization of academic and research institutions in face of dramatic technological changes.

The summit took place on two days: The first (the 8th of Nov.) served as a meeting for the presidents and a discussion of common challenges. The second (the 9th of Nov.) was a workshop for the faculty, department heads, deans and center directors from the participating universities and research centers. It also included leaders from industry, academia and government to join in our discussion.

The Presidential Summit and its workshop was an opportunity for the presidents, faculty, and their partners to discuss challenges and concerns that affect the future and the mission of our organizations.

THE CHALLENGE

Research universities and research laboratories today are confronted with fundamental changes in the way we learn and do research. Innovative new technologies offer unprecedented capabilities in mobility, communication, education, and robotics that free users from traditional barriers created by regional separation, culture, national borders or language. As a result they have begun to generate vastly broader communities that are no longer limited to any particular locale or cultural background. Technology eliminates the need for meeting in one place, in one culture or one language: We can learn remotely over the internet; we can learn on-the-job wherever we are. We can learn using computer tutors and tools. We teach or work with others across continents and time zones. We can physically operate, manipulate and even represent ourselves remotely via robotic tools or humanoid extensions. And we can teach, learn and collaborate with other humans in any culture and across language barriers.

Universities and research centers, by contrast, have traditionally operated much more in a regional and national manner. They typically derive significant financial resources from local or national governments, who view the success of their operation, education and the excellence of their

research as an expression of regional/national pride, identity, source of a future workforce, and as a source of regional inspiration, problem solving and innovation. With increased globalization and mobility, however, modern research universities and research centers have begun to adjust. Most of our institutions already carry out collaborative projects, operate educational programs in other countries and locations, and all participate in international cooperation and exchange.

The Presidential Summit and its workshop explored the impact of these changes and proposed mechanism to respond more forcefully. Rather than adjusting to external change, we aim to invent and spearhead the change. During the summit, we examined how new human-to-human technologies could be embraced and developed to advance the mission and the role of the university in the 21st century. We explored the organizational changes needed, as well as develop an action plan for the technologies that make them possible.

Four key technologies were the basis for our discussion as they affect education and research:

- Language Technology, Cross-lingual Communication
- Robotics, Remote Presence, Remote Manipulation, Teleoperation and Telepresence
- Instructional Technologies, Distance Learning, Open Learning/Courseware
- Mobility and Mobile Devices

As we aim to expand the global reach of our activities, we also discussed policy issues, development, funding and financing in and between the partner countries.

REALIZATION AND PROGRAM

The Presidential Summit took place on Nov. 8 and 9 and had the following goals:

1. Provide opportunity for the presidents of the key institutions in interACT to meet (8th)
2. Discussion of challenges facing research universities/institutions today (8th)
3. Presidential public response (8th)
4. Workshop for faculty to deepen and expand on the Presidential Agenda (9th)
5. Discussion, summaries and planning (9th)

Each institution was represented by its president, but also by delegates, key faculty members, deans or department heads, who represent key technology or policy issues as outlined in the agenda, and who are prepared to engage in discussion on the challenges and opportunities during the workshop part of the summit.

For the workshop on the 9th, participants were asked to prepare a short presentation and to participate in discussion. To accommodate the large group of attendees while still allowing discussion and exchange between all members, we had brief lightning talks by all participants (3 mins) for each member to introduce its lab and its work and comments related to the theme of the summit/workshop.

Furthermore, there were four break-out sessions, one for each area:

- Language Technology, Cross-lingual Communication
- Robotics, Remote Presence, Remote Manipulation, Teleoperation and Telepresence
- Instructional Technologies, Distance Learning, Open Learning/Courseware
- Mobility and Mobile Devices

Discussion points were:

- The missing science, what needs to be done in the area?
- How can new technology be transitioned?
- How can we collaborate in interACT? How can we collaborate with industry?
- How can we do joint experimentation in the operational context of a university or a research lab?
- What are the funding constraints?

To discuss funding, we invited several speakers to explain different funding schemes and research policies in different partner countries. These talks were to stimulate discussion on how joint funding could be obtained for joint initiatives.

PROGRAM

The program had two parts:

Nov. 8: Presidential Summit

The events on the first day were devoted to a meeting of the presidents. Most of the day was closed to the public and intended as an opportunity for the presidents and a selected group of faculty to meet and to discuss ideas toward meeting significant challenges facing today's research universities and institutes. The discussion was motivated by several short talks and presentations. The presidents and representative faculty discussed and prepared a joint response.

The evening was then a public event. During this event, members of the Silicon Valley Research and Technology communities were invited. The interACT presidents participated in a panel discussion and presented their conclusion from the day's discussion and a joint response. The evening concluded with a reception and an opportunity for networking.

Nov. 9: interACT Summit Workshop

This second day was intended for key faculty representing some of the key technology areas to present their research and relate their work to the challenges of the summit. The goal was to meet colleagues from the interACT network and to plan joint research and education measures that respond to the vision of the presidents. In keeping with a famous Silicon Valley adage, "the way to predict the future is to invent it" our workshop attempted to plan and propose coordinated research actions between the interACT partner institutions.



*Above: Panel of the presidential summit
Middle left: CMU-president J.L. Cohon
Middle right: CMU-president Cohon,
CMU-SV-director Griss, R&D VP Panasonic Junqua,
and interACT-director Waibel
Below left: K. Enami, VP NICT
Below right: Waseda-president K. Shirai*

AGENDA

The interACT Presidential Summit

The Globalized University

Mobility, Communication and their Impact on Education & Research
CMU-Silicon Valley

Meeting of the Presidents

November 08, 2010

Morning (Open to InterACT members):

11:00 NASA Ames Research - Overview and History NASA Ames
Dr. Mike Marlaire, Director, NASA Ames Research Park
NASA Ames and the Development of the NASA Ames Research Park

Afternoon (Presidents and Delegation)

12.30 **Welcome: Presidents Meet and Greet**
Prof. Dr. Martin Griss, Director Silicon Valley Campus
Prof. Dr. Alex Waibel, CMU&KIT, Director interACT
The Presidents of interACT: Brief Intro of each Organization

12.45 **Lunch**
Brief Introductory Statements by the Presidents

14.15 **Challenges & Opportunities for Research Universities and Institutes**
Emerging Technologies fundamentally Change Education as we know it

- Cross-Lingual Communication Technologies – Prof. Dr. Alex Waibel
- Humanoid Robots from Afar – Prof. Dr. Rüdiger Dillmann
- Open Learning Initiative – Candace Thille
- Mobility – Prof. Dr. Martin Griss

15:15 **Discussion**

15:45 **Break**

16:00 **Closed Session** Presidents, Discussion – Conclusions

The Presidential Panel

November 08, 2010

17:30 **Reception**
Welcome
Dr. Pete Worden, Director, NASA Ames, Welcome
Alumni of interACT Universities and External Guests

18:30 **Presidential Panel**

Introduction of Panellists

Prof. Dr. Alex Waibel, CMU&KIT, Director InterACT, Welcome and Introduction
Dr. Ed Frank, VP Apple, Board of Trustees, Carnegie Mellon

Panel Discussion

interACT Presidents:

The US-American Perspective:

- Prof. Dr. Jared L. Cohon, President Carnegie Mellon University
- Prof. Dr. Randolph Hall, Vice President, University of Southern California

The European Perspective:

- Prof. Dr. Horst Hippler, President, Karlsruhe Institute of Technology
- Prof. Dr. Giulio Sandini, Italian Institute of Technology

The Asian Perspective:

- Prof. Dr. Katsuhiko Shirai, President, Waseda University
- Dr. Kazumasa Enami, Vice President, NICT
- Prof. Dr. Dekai Wu, Hong Kong University of Science and Technology

Technology Respondents:

- Dr. Jean-Claude Junqua, VP of R&D, Panasonic
- Dr. John Shen, Director, Nokia Research Center
- Dr. Jatinder Singh, VP of R&D, Deutsche Telekom
- Prof. Dr. Oussama Khatib, Director, Stanford University AI Lab
- Dr. Andreas Weigend, weigend.com, former Chief Scientist, Amazon.com

19:30 **Networking**

interACT Workshop

November 09, 2010

Enabling Technologies for Globalization: Education and Research

8:30 **Coffee**

8:45 **Welcome and Introduction**, Prof. Dr. Alex Waibel, CMU&KIT

9:00 – 11:35 **Lightning Talks (2-3 slides, 3 min. Overview, Research and Impact)**

Language Technologies

- 09.00 – 09.05 Prof. Dr. Tetsunori Kobayashi, Waseda University
- 09.05 – 09.10 Prof. Dr. Satoshi Nakamura & Dr. Chiori Hori, NICT
- 09.10 – 09.15 Prof. Dr. Dekai Wu, Hong Kong University of Science and Technology
- 09.20 – 09.25 Dr. Joseph Mariani, LIMSI-CNRS & IMMI
- 09.25 – 09.30 Prof. Dr. Alex Waibel, CMU&KIT
- 09.35 – 09.40 Prof. Dr. Giorgio Metta, Italian Institute of Technology

Distance Education and Educational Technology

- 09.45 – 09.50 Prof. Dr. Ray Bareiss, Carnegie Mellon
- 09.50 – 09.55 Candace Thille, Carnegie Mellon
- 09.55 – 10.00 Prof. Dr. Randolph Hall, University of Southern California

Mobility

- 10.10 – 10.15 Prof. Dr. Martin Griss, Carnegie Mellon Silicon Valley
10.15 – 10.20 Dr. John Shen, Nokia Research Lab
10.20 – 10.25 Dr. Ciaran Rochford, Samsung
10.25 – 10.30 Dr. Adam Blum, Rhomobile
10.30 – 10.35 Dr. Jatinder Singh, Deutsche Telekom
10.35 – 10.40 Dr. Yutaka Kidawara, NICT
10.40 – 10.45 Prof. Dr. Clifford Nass, Stanford University

10.50 – 11.00 **Coffee-Break**

Humanoid Robots, Teleoperation, Telepresence

- 11.00 – 11.05 Prof. Dr. Masakatsu G. Fujie, Waseda University
11.05 – 11.10 Prof. Dr. Rüdiger Dillmann, Karlsruhe Institute of Technology
11.10 – 11.15 Dr. Tamim Asfour, Karlsruhe Institute of Technology
11.15 – 11.20 Prof. Dr. James Kuffner, Google Research & Carnegie Mellon
11.20 – 11.25 Dr. Kazumasa Enami, NICT
11.25 – 11.30 Dr. Komei Sugiura, NICT
11.30 – 11.35 Prof. Dr. Giulio Sandini, Italian Institute of Technology
11.35 – 11.40 Prof. Dr. Oussama Khatib, Stanford University

11.40 – 12.30 **Breakout-Sessions**

Discussion of each theme in the context of globalized education and research. Determination of missing science. What can we do under interACT to solve these issues and how can we carry out joint experiments using our technologies under interACT?

12.30 – 14.00 **Lunch**

14.00 – 15.30 **Breakout-Session Summaries & Discussion**

15.30 – 15.45 **Coffee Break**

15.45 – 16.05 **Short Talks: Policy, Development, Finances**

Support Mechanisms, Funding Programs, Policy

- 15.45 – 15.50 Prof. Dr. Randy Bryant, Carnegie Mellon
15.50 – 15.55 Dr. Jean-Philippe Touffut, Centre Cournot
15.55 – 16.00 JD Matt Harbaugh, Innovation Works, Mobile Technologies
16.00 – 16.05 Dr. Howard Wactlar, National Science Foundation

16.05 – 17.30 **Discussion**

Plans for further cooperation. Joint R&D activities.

19.00 **Dinner & Reception**



Above left: Ed Frank, Vice President at Apple
Above right: KIT-interACT-students doing their scholarship at CMU with KIT-president Hippler
Middle left: IIT-interACT-associate director Giulio Sandini
Middle right: CMU-president Cohon with summit participants from research and industry
Below left: Research meets industry: D. Wu (HKUST), E. Frank (Apple), J. L. Cohon
Below right: IMMI-director J. Mariani and NAIST-interACT-associate director S. Nakamura



Above left: Alex Waibel opens the interACT presidential panel
Above right: G. Sandini (IIT-interACT-associate director), K. Enami (VP NICT) and K. Shirai (president of Waseda University), from left to right
Middle left: IMMI director J. Mariani and A. Waibel
Middle right: J.-C. Junqua, VP of R&D Panasonic
Below left: CMU-president Cohon and KIT-president Hippler (from left)
Below right: Alex Waibel and J. Shen, Director Nokia Research Lab



Above left: KIT-president Horst Hippler
Above right: CMU-president Cohon with two KIT-interACT-students
Middle left: KIT-interACT-associate director R. Dillmann and T. Asfour (KIT)
Middle right: R. Hall, VP USC and D. Wu (HKUST)
Below left: R. Hall, VP USC and K. Enami (NICT)
Below right: A. Weigend (former chief scientist Amazon) and O. Khatib (Director Stanford AI Lab)

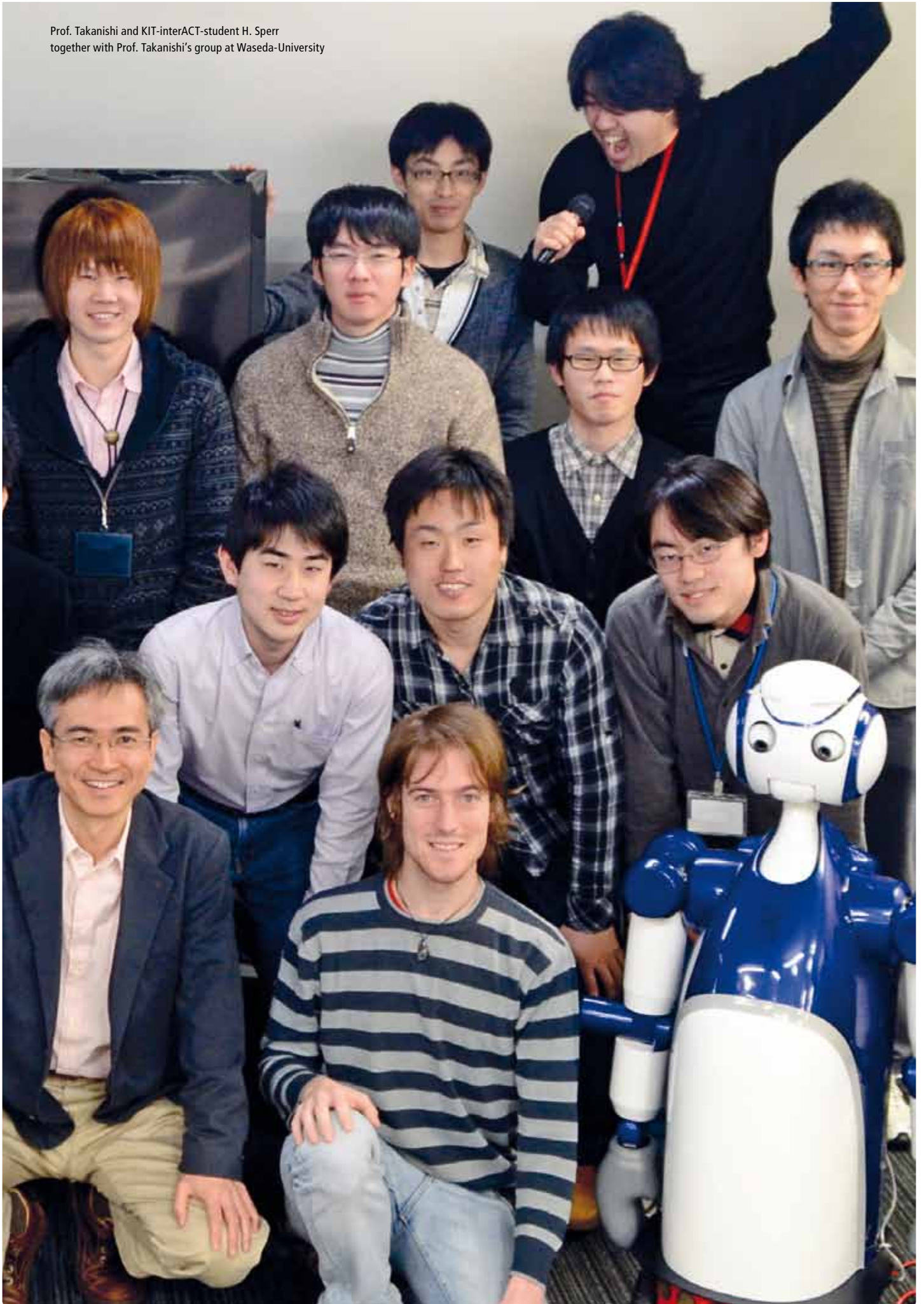
PARTICIPANTS IN THE PRESIDENTIAL SUMMIT

Asfour Tamim	Senior Research Scientist, KIT
Bareiss Ray	Director of Educational Programme, Prof. of Computer Science, Carnegie Mellon University
Blum Adam	Chief Executive Officer of Rhomobile
Bryant Randy	Dean School of Computer Science, Carnegie Mellon University
Cohon Jared L.	President Carnegie Mellon University
Dillmann Rüdiger	Head of Humanoids and Intelligence Lab, Prof. of Computer Science at KIT
Eck Matthias	Research Scientist at Mobile Technologies
Enami Kazumasa	Vice-President of National Institute for Information and Communications Technology
Frank Ed	Vice President at Apple
Fujie Masakatsu G.	Leader Global Robot Academia at Waseda University
Fujie Shinya	Assistant Professor at Waseda University
Griss Martin	Director Carnegie Mellon Silicon Valley
Hall Randolph	Vice-President of Research of University of Southern California
Harbaugh Matt	Chief Operating Office at Mobile Technologies
Hippler Horst	President of Karlsruhe Institute of Technology
Hori Chiori	Senior Researcher at National Institute for Information and Communications Technology
Junqua Jean-Claude	Vice President of R&D at Panasonic
Khatib Oussama	Director AI Lab and Prof. of Computer Science at Stanford University
Kidawara Yutaka	Group Leader of Knowledge Clustered Group, National Institute for Information and Communications Technology
Kobayashi Tetsunori	Prof. of Computer Science and Engineering at Waseda University
Kuffner James	Research Software Engineer at Google and Adjunct Associate Prof. at CMU
Lane Ian	Assistant Research Professor, Carnegie Mellon University
Mariani Joseph	LIMSI-CNRS & Director of IMMI
Martin Christian	Executive Director, Institut Telecom
Matsuyama Yoichi	Research Associate at Waseda University
Metta Giorgio	Senior Scientist at IIT, Assistant Prof. at University of Genova
Metze Florian	Assistant Research Professor, Carnegie Mellon University
Nakamura Satoshi	Director General of Keihanna Research Labs, National Institute for Information and Communications Technology
Nass Clifford	Thomas M. Storke Prof. at Stanford University
Petersen Klaus	Research Associate at Waseda University
Rochford Ciaran	Vice President of R&D at Samsung
Sandini Giulio	Director of Research at IIT, Prof. of Bioengineering at University of Genova
Shen John	Director of Nokia Research Lab, Palo Alto
Shirai Katsuhiko	President of Waseda University
Singh Jatinder	Vice Preseident of R&D at Deutsche Telekom
Stüker Sebastian	Senior Research Scientist at Karlsruhe Institute of Technology
Sugiura Komei	Expert Researcher at National Institute for Information and Communications Technology
Thille Candace	Director Open Learning Initiative, Carnegie Mellon University
Touffut Jean-Philippe	Director Foundation of Saint-Gobain, Centre Cournot
Wactlar Howard	Division Director at National Science Foundation
Waibel Alex	Director interACT, Prof. of Computer Science, Carnegie Mellon University and Karlsruhe Institute of Technology
Weigend Andreas	Former Chief Scientist at Amazon.com
Wu Dekai	Prof. of Computer Science at Hong Kong University of Science and Technology
Zhang Joy Ying	Assistant Research Professor, Carnegie Mellon University



interACT COOPERATIONS

Prof. Takanishi and KIT-interACT-student H. Sperr together with Prof. Takanishi's group at Waseda-University



interACT Cooperations

Established initially as a collaboration between the Interactive Systems Laboratories of the former Universität Karlsruhe (TH) and Carnegie Mellon University in 1991, interACT has since grown and flourished into a joint center between the computer science departments of eight of the leading universities in this field worldwide. 78 professors in the computer science departments of all partner universities started to cooperate under interACT:



NICT

National Institute of Information and
Communications Technology

Dr. Chiori Hori | *Spoken Language Communication Laboratory*



IIT

Istituito Italiano Di Tecnologia

Prof. Darwin Caldwell | *Advanced Robotics*

Prof. Giulio Sandini | *Robotics, Brain and Cognitive Sciences*



NAIST

Nara Institute of Science and Technology

Prof. Satoshi Nakamura | *Graduate School of Information Science*

Prof. Naotake Ogasawara | *Graduate School of Information Science*



USC

University of Southern California

- Prof. Ting Chen** | *Computational Biology and Bioinformatics*
Prof. Nenad Medvidovic | *Center for Systems and Software Engineering*
Prof. Ramakant Nevatia | *Institute for Robotics and Intelligent Systems (IRIS)*
Prof. Clifford Neuman | *Information Science Institute*
Prof. Stefan Schaal | *Computational Learning & Motor Control Lab*
Prof. Laurent Itti | *Computer Science, Psychology and Neuroscience*
-



WASEDA

Waseda University

- Prof. Tetsunori Koboyashi** | *Faculty of Science and Engineering*
Prof. Tatsuo Nakajima | *Distributed and Ubiquitous Computing Laboratory (DCL)*
Prof. Jun Ohya | *Ohya Lab Visual Information Processing Laboratory*
Prof. Atsuo Takanashi | *Humanoid Robotics Institute (HRI)*
-



HKUST

Hong Kong University of Science and Technology

- Prof. Siu-Wang Cheng** | *Department of Computer Science and Engineering*
Prof. Pascale Fung | *Department of Electronic & Computer Science*
Prof. James Tin-Yau Kwok | *Department of Computer Science and Engineering*
Prof. Bertram Shi | *Department of Electronic & Computer Science*
Prof. Dekai Wu | *Department of Electronic & Computer Science*
-



CMU

Carnegie Mellon University

Prof. Jonathan Aldrich | *Institute for Software Research (ISR)*
Prof. David Anderson | *Carnegie Mellon CyLab*
Prof. Chris Atkeson | *Human-Computer Interaction Institute (HCII)*
Prof. Edmund E. Clarke | *School of Computer Science (SCS)*
Prof. John M. Dolan | *The Robotics Institute (RI)*
Prof. Martin Griss | *Electrical & Computer Engineering (ECE)*
Prof. Martial Hebert | *School of Computer Science (SCS)*
Prof. James D. Herbsleb | *Carnegie Mellon CyLab*
Prof. Jessica Hodgins | *The Robotics Institute (RI)*
Prof. Jason I. Hong | *CHIMPS Lab*
Prof. Ramayya Krishnan | *Carnegie Mellon CyLab*
Prof. James Kuffner | *The Robotics Institute (RI)*
Prof. Grace Lewis | *Software Engineering Institute*
Prof. A. Javier Lopez | *Department of Biological Sciences*
Prof. Bruce M. McLaren | *Human-Computer Interaction Institute (HCII)*
Prof. Florian Metze | *Language Technologies Institutes (LTI)*
Prof. Gary L. Miller | *School of Computer Science (SCS)*
Prof. Eric Nyberg | *School of Computer Science (SCS)*
Prof. Mark C. Paulk | *School of Computer Science (SCS)*
Prof. André Platzer | *Computer Science Department*
Prof. Nancy Pollard | *School of Computer Science (SCS)*
Prof. Ramamoorthi Ravi | *Tepper School of Business*
Prof. Srinivasan Seshan | *School of Computer Science (SCS)*
Prof. Mary Shaw | *Software Engineering Masters Program*
Prof. Reid Simmons | *The Robotics Institute (RI)*
Prof. Bruno Sinopoli | *Electrical & Computer Engineering (ECE)*
Prof. Siddhartha Srinivasa | *School of Computer Science (SCS)*
Prof. Klaus Sutner | *School of Computer Science (SCS)*
Prof. Peter Steenkiste | *Electrical & Computer Engineering (ECE)*
Prof. Richard Stern | *Electrical & Computer Engineering (ECE)*
Prof. Katia Sycara | *The Robotics Institute (RI)*
Prof. Stephan Vogel | *Language Technologies Institutes (LTI)*
Prof. Alex Waibel | *interACT*
Prof. Katsu Yamane | *The Robotics Institute (RI)*
Prof. Jie Yang | *School of Computer Science (SCS)*



KIT

Karlsruhe Institute of Technology

- Prof. Tamim Asfour** | *Humanoids Robotics Systems, High Performance Humanoid Technologies Lab (H2T), Institute for Anthropomatics*
- Prof. Michael Beigl** | *Pervasive Computing Systems (PCS)*
- Prof. Rüdiger Dillmann** | *Humanoids Intelligence and Systems Lab, Institute for Anthropomatics*
- Prof. Wilfried Juling** | *Chief Science and Information Officer, MWRG - IT Management and Weg Engineering Research Group*
- Prof. Uwe D. Hanebeck** | *Intelligent Sensor-Actuator-Systems, Institute for Anthropomatics*
- Prof. Hannes Hartenstein** | *Steinbuch Centre for Computing (SSC)*
- Prof. Jörg Henkel** | *Chair for Embedded Systems (CES)*
- Prof. Oliver Hummel** | *Software Design and Quality (SDQ), Institute for Program Structures and Data Organization*
- Prof. Wolfgang Karl** | *Computer Architecture and Parallel Processing*
- Prof. Gisela Lanza** | *Institute of Production Science (WBK)*
- Prof. Jörn Müller-Quade** | *Institute of Cryptography and Security (IKS)*
- Prof. Andreas Oberweis** | *Institute of Applied Informatics and Formal Description Methods (AIFB)*
- Prof. Ralf H. Reussner** | *Software Design and Quality (SDQ)*
- Prof. Hartmut Schmeck** | *Institute of Applied Informatics and Formal Description Methods (AIFB)*
- Prof. Peter H. Schmitt** | *Logic and Formal Methods*
- Prof. Gregor Snelting** | *Paradigm of Programming*
- Prof. Rainer Stiegelhagen** | *Computer Vision for Human-Computer Interaction Lab, Institute for Anthropomatics*
- Prof. Rudi Studer** | *Institute of Applied Informatics and Formal Description Methods (AIFB)*
- Prof. Stefan Thai** | *Institute of Applied Informatics and Formal Description Methods (AIFB)*
- Prof. Walter F. Tichy** | *Institute for Program Structures and Data Organization (IPD)*
- Prof. Roland Vollmar** | *Institute of Cryptography and Security (IKS)*
- Prof. Dorothea Wagner** | *Algorithmics I at the Institute of Theoretical Informatics*
- Prof. Alexander Waibel** | *Interactive System Labs (ISL), Institute for Anthropomatics*
- Prof. Christof Weinhardt** | *Institute of Information Systems and Management (IISM)*
- Prof. Martina Zitterbart** | *Institute of Telematics*
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interACT STUDENT EXCHANGE

Students at Waseda-campus



interACT Student Exchange

InterACT is a network of international excellence and serves as a model for international teamwork and cooperation. The center promotes the exchange of knowledge and joint training of students in an environment of international immersion. Students get to know each other's culture and learn to collaborate and participate in research projects. The partner universities offer exciting scientific opportunities and scholarships. For these reasons, the interACT exchange program is one main pillar of interACT, providing outstanding students with the opportunity to write their thesis in one of the partner-labs abroad.

Since 2004, the interACT-Advisory Board has chosen 130 outstanding students and researchers to receive interACT scholarships. In particular,

- 57 Student Research Papers (41) and Bachelor's theses (16),
- 63 Diploma theses (52) and Master's theses (11), as well as
- 10 PhD students and post Doc research projects

They spent three to eight months at one of the partner universities. Most of the students passed their stay abroad in the US (CMU followed by USC) followed by Asia (HKUST, NAIST, Waseda). Also longer research stays by post docs are part of the exchange program, e.g. Dr. J. Noh (Waseda-university) spent 6 months (Oct. 2011- April 2012) and Dr. Y. Takanishi (Waseda-university) spent 12 months at KIT.

The interACT students are financially supported by the Baden-Württemberg Stiftung and by the eight partners. Thanks to this generous support more than 130 students could benefit from the interACT exchange program and from a stay abroad. It is not only the students who benefit from the program but also the supervising professors. Since interACT was established officially in 2004, more than 75 new cooperations between professors at the partner universities have been established via the student exchange.

interACT advertizes the exchange program on the interACT website (<http://interact.ira.uka.de>), by e-mail notification, by announcing the program in lectures, through informative events, through participation in academic events, through the help of student representatives, through the international office, and as well as via the professors of the faculties. Students interested in doing their research at one of the partner universities are invited to start the application process with a personal interview with one of the interACT staff members at the student's university. After having submitted an official application, either the interACT Advisory Board (at KIT) or the interACT directors choose the students. Then the interACT offices support the selected interACT students by helping with visa applications, finding housing, and by answering all the questions arising in advance of and during their stay. An interACT mailing list allows fast communication among scholarship holders. In addition to the mailing list, an interACT-Wiki was established in 2008 providing students a platform to share information and experience on topics such as housing, insurance, and transportation. Also facebook is used in order to allow fast communication between the current students. The interACT offices do their best to give the best support to the students so that they can concentrate on their research projects. At the end of the stay, each student compiles a report about her stay and experience.

To give an idea on the educational background, academic interests, and research stays of the interACT scholarship recipients, a short bio of each is presented below. As most of the students are supported by the „Baden-Württemberg Stiftung“ and since there grants are given during the fiscal year of September 01 to August 31, the students are listed accordingly by date.



Above left: interACT student Narine Kokhlikyan at CMU-Silicon Valley
Above right: Dietmar Bernreuther, Silja Hildebrand and Matthias Paulik at CMU
Middle left: President Cohon with interACT students in Karlsruhe
Middle right: Matthias Walliczek during his interACT-presentation
Below left: interACT students Nico Schläfer, Andreas Schuster and Thomas Prommer in Pittsburgh
Below right: Three interACT-students (M. Heck, T. Abe, M. Sperber) at the lab of Prof. S. Nakamura at NAIST

interACT Scholarship Holders 2013/2014

Baumstark, Niklas | Espe, Benjamin | Ferizovic, Damir | Götzmann, Vera | Grundmann, Matthias
 Kojic, Daniel | Rojas, Daniel | Rosenthal, Florian | Schmitz, Christian | Wörtwein, Torsten

Name	Niklas BAUMSTARK
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Parallel Algorithms
Advisors	Prof. P. Sanders (KIT), Prof. G. Blelloch (CMU)
Length of Stay	4 months

Name	Benjamin ESPE
Nationality	German
Field of Study	Computer Science (Master)
Bachelor	Average
Host University	University of Southern California
Type of Thesis	Master Thesis
Subject/Title	Digital Forensics
Advisors	Prof. J. Müller-Quade (KIT), Prof. U. Neumann (USC)
Length of Stay	6 months

Name	Damir FERIZOVIC
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Parallel Algorithms
Advisors	Prof. P. Sanders (KIT), Prof. G. Blelloch (CMU)
Length of Stay	4 months

Name	Vera GÖTZMANN
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Nara Institute of Science and Technology
Type of Thesis	Bachelor Thesis
Subject/Title	Design of a System for Human-Computer Lingual Interaction in a Conversational Manner
Advisors	Prof. A. Waibel (KIT), Prof. S. Nakamura (NAIST)
Length of Stay	4 months

Name	Matthias GRUNDMANN
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Optimizing Code for Heterogenous Parallel Systems
Advisors	Prof. W. Karl (KIT), Prof. T. Mowry / Prof. O. Mutlu (CMU)
Length of Stay	4 months

Name	Daniel KOJIC
Nationality	German
Field of Study	Computer Science (Master)
Bachelor	Good
Host University	Carnegie Mellon University - Silicon Valley
Type of Thesis	Master Thesis
Subject/Title	Software Engineering/ Cognitive Systems
Advisors	B. Klatt (KIT), Prof. M. Griss (CMU-SV)
Length of Stay	6 months

Name	Daniel ROJAS
Field of Study	Mechanical Engineering
Intermediate Diploma	Good
Host University	Hong Kong University of Science and Technology
Type of Thesis	Diploma Thesis
Subject/Title	Industrial Automation
Advisors	Prof. T. Asfour (KIT), Prof. Zhang (HKUST)
Length of Stay	6 months

2013/2014

Name	Florian ROSENTHAL
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Evaluation with Palladio of Reference Architectures for Mobile Computing in Resource-Constrained Environments
Advisors	Prof. R. Reussner (KIT), Prof. G. Lewis (CMU)
Length of Stay	4 months

Name	Christian SCHMITZ
Nationality	German
Field of Study	Computer Science (Master)
Bachelor	Good
Host University	National Chung Hsing University
Type of Thesis	Master Thesis
Subject/Title	Algorithmic Aspects of Energy Systems
Advisors	Prof. D. Wagner (KIT), Prof. D. T. Lee (NCHU)
Length of Stay	6 months

Name	Torsten WÖRTWEIN
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	University of Southern California
Type of Thesis	Bachelor Thesis
Subject/Title	Attention Modelling for Assistive Systems to Support Visually Impaired
Advisors	Prof. R. Stiefelhagen (KIT), Prof. L. Itti (USC)
Length of Stay	4 months

2012/2013

interAct Scholarship Holders 2012/2013

Abele, Timo | Binder, Georg | Bui, Duc Viet | Czech, Lucas | von Drigalski, Felix | Henning, Andreas
 Isaac, Jan | Laturnus, Sophie | Leupold, Stefan | Maas, Manuel | Pfreundt, Claudia | Rieger, David
 Sautter, Leonie | Schauerte, Boris | Schneider, Lukas | Schulze, Martin | Sons, Marc | Veit, Andreas
 Winkler, Alexander

Name	Timo ABELE
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Nara Institute of Science and Technology
Type of Thesis	Bachelor Thesis
Subject/Title	Developing the Nara Lecture Translator
Advisors	Prof. A. Waibel (KIT), Prof. S. Nakamura (NAIST)
Length of Stay	4 months

Name	Georg BINDER
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Car-2-X-Communications
Advisors	Prof. H. Hartenstein (KIT), Prof. P. Steenkiste (CMU)
Length of Stay	4 months

Name	Duc Viet BUI
Nationality	German
Field of Study	Computer Science
Bachelor	Good
Host University	Carnegie Mellon University
Type of Thesis	Master Thesis
Subject/Title	How to Establish a Sage Environment for Speech Recognition
Advisors	Prof. J. Müller-Quade (KIT), Prof. J. Hong (CMU)
Length of Stay	6 months

Name	Lucas CZECH
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Multimodal Dialogue-Repair-Methods in Spoken Human-Machine Communication
Advisors	Prof. A. Waibel (KIT), Prof. F. Metzger (CMU)
Length of Stay	6 months

Name	Felix VON DRIGALSKI
Nationality	German
Field of Study	Mechanical Engineering
Intermediate Diploma	Good
Host University	Nara Institute of Science and Technology
Type of Thesis	Diploma Thesis
Subject/Title	Design of a Measurement Device for the Deformation of the Human Fingertip
Advisors	Prof. T. Asfour (KIT), Prof. N. Ogasawara (NAIST)
Length of Stay	6 months

Name	Andreas HENNING
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Waseda University
Type of Thesis	Diploma Thesis
Subject/Title	Generating Manlike Walking Trajectories for Humanoid Robots With Recorded Human Motions
Advisors	Prof. T. Asfour (KIT), Prof. A. Takanashi (WASEDA)
Length of Stay	6 months

2012/2013

Name	Jan ISAAC
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	University of Southern California
Type of Thesis	Diploma Thesis
Subject/Title	Computational Learning
Advisors	Prof. T. Asfour (KIT), Prof. St. Schaal (USC)
Length of Stay	6 months

Name	Sophie LATURNUS
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	University of Southern California
Type of Thesis	Bachelor Thesis
Subject/Title	Humanoid Robots
Advisors	Prof. T. Asfour (KIT), Prof. St. Schaal (USC)
Length of Stay	4 months

Name	Stefan LEUPOLD
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	University of Southern California
Type of Thesis	Bachelor Thesis
Subject/Title	Robotics
Advisors	Prof. T. Asfour (KIT), Prof. St. Schaal (USC)
Length of Stay	4 months

Name	Manuel MAAS
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Authentication Using the Kinect
Advisors	Prof. J. Müller-Quade (KIT), Prof. J. Hong (CMU)
Length of Stay	4 months

Name	Claudia PFREUNDT
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	University of Southern California
Type of Thesis	Bachelor Thesis
Subject/Title	Robotics
Advisors	Prof. T. Asfour (KIT), Prof. St. Schaal (USC)
Length of Stay	4 months

Name	David RIEGER
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Waseda University
Type of Thesis	Bachelor Thesis
Subject/Title	Ad-hoc Secure Device Pairing
Advisors	Prof. M. Beigl (KIT), Prof. T. Nakajima (WASEDA)
Length of Stay	6 months

Name	Leonie SAUTTER
Nationality	German
Field of Study	Computer Science and Mathematics
Intermediate Diploma	Excellent (Computer Science), Excellent (Mathematics)
Host University	Hong Kong University of Science and Technology
Type of Thesis	Student Research Paper
Subject/Title	Approximate Shortest Gentle Paths
Advisors	Prof. D. Wagner (KIT), Prof. Siu-Wing Cheng (HKUST)
Length of Stay	4 months

Name	Boris SCHAUERTE
Nationality	German
Field of Study	Computer Science
Master	Excellent
Host University	University of Southern California
Type of Thesis	Doctoral Thesis
Subject/Title	Implementation of Multimodal Attention In (Interactive) Technical Systems
Advisors	Prof. R. Stiefelhagen (KIT), Prof. L. Itti (USC)
Length of Stay	4 months

2012/2013

Name	Lukas SCHNEIDER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	University of Southern California
Type of Thesis	Student Research Paper
Subject/Title	Active Person Tracking in Video Sequences With Online Trained Models
Advisors	Prof. R. Stiefelhagen (KIT), Prof. R. Nevatia (USC)
Length of Stay	4 months

Name	Martin SCHULZE
Nationality	German
Field of Study	Computer Science (Master)
Bachelor	Good
Host University	Carnegie Mellon University
Type of Thesis	Master Thesis
Subject/Title	Human-Computer-Interaction
Advisors	Prof. A. Waibel (KIT), Dr. M. Eck (CMU)
Length of Stay	6 months

Name	Marc SONS
Nationality	German
Field of Study	Computer Science (Master)
Bachelor	Good
Host University	Carnegie Mellon University
Type of Thesis	Master Thesis
Subject/Title	A Theoretical Framework for Controlling an UAV With Respect To Maximizing Observations of the Ground-Agents
Advisors	Prof. U. Hanebeck (KIT), Prof. B. Sinopoli (CMU)
Length of Stay	6 months

Name	Andreas VEIT
Nationality	German
Field of Study	Information Technology (Master)
Bachelor	Good
Host University	Carnegie Mellon University
Type of Thesis	Master Thesis
Subject/Title	Applying Multi-Agent Systems to Energy Management
Advisors	Prof. H. Schmeck (KIT), Prof. K. Sycara (CMU)
Length of Stay	6 months

Name	Alexander WINKLER
Nationality	German
Field of Study	Mechanical Engineering (Master)
Bachelor	Good
Host University	Istituto Italiano Di Tecnologia
Type of Thesis	Master Thesis
Subject/Title	Path Planning and Control for a Hydraulically Actuated Quadruped
Advisors	Prof. R. Dillmann (KIT), Prof. D. Caldwell (IIT)
Length of Stay	6 months

2011/2012

interAct Scholarship Holders 2011/2012

Ernesti, Johannes | Gehring, Jonas | Heck, Michael | Huber, Ralf | Illing, Boris | Kappler, Daniel
 Kilic, Armagan | Kokhlikyan, Narine | Messinger, Dominik | Neudecker, Til | Oertel, David
 Ragadjiev, Emil | Roth, Markus | Sperber, Matthias | Sperr, Henning | Weinert, Rene | Wu, Ge

Name	Johannes ERNESTI
Nationality	German
Field of Study	Mathematics
Intermediate Diploma	Good
Host University	University of Southern California
Type of Thesis	Student Research Paper
Subject/Title	Machine Learning
Advisors	Prof. R. Dillmann (KIT), Prof. St. Schaal (USC)
Length of Stay	4 months

Name	Jonas GEHRING
Nationality	German
Field of Study	Computer Science
Bachelor's Degree	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Master Thesis
Subject/Title	Speech Recognition
Advisors	Prof. A. Waibel (KIT), Prof. F. Metze (CMU)
Length of Stay	6 months

Name	Michael HECK
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Nara Institute of Science and Technology
Type of Thesis	Diploma Thesis
Subject/Title	Methods for Unsupervised / Lightly Supervised Acoustic Model Training
Advisors	Prof. A. Waibel (KIT), Prof. S. Nakamura (NAIST)
Length of Stay	6 months

Name	Ralf HUBER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Dereverberation of Real Speech Signals
Advisors	Prof. A. Waibel (UKA), Prof. R. Stern (CMU)
Length of Stay	6 months

Name	Boris ILLING
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Motion Graph for Motion Planing
Advisors	Prof. R. Dillmann (KIT), Prof. K. Yamane (CMU)
Length of Stay	6 months

Name	Daniel KAPPLER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Istituto Italiano di Tecnologia
Type of Thesis	Diploma Thesis
Subject/Title	Robotics, Brain and Cognitive Systems
Advisors	Prof. R. Dillmann (KIT), Prof. G. Sandini (IIT)
Length of Stay	6 months

2011/2012

Name	Armagan KILIC
Nationality	Turkish
Field of Study	Computer Science (Master)
Bachelor's Degree	Good
Host University	University of Southern California
Type of Thesis	Master Thesis
Subject/Title	Modeling Software Architecture
Advisors	Prof. R. Reussner (KIT), Prof. N. Medvidovic (USC)
Length of Stay	6 months

Name	Narine KOKHLIKYAN
Nationality	Armenian
Field of Study	Computer Science (Master)
Master's Degree	Excellent
Host University	Carnegie Mellon University - Silicon Valley Campus
Type of Thesis	Master Thesis
Subject/Title	Machine Learning / Translation
Advisors	Prof. A. Waibel (KIT), Dr. Joy Ying Zhang (CMU)
Length of Stay	6 months

Name	Dominik MESSINGER
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Software Engineering
Advisors	Prof. H. Reussner (KIT), Dr. G. Lewis (CMU)
Length of Stay	4 months

Name	Till NEUDECKER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Wireless Vehicle Networks
Advisors	Prof. H. Hartenstein (KIT), Prof. P. Steenkiste (CMU)
Length of Stay	4 months

Name	Davied OERTEL
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Energy Network Enhancement and Stability
Advisors	Prof. D. Wagner (KIT), Prof. R. Ravi (CMU)
Length of Stay	6 months

Name	Emil RAGADJIEV
Nationality	Hungarian
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Parallel Processing
Advisors	Prof. W. Tichy (KIT), Dr. J. Lopez (CMU)
Length of Stay	6 months

2011/2012

Name	Markus ROTH
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	University of Southern California
Type of Thesis	Student Research Paper
Subject/Title	Computer Vision
Advisors	Prof. R. Stiefelwagen (KIT), Prof. R. Nevatia (USC)
Length of Stay	4 months

Name	Matthias SPERBER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Nara Institute of Science and Technology
Type of Thesis	Student Research Paper
Subject/Title	Methods for Speaker Adaption
Advisors	Prof. A. Waibel (KIT), Prof. S. Nakamura (NAIST)
Length of Stay	6 months

Name	Henning SPERR
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Waseda University
Type of Thesis	Student Research Paper
Subject/Title	Machine Translation
Advisors	Prof. A. Waibel (KIT), Prof. T. Koboyashi (WASEDA)
Length of Stay	4 months

Name	René WEINERT
Nationality	German
Field of Study	Information Technology (Master)
Bachelor's Degree	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Master Thesis
Subject/Title	Trade-Off Analysis of Cloud Systems
Advisors	Prof. St. Tai (KIT), Dr. Metze (CMU)
Length of Stay	6 months

Name	Ge WU
Nationality	Chinese
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Language Recognition
Advisors	Prof. A. Waibel (KIT), Dr. F. Metze (CMU)
Length of Stay	4 months

interAct Scholarship Holders 2010/2011

**Brillout, Roumald | Herzog, Alexander | Kaiser, Peter | Karich, Georg | Kolkhorst, Henrich
Märgner, Paul | Posselt, Markus | Revfi, Marcel | Tuga, Michele | Weiner, Jochen**

Name	Roumald BRILLOUT
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Dynamic Logic
Advisors	Prof. P. Schmitt (KIT), Prof. A. Platzer (CMU)
Length of Stay	6 months

Name	Alexander HERZOG
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	University of Southern California
Type of Thesis	Diploma Thesis
Subject/Title	Robotics in the Field of Grasp Planning
Advisors	Prof. R. Dillmann (KIT), Prof. St. Schaal (USC)
Length of Stay	8 months

Name	Peter KAISER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Motion Planning Under Constraints for Service Robots and Humanoid Robots
Advisors	Prof. R. Dillmann (KIT), Prof. S. Srinivasa (CMU)
Length of Stay	4 months

Name	Georg KARICH
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	University of Southern California
Type of Thesis	Diploma Thesis
Subject/Title	Motor Primitives
Advisors	Prof. R. Dillmann (KIT), Prof. St. Schaal (USC)
Length of Stay	8 months

Name	Henrich KOLKHORST
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Speech Recognition and Speech Processing
Advisors	Prof. A. Waibel (KIT), Dr. F. Metze (CMU)
Length of Stay	4 months

Name	Paul MÄRGNER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Lecture Translation
Advisors	Prof. A. Waibel (KIT), Dr. M. Eck (CMU)
Length of Stay	8 months

2010/2011

Name	Markus Posselt
Nationality	German
Field of Study	Information Technology
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	CMMI-SVC in High-Growth IT Service Companies
Advisors	Prof. A. Oberweis (KIT), Prof. R. Kneuper (CMU)
Length of Stay	8 months

Name	Marcel REVFI
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Human Motion Capture
Advisors	Prof. R. Dillmann (KIT), Prof. K. Yamane (CMU)
Length of Stay	4 months

Name	Michele TUGA
Nationality	German
Field of Study	Mechanical Engineer
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Improving Feedforward Control of a Force-Controlled Hydraulic Humanoid Robot
Advisors	Prof. R. Dillmann (KIT), Prof. Ch. Atkeson (CMU)
Length of Stay	6 months

Name	Jochen WEINER
Nationality	German
Field of Study	Computer Science (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Code Switching
Advisors	Prof. T. Schultz (KIT), Prof. F. Metze (CMU)
Length of Stay	4 months

interAct Scholarship Holders 2009/2010

Bossert, Til | Dan, Luo | Franke, Robert | Fuchs, Fabian | Hofman, Lisa-Marie | Jiang, Feijun
 Lichtenstein, Thomas | Mohr, Manuel | Nguyen, Thanh Le | Semen, Kivanc | Vogelgesang, Matthias

Name	Till BOSSERT
Nationality	German
Field of Study	Business Engineering
Intermediate Diploma	Good
Host University	Hong Kong University of Science and Technology
Type of Thesis	Diploma Thesis
Subject/Title	Strategies for Supplier Management
Advisors	Prof. G. Lanza (UKA), Dr. D. Ender (HKUST)
Length of Stay	6 months

Name	Luo DAN
Nationality	Chinese
Field of Study	Computer Science
Host University	Karlsruhe Institute for Technology
Type of Thesis	Doctoral Thesis
Subject/Title	Human Gesture Understanding for Human Computer Interaction
Advisors	Prof. R. Stiefelhagen (KIT), Prof. J. Ohya (WASEDA)
Length of Stay	12 months

Name	Robert FRANKE
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Waseda University
Type of Thesis	Diploma Thesis
Subject/Title	Speech Recognition and the Dialog Between Human Robots or Speech Synthesis
Advisors	Prof. A. Waibel (UKA), Prof. T. Kobayashi (WASEDA)
Length of Stay	6 months

Name	Fabian FUCHS
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Algorithmics in Route Planning
Advisors	Prof. D. Wagner (UKA), Dr. G. Nannicini (CMU)
Length of Stay	4 months

Name	Lisa-Marie HOFMANN
Nationality	German
Field of Study	Business Engineering
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Trust Architectures - Reputation Systems for Computer Networks
Advisors	Prof. H. Schmeck (KIT), Prof. K. Sycara (CMU)
Length of Stay	8 months

Name	Feijun JIANG
Nationality	Chinese
Field of Study	Electrical Engineering and Information Technology
Host University	Karlsruhe Institute of Technology
Type of Thesis	Doctoral Thesis
Subject/Title	Integrating Multiple Visual Cues for Face Detection and Recognition
Advisors	Prof. R. Stiefelhagen (KIT), Prof. B. Shi (HKUST)
Length of Stay	4 months

2009/2010

Name	Thomas LICHTENSTEIN
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Peer-to-Peer and the World Wide Web
Advisors	Prof. W. Juling (KIT), Dr. S. Seshan (CMU)
Length of Stay	4 months

Name	Manuel MOHR
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Concurrency - Programming Languages
Advisors	Prof. G. Snelting (KIT), Prof. J. Alderich (CMU)
Length of Stay	8 months

Name	Than Le NGUYEN
Nationality	Czech
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University - Silicon Valley Campus
Type of Thesis	Diploma Thesis
Subject/Title	Probabilistic Inertial Navigation
Advisors	Prof. R. Studer (KIT), Prof. M. Griss (CMU)
Length of Stay	8 months

Name	Kivanc SEMEN
Nationality	Turkish
Field of Study	Information Technology (Bachelor)
Host University	Carnegie Mellon University
Type of Thesis	Bachelor Thesis
Subject/Title	Software Engineering
Advisors	Prof. A. Oberweis (KIT), Dr. M. Paulk (CMU)
Length of Stay	4 months

Name	Matthias VOGELGESANG
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Parallelization of a Linguistic Model on a Cluster
Advisors	Prof. W. Tichy (KIT), Prof. S. Srinivasa (CMU)
Length of Stay	8 months

interAct Scholarship Holders 2008/2009

**Borek, Alexander | Friedberger, Simon | Fritz, Alexander | Gebhardt, Jan | Herrmann, Martin
 Hildebrand, Silja | Kappler, Daniel | Meng, Johannes | Siebler, Clemens | Telaar, Dominic
 Ultes, Stefan | Vahrenkamp, Nikolaus**

Name	Alexander BOREK
Nationality	German
Field of Study	Information Technology
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Peer-to-Peer Networks and eMarkets
Advisors	Prof. R. Studer (UKA), Dr. B. McLaren (CMU)
Length of Stay	8 months

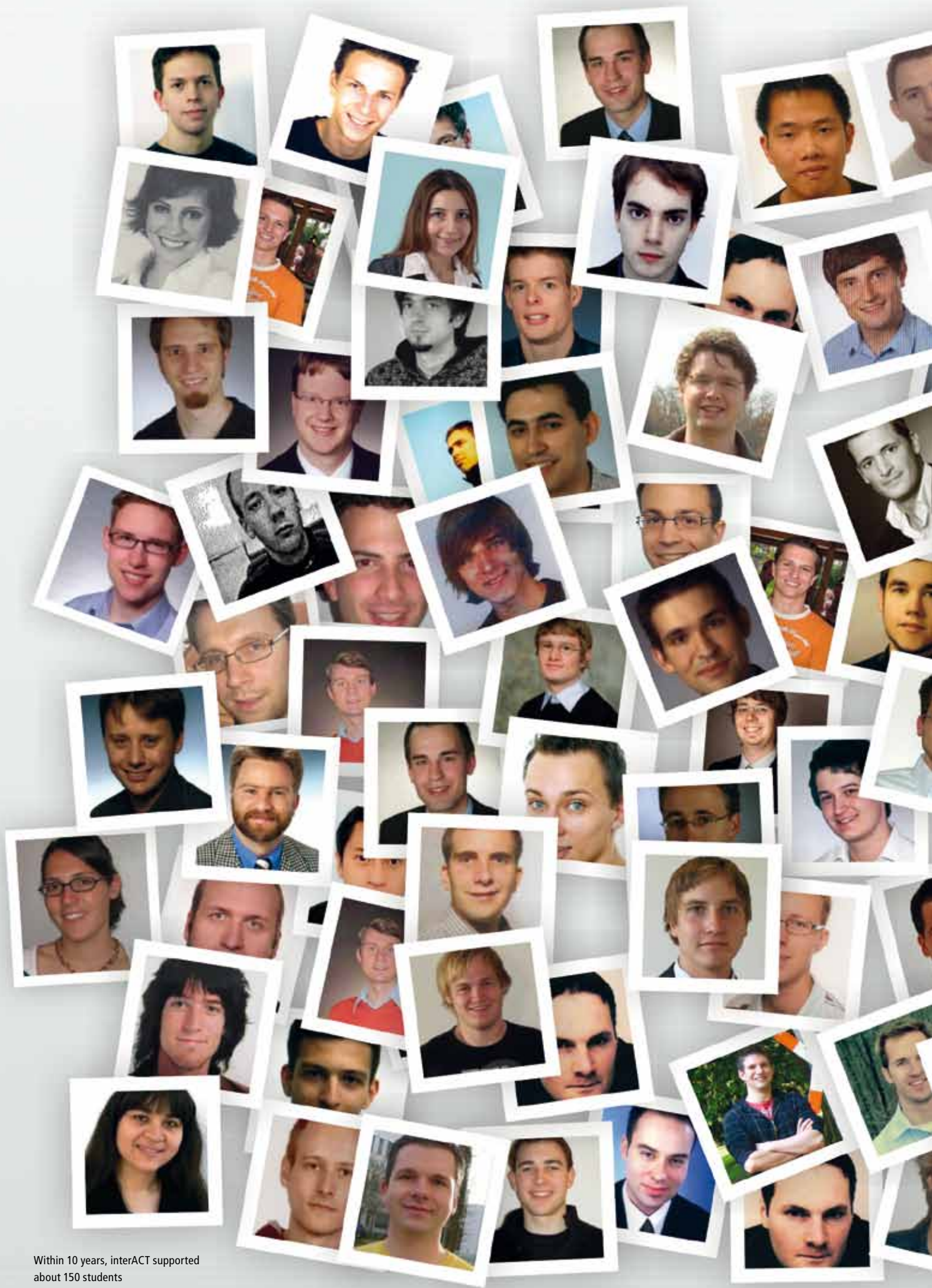
Name	Simon FRIEDBERGER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Food Recognition
Advisors	Prof. A. Waibel (UKA), Dr. J. Young (CMU)
Length of Stay	7 months

Name	Alexander FRITZ
Nationality	German
Field of Study	Information Technology (Bachelor)
Host University	Hong Kong University of Science and Technology
Type of Thesis	Bachelor Thesis
Subject/Title	Agent-Based Learning Classifier System and a Java Implementation for a Cleaning Robot Simulation
Advisors	Prof. H. Schmeck (UKA), Prof. J. Kwok (HKUST)
Length of Stay	6 months

Name	Jan GEBHARDT
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Honk Kong University of Science and Technology
Type of Thesis	Diploma Thesis
Subject/Title	Multilingual Speech Processing
Advisors	Prof. T. Schultz (UKA), Prof. P. Fung (HKUST)
Length of Stay	6 months

Name	Martin HERRMANN
Nationality	German
Field of Study	Electrical Engineering and Information Technology
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Signal Processing and Image Processing
Advisors	Prof. U. Hanebeck (UKA), Prof. K. Sycara (CMU)
Length of Stay	8 months

Name	Silja HILDEBRAND
Nationality	German
Field of Study	Computer Science
Diploma	Excellent
Host University	University of Karlsruhe
Type of Thesis	Doctoral Thesis
Subject/Title	Self Assessment of Automatic Machine Translation Systems
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	6 months



Within 10 years, interACT supported about 150 students



2008/2009

Name	Daniel KAPPLER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Generic Preparation for Human Inspired Grasping
Advisors	Prof. R. Dillmann (UKA), Prof. N. Pollard (CMU)
Length of Stay	4 months

Name	Johannes MENG
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Local Discriminant Features of Laser Range Data for Localization in Dynamic
Advisors	Prof. R. Dillmann (UKA), Prof. M. Hebert (CMU)
Length of Stay	4 months

Name	Clemens SIEBLER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Visual Perception
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	6 months

Name	Dominic TELAAR
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Hong Kong University of Science and Technology
Type of Thesis	Student Research Paper
Subject/Title	Speech Recognition and Summarization
Advisors	Prof. T. Schultz (UKA), Prof. P. Fung (HKUST)
Length of Stay	4 months

Name	Stefan ULTES
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Machine Learning
Advisors	Prof. R. Dillmann (UKA), Prof. Ch. Atkeson (CMU)
Length of Stay	8 months

Name	Nikolaus VAHRENKAMP
Nationality	German
Field of Study	Computer Science
Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Doctoral Thesis
Subject/Title	Sampling-based Motion Planning With Rapidly Exploring Random Trees (RRT)
Advisors	Prof. R. Dillmann (UKA), Prof. J. Kuffner (CMU)
Length of Stay	2 months

interAct Scholarship Holders 2007/2008

Armbruster, Patrick | Bäuml, Martin | Blaicher, Fabian | Burgmer, Christoph | Gärtner, Stefan
 Greiner, Simon | Kraus, Franziska | Kröhnert, Manfred | Messmer, Felix | Morlock, Daniel
 Porbadnigk, Anne | Schaaf, Kristina | Schick, Alexander | Schmitzer, Mark | Schneider, Christoph
 Szasz-Toth, Lorant | Wenzel, Frédéric

Name	Patrick ARMBRUSTER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Implementing and Evaluating an Innovative Application for the Visualization of Experiments in Wireless Sensor-Actor Networks
Advisors	Prof. H. Hartenstein (UKA), Prof. P. Steenkiste (CMU)
Length of Stay	4 months

Name	Martin BÄUML
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Pattern Recognition, Image Processing
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	4 months

Name	Fabian BLAICHER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Image Processing
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	3 months

Name	Christoph BURGMER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Hong Kong University of Science and Technology
Type of Thesis	Diploma Thesis
Subject/Title	Code-Switching in Speech Recognition
Advisors	Prof. T. Schultz (UKA), Prof. P. Fung (HKUST)
Length of Stay	8 months

Name	Stefan GÄRTNER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Human Motion Capture
Advisors	Prof. R. Dillmann (UKA), Prof. J. K. Hodgins (CMU)
Length of Stay	8 months

Name	Simon GREINER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	People Tracking or Pedestrian Detection from a Moving Vehicle
Advisors	Prof. R. Stiefelhagen (UKA), Dr. J. Yang (CMU)
Length of Stay	4 months

2007/2008

Name	Franziska KRAUS
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Computer Vision
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	4 months

Name	Manfred KRÖHNERT
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Motion Planning for Humanoid Robots
Advisors	Prof. R. Dillmann (UKA), Prof. J. Kuffner (CMU)
Length of Stay	4 months

Name	Felix MESSMER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Motion Planning for Humanoid Robots
Advisors	Prof. R. Dillmann (UKA), Prof. J. Kuffner (CMU)
Length of Stay	4 months

Name	Daniel MORLOCK
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Visual Perception
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	4 months

Name	Anne PORBADNIGK
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Cognitive Architecture
Advisors	Prof. R. Dillmann (UKA), Prof. Anderson (CMU)
Length of Stay	8 months

Name	Kristina SCHAAF
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Speech Recognition
Advisors	Prof. A. Waibel (UKA), Prof. T. Schultz (CMU)
Length of Stay	4 months

Name	Alexander SCHICK
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Hand-Tracking as Basis for Gesture Recognition in Humans - Machine Context
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	4 months

Name	Marc SCHMITZER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Parallel Computing
Advisors	Prof. R. Vollmar (UKA), Prof. K. Sutner (CMU)
Length of Stay	4 months

Name	Christoph SCHNEIDER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Speech Translation
Advisors	Prof. J. Kuffner (CMU)
Length of Stay	4 months

Name	Lorent SZASZ-TOTH
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Learning Based Object Detection and Recognition Methods
Advisors	Dr. H. Ekenel (UKA), Dr. J. Yang (CMU)
Length of Stay	6 months

Name	Frédéric WENZEL
Nationality	German
Field of Study	Information Technology
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Modelling Distributed Workflows
Advisors	Prof. W. Juling (UKA), Dr. Dennis Smith (CMU)
Length of Stay	8 months

2006/2007

interAct Scholarship Holders 2006/2007

Bracht, Matthias | Helaoui, Rim | Ionescu, Catalin | Lang, Steffen | Scheurer, Christian | Schläfer, Nico
 Stoimenov, Emilian | Stolle, Martin

Name	Matthias BRACHT
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Basic Travel Expression Corpus
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	3 months

Name	Rim HELAOUI
Nationality	Tunesian
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Machine Learning and Machine Translation Arabic
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	5 months

Name	Catalin IONESCU
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Probabilistic Model Checking
Advisors	Prof. P. Schmitt (UKA), Prof. E. Clarke (CMU)
Length of Stay	8 months

Name	Steffen LANG
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Protein Domain Decomposition Using Spectral Graph Partitioning
Advisors	Prof. D. Wagner (UKA), Prof. G. Miller (CMU)
Length of Stay	6 months

Name	Christian SCHEURER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Manipulation, Mobile Robotics, Motion Planning
Advisors	Prof. R. Dillmann (UKA), Prof. J. Kuffner (CMU)
Length of Stay	7 months

Name	Nico SCHLÄFER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Deploying Semantic Resources for Open Domain Question Answering
Advisors	Prof. A. Waibel (UKA), Prof. E. Nyberg (CMU)
Length of Stay	8 months

Name	Emilian STOIMENOV
Nationality	Bulgarian
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Speech Recognition
Advisors	Prof. A. Waibel (UKA), Prof. T. Schultz (CMU)
Length of Stay	6 months

Name	Martin STOLLE
Nationality	German
Field of Study	Computer Science
Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Doctoral Thesis
Subject/Title	Machine Learning and Controls
Advisors	Prof. R. Dillmann (UKA), Prof. Ch. Atkeson (CMU)
Length of Stay	3 months

2005/2006

interAct Scholarship Holders 2005/2006

Borgi, Irmen | Callies, Jan Peter | Faubel, Friedrich | Gautam, Nimish | Gehrig, Dirk | Goebel, Christoph
 Heger, Dominic | Hetzer, Moritz | Niehues, Jan | Pastor, Peter | Prommer, Thomas | Raab, Martin
 Rottmann, Kay | Schamburek, Jan Ullrich | Schmid, Andreas | Wand, Michael | Wester, Marek
 Zollmann, Andreas

Name	Irmen BORGI
Nationality	Tunesian
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Using Cooperation and Communication to Improve the Performance of a 2-Robot
Advisors	Prof. R. Dillmann (UKA), Prof. J. Dolan (CMU)
Length of Stay	5 months

Name	Jan Peter CALLIES
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	EEG- Signal Classification Using Machine Learning Methods
Advisors	Prof. A. Waibel (UKA), Prof. T. Schultz (CMU)
Length of Stay	4 months

Name	Friedrich FAUBEL
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Particle Filter for Suppression of Background Noise in Speech Recognition
Advisors	Prof. A. Waibel (UKA), Dr. K. Laskowski (CMU)
Length of Stay	5 months

Name	Nimish GAUTAM
Host University	Carnegie Mellon University
Type of Thesis	Doctoral Thesis
Subject/Title	Recording and Alignment Modus for Statistical Machine Translation
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	4 months

Name	Dirk GEHRIG
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Comparison of Methods for the Selection of Subfunctions when Evaluating Gauss Mixture Distributions in Language Recognition
Advisors	Prof. A. Waibel (UKA), Dr. Th. Schaaf (CMU)
Length of Stay	4 months

Name	Christoph GOEBEL
Nationality	German
Field of Study	Information Technology
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Economic Incentives for Secure BGP Adoption
Advisors	Prof. Ch. Weinhardt (UKA), Prof. R. Krishnan (CMU)
Length of Stay	7 months

2005/2006

Name	Dominic HEGER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Speech Feature Enhancement Using Particle Filters with Class-Based Phoneme Models
Advisors	Prof. A. Waibel (UKA), Dr. K. Laskowski (CMU)
Length of Stay	3 months

Name	Moritz HETZER
Nationality	German
Field of Study	Information Technology
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Pricing Web Services
Advisors	Prof. R. Studer (UKA), Prof. K. Sycara (CMU)
Length of Stay	4 months

Name	Jan NIEHUES
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Machine Translation
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	6 months

Name	Peter PASTOR
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Autonomous Assembly by Team of Coordinated Robots
Advisors	Prof. R. Dillmann (UKA), Prof. R. Simmons (CMU)
Length of Stay	6 months

Name	Thomas PROMMER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Reinforcement Learning and its Application to Dialogue Systems
Advisors	Prof. A. Waibel (UKA), Dr. Th. Schaaf (CMU)
Length of Stay	8 months

Name	Martin RAAB
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Language Modeling Techniques for Statistical Machine Translation
Advisors	Dr. St. Vogel (UKA), Matthias Eck (CMU)
Length of Stay	6 months

Name	Kay ROTTMANN
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Object Recognition
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	6 months

2005/2006

Name	Jan Ullrich SCHAMBUREK
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Sensor-supported Motion Planning and Motion Control for Humanoid Robots
Advisors	Prof. R. Dillmann (UKA), Prof. J. Kuffner (CMU)
Length of Stay	7 months

Name	Andreas SCHMID
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Web-Engineering
Advisors	Prof. W. Juling (UKA), Prof. E. Nyberg (CMU)
Length of Stay	6 months

Name	Michael WAND
Nationality	German
Field of Study	Mathematics
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Wavelet-based Preprocessing of EEG and EMG Signals
Advisors	Prof. A. Waibel (UKA), Prof. T. Schultz (CMU)
Length of Stay	3 months

Name	Marek WESTER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Unspoken Speech - Speech Recognition Based on Electroencephalography
Advisors	Prof. A. Waibel (UKA), Dr. Th. Schaaf (CMU)
Length of Stay	8 months

Name	Andreas ZOLLMANN
Nationality	German
Host University	University of Karlsruhe
Type of Thesis	Doctoral Thesis
Subject/Title	Syntax Based Statistical Machine Translation
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	3 months

interAct Scholarship Holders 2004/2005

Bernreuther, Dietmar | Bertram, Dominik | Holzapfel, Hartwig | Kraft, Florian | Liebelt, Jörg
 Padberg, Frank | Schuster, Andreas | Steinbach, Klaus | Walliczek, Matthias

Name	Dietmar BERNREUTHER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Statistical Machine Translation
Advisors	Prof. A. Waibel (UKA), Dr. St. Vogel (CMU)
Length of Stay	8 months

Name	Dominik BERTRAM
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Service Robots and Humanoid Robots
Advisors	Prof. R. Dillmann (UKA), Prof. J. Kuffner (CMU)
Length of Stay	4 months

Name	Hartwig HOLZAPFEL
Nationality	German
Field of Study	Computer Science
Diploma	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Doctoral Thesis
Subject/Title	Cognitive Models for Dialog Processing
Advisors	Prof. A. Waibel (KIT), Dr. Th. Schaaf (CMU)
Length of Stay	6 months

Name	Florian KRAFT
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Continuous Audio Object Recognition
Advisors	Prof. A. Waibel (UKA), Prof. T. Schultz (CMU)
Length of Stay	6 months

Name	Jörg LIEBELT
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Image Understanding and Analysis of Social Interactions in AG Care Media
Advisors	Prof. A. Waibel (UKA), Dr. J. Yang (CMU)
Length of Stay	6 months

Name	Dr. -Ing. Frank PADBERG
Nationality	German
Field of Study	Mathematics
Doctoral Degree	Excellent
Host University	Carnegie Mellon University
Type of Thesis	Post-doc Research
Subject/Title	Software Engineering
Advisors	Prof. W. Tichy (UKA), Prof. J. Herbsleb (CMU)
Length of Stay	6 months

2004/2005

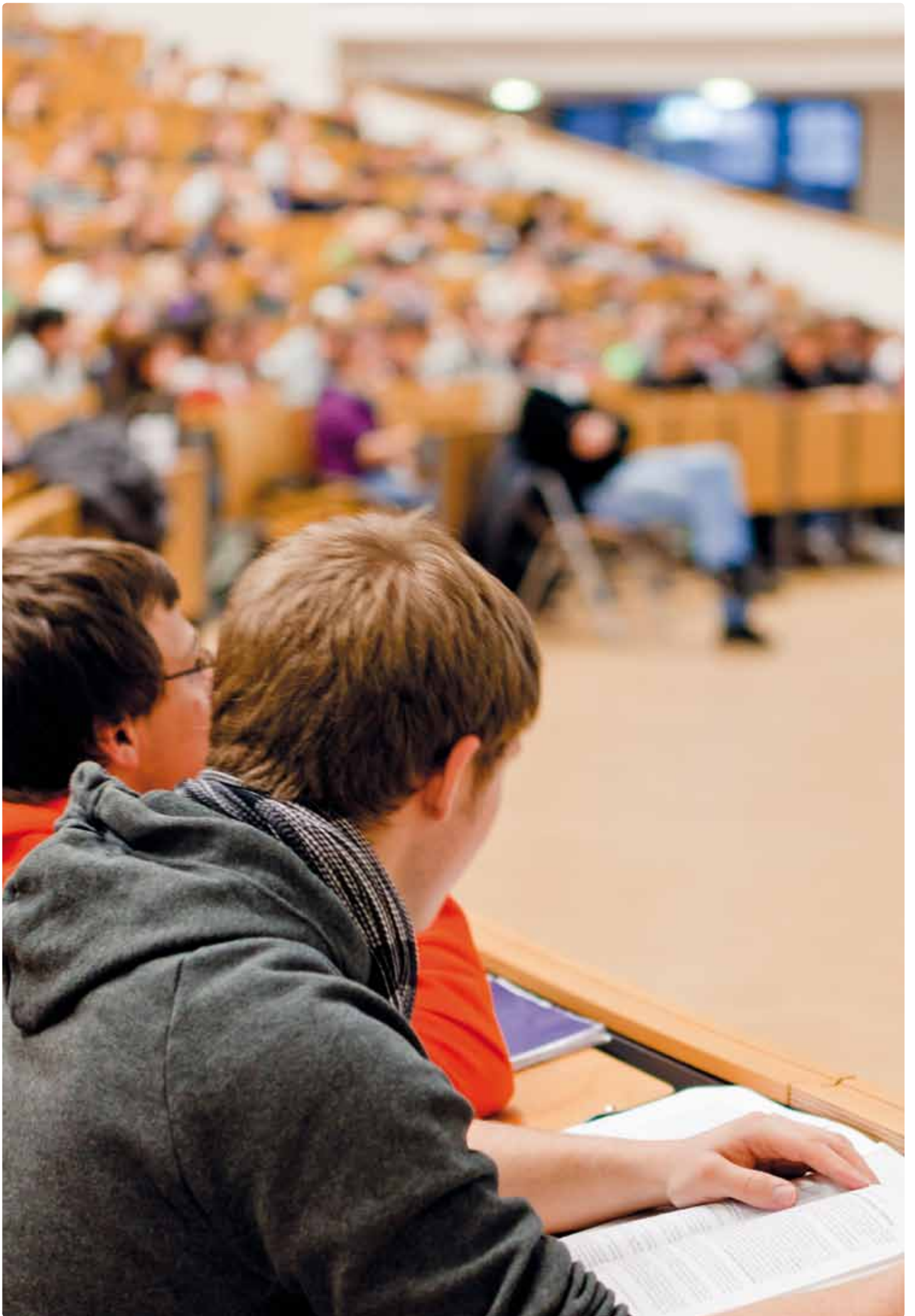
Name	Andreas SCHUSTER
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Connecting External Document Archives to FreeSoDa
Advisors	Prof. W. Tichy (UKA), Prof. J. Herbsleb (CMU)
Length of Stay	3 months

Name	Klaus STEINBACH
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Good
Host University	Carnegie Mellon University
Type of Thesis	Diploma Thesis
Subject/Title	Service Robots and Humanoid Robots
Advisors	Prof. R. Dillmann (UKA), Prof. J. Herbsleb (CMU)
Length of Stay	6 months

Name	Matthias WALLICZEK
Nationality	German
Field of Study	Computer Science
Intermediate Diploma	Average
Host University	Carnegie Mellon University
Type of Thesis	Student Research Paper
Subject/Title	Speaker Localization for Humanoid Robots
Advisors	Prof. A. Waibel (UKA), Dr. Th. Schaaf (CMU)
Length of Stay	4 months



interACT STUDENTS – WHERE ARE THEY TODAY?



interACT Students – Where are they today?

Since 2004, interACT has supported more than 130 students and given them the possibility to work with the best researchers worldwide. interACT continues to keep contact with most of its previous students. Below is an update from selected interACT students.



Nico SCHLAEFER

Carnegie Mellon University, Pittsburgh, PA, USA – 2005

Nico Schlaefer was awarded an interACT scholarship for a student research project at Carnegie Mellon University in 2005. In this project he started working on Question Answering (QA), the task of automatically retrieving answers to natural language questions from large information sources such as the Web. Nico developed the Ephyra QA system, which was used for participations in major QA evaluations and was later released into open source. In 2006, Nico was awarded a second interACT scholarship for his Diploma Thesis, which enabled him to continue his work on the Ephyra system and collaborate with researchers at CMU on new Question Answering algorithms. Nico was admitted to CMU's Ph.D. program in Language and Information Technologies and joined Carnegie Mellon after graduating from KIT in 2007.

While a Ph.D. student at CMU, Nico closely collaborated with a research group at IBM on Watson, a state-of-the-art question answering system that appeared on the Jeopardy! TV show in 2011 and won against the strongest human Jeopardy! contestants. Nico visited IBM Research for summer internships in 2008-2010 and was awarded IBM Ph.D. Fellowships in 2009 and 2010. His contributions to Watson were featured in a 2011 newsmaker interview with Science titled "Schooling the Jeopardy! Champ: Far From Elementary". After receiving his Ph.D. from CMU, Nico joined the hedge fund Citadel, where he is now working as a Quantitative Researcher.



credit "Luke Fisher Photography"

Peter PASTOR

Carnegie Mellon University, Pittsburgh, PA, USA – 2005/2006

Looking back, I have to admit that the interACT scholarship had a very positive impact on my career. In fact, it started my career. During my 6 month stay at CMU in 2005/06, I got a very positive impression on research in robotics. I very much liked the hands on experience as well as working in small research groups that enforce a very focused and tight collaboration.

Motivated by this experience, I decided to conduct my diploma thesis in a similar research environment at USC in Los Angeles. Prof. Asfour greatly supported my application, and I am still thankful for his effort, nevertheless, I am sure that having spend 6 months at CMU positively

influenced my host to agree on my research visit. After defending my thesis in Karlsruhe, I decided to go back to USC to pursue a PhD with the very same advisor that supervised me during my diploma thesis, Prof. Schaal. It turned out to be the best decision I could have made. My time here at USC has been and still is very exciting and very productive. I got the chance to interact with amazing scientists and got my hands on exciting hardware. I also was able to travel to many conferences, including a five month research stay at ATR, Japan, and 2 three month research internships at Willow Garage in the silicon valley. All in all, I am very thankful for the opportunity that I was granted back then.



Jan NIEHUES

Carnegie Mellon University, Pittsburgh, PA, USA – 2005/2006

Due to the support of the interACT scholarship I was able to spend 3 months at the CMU Pittsburgh for writing my bachelor thesis. During my stay I was introduced to the area of machine translation, the topic of my thesis. Furthermore, I had the opportunity to work in an international research team. I enjoyed the direct exchange with several people working in this field. Since then I stayed in touch with the area of machine translation and research at the university. I had the opportunity to go back to CMU Pittsburgh to write part of my diploma thesis in the same area. Afterwards, I started working at the Institute of Prof. Waibel at the Karlsruhe Institute of Technology as a research assistant.

Since I was introduced to the field of machine translation during my interACT scholarship, this field is the main focus point of my professional life.



Manfred KRÖHNERT

Carnegie Mellon University, Pittsburgh, PA, USA – 2007/2008

Early on I developed an interest in robotics sparked by a presentation given at my school by Prof. Dillmann of the University of Karlsruhe. During my studies I was made aware of the interACT scholarship and its offerings. The scholarship provided me with the opportunity to write my student research paper at Carnegie Mellon University in Pittsburgh, USA. My advisor at CMU was Prof. James Kuffner who co-developed the Rapidly exploring

Random Tree algorithm which is widely used for motion planning nowadays. Overall, it was a great experience to visit Pittsburgh and the innovative Robotics Lab at CMU, to apply english as a work language, and to be part of a different work culture. Meeting people outside the university as well as traveling the country helped to gain a better understanding of the American culture.

After returning to the University of Karlsruhe, I decided to specialize on the technical knowledge acquired during my stay abroad by visiting robotics and embedded systems lectures. Additionally, I continued to work as a student research assistant working with the humanoid robot ARMAR-III at the Humanoids and Intelligence Systems Lab (HIS) at KIT. Later on, I wrote my diploma thesis at the same lab where I worked with a pair of legs derived from the iCub robot of the Italian Institute of Technology.

Currently, I am working on my PhD at the High Performance Humanoid Technologies Lab (H2T), KIT, with Prof. Tamim Asfour being my advisor. Usage of resource-aware many-core platforms for humanoid robots is the topic I am investigating in a transregional research project. The previous usage of English as a work language during my stay abroad proves to be invaluable both in terms of communicating with English speaking colleagues as well as writing scientific texts in English.



Anne PORBADNIGK

Carnegie Mellon University, Pittsburgh, PA, USA – 2008

After finishing my diploma thesis at CMU and my degree at KIT, I started pursuing a PhD in Computer Science at the Machine Learning Lab of Berlin Institute of Technology, more precisely the highly interdisciplinary Berlin Brain-Computer Interface group (BCI), working with Prof. Klaus-Robert Müller (machine learning), Prof. Benjamin Blankertz (neurotechnology) and Prof. Gabriel Curio (neurophysiology). In particular, I am developing methods for using brain imaging (electroencephalography, EEG) combined with machine learning techniques for assessing, how the quality of audio and visual signals is perceived by a user on a neural level. For my research, the experience and knowledge gained during my time at CMU proved invaluable, not only by extending my knowledge in cognitive science, neurophysiology and machine learning, but also by teaching me to think and work interdisciplinary.

Inspired by the structured PhD programs at CMU and the Center for the Neural Basis of Cognition there, I applied and was admitted into the graduate school 'Sensory Computation in Neural Systems', which is part of the Bernstein Center for Computation Neuroscience (BCCN) in Berlin. Being part of a graduate school has enabled me to widen my horizon both on a personal and professional level, besides giving me a more structured approach for my PhD research.

On a personal level, the experience I gained while playing for an elite Ultimate Frisbee team in Pittsburgh helped fundamentally in advancing my sports career. After my return to Germany, I started playing for the internationally successful women's club team in Berlin, competing at world club championships 2010, among others. Eventually, I made it into the German women's national team in 2013, winning bronze at European Beach championships the same year.



Johannes ERNESTI

University of Southern California, Los Angeles, CA, USA – 2011

In 2011, I applied for an interACT internship and went to the University of Southern California (USC) for a student research project. Since the results were promising, we decided to derive a paper (title: “Encoding of Periodic and their Transient Motions by a Single Dynamic Movement Primitive”) that we submitted to the Humanoids conference 2012 in Osaka. The paper got accepted and I travelled to Japan to present the results during an oral session. Furthermore, the work was chosen as a candidate for the best paper award of the conference (there were three candidates out of 133 accepted papers). Summarizing, I got in contact with many interesting people and I was able to get a realistic insight how working as a scientist in robotics feels like. All that was only possible due to the interACT internship.



Marcel REVFI

Carnegie Mellon University, Pittsburgh, PA, USA – 2011

With the scholarship from interACT, I got the opportunity to write my student research paper at the Carnegie Mellon University in Pittsburgh. It has been an enabler for deeper research on my interests in cognitive systems and robotics while staying abroad and improving my social as well as my language skills at the same time. I am interested in the automotive industry, as well. This is why I wrote my diploma thesis about vehicle diagnosis, one year later. During this time, I applied my enhanced english skills in business discussions.

Now, as a graduate in computer science, I still want to combine the scientific interests with my automotive affinity by aiming the PhD. In order to facilitate highly autonomous driving and intelligent mobility in the future, it is important to enable vehicles as cognitive systems to speak to each other and to get global information over the internet. Due to the topic of my diploma thesis on the other hand, my field of research will now be the remote diagnosis of connected vehicles.



Daniel KAPPLER

Italian Institute of Technology – 2011/2012

With the help of the interACT scholarship, I did write my Diploma Thesis at the Istituto Italiano di Tecnologia (IIT). IIT is a research institute funded by the Italian government, with its central office at Bolzaneto, a small quarter north of Genoa. A really great aspect of the IIT is that it is a very international oriented research institute with a majority of postdoctoral researchers. In addition, there are several groups working not only on robotics,

but also cognitive science, neuroscience, nanophysics, and nanochemistry. Thus a lot of established researchers of the respective fields are invited to give lectures about their research.

The connection to Giorgio Metta my supervisor at (IIT), was established by Tamim Asfour, my supervisor at the Karlsruhe Institute of Technology (KIT). Giorgio Metta's group is the core developer of the humanoid robotic platform iCup. It was interesting to be part of this lab, attend the iCup demonstrations and learn about the differences of their platform to the humanoid robot ARMAR III from Karlsruhe, as well as the different research approaches, mostly focusing on learning based methods.

Besides the research experience, living in Genoa itself was a personal gain. The old city center is part of the UNESCO World Cultural Heritage and the city is not touristic at all. It is also a very good starting point to explore the North of Italy, including Milan, Florence, Turin, and the region of Liguria. Furthermore, it is a great place for hiking and especially climbing. I am really grateful that the interACT scholarship made this exchange possible and can only encourage anyone to apply to the program.



Michael HECK

Nara Institute of Science and Technology, Nara, Japan – 2012

During my 6-month stay at Nara Institute of Science and Technology (NAIST) in Nara, Japan, I composed my Diploma Thesis under supervision of Prof. Satoshi Nakamura. This exchange gave me the great opportunity to study abroad, write my thesis in a professional research environment at an internationally acclaimed university, and to get deep insights into Japanese culture and every-day life. After graduation I started my PhD studies at KIT and became a research assistant in the Interactive Systems Labs. The past stay at NAIST enabled me to visit the lab of Nakamura-sensei on a regular basis in my position as a visiting researcher. Thus, the initial stay became the starting point for ongoing and future joint research between KIT in Germany and NAIST in Japan.



DISTINGUISHED LECTURE SERIES



interACT organised more than
25 distinguished lectures

DISTINGUISHED LECTURE SERIES

interACT aims at sharing it's scientific know-how between the partners. Therefore, a distinguished lecture series has been organised to disseminate this knowledge to students, researchers and professors. Every year interACT associate professor, Satoshi Nakamura gives a weekly lecture in the field of speech recognition at KIT. Below is a sample of some of the distinguished lectures:



Prof. Tom Mitchel (CMU)



Prof. Stefan Vogel (CMU)



Prof. Chi Mai Luong (VAST)



Prof. Lori Lamel (Centre National de la Recherche Scientifique)



Prof. Alan Black (CMU)



Prof. Peter Steenkiste (CMU)



Prof. Dekai Wu (HKUST)

Dr. Gerasimos Potamianos (IBM Forschungszentrum Yorktown Heights) at UKA, *January 27, 2005*:
"Audio-Visual Speech Recognition"

Dr. Joachim Neumann (Universitat Politècnica de Catalunya (UPC) at UKA, *January 28, 2005*:
"Hearing Aid Fitting"

Prof. Alan Black (CMU) at the University of Karlsruhe, *June 6, 2005*:
"Building Synthetic Voices in Languages You Don't Know"

Prof. Katsu Ikeuchi (Tokyo Institute of Technology) at the University of Karlsruhe, *June 7, 2005*:
"Making Humanoid Robots Dance By Using the Programming-by-Demonstration Paradigm "

Prof. Tom Mitchel (CMU) at the University of Karlsruhe, *June 24, 2005*:
"Lecture on Machine Learning and Brain Imaging"

Prof. Aytul Ercil (Sabanci University in Istanbul, Turkey) at UKA, *July 7, 2005*:

“Sabanci University and the SPICE Project”

Prof. Satoshi Nakamura (ATR, Japan) at UKA, *July 20, 2005*:

“Speech-to-Speech-Translation”

Prof. Christof Weinhardt (UKA) at CMU, *September 30, 2005*:

“Process Engineering”

Prof. Lori Lamel (Centre National de la Recherche Scientifique) at UKA, *December 9, 2005*:

“Natural Language Processing at LIMSI”

Prof. Mari Ostendorf, University of Washington

did a research stay at interACT Karlsruhe from August 2005 until June 2006

Prof. D. Wagner (KIT) at CMU, *June 13, 2007*:

“Theoretical Informatics ”

Prof. Alan Black (CMU) at UKA, *June 15, 2007*:

“Making Synthetic Speech Output as Natural, Flexible, and Efficient as Human Speech”

Prof. Dekai Wu (HKUST) at UKA, *July 4, 2007*:

“Cognitive Systems”

Prof. Dekai Wu (HKUST) at UKA, *July 5, 2007*:

“Does Statistical Machine Translation need Syntax or Semantics”

Prof. Pascale Fung (HKUST) at UKA, *July 7, 2007*:

“What You Say and How You Say It: Acoustic and Linguistic Features in Lecture Speech Summarization”

Prof. Stefan Vogel (CMU) at HKUST, *September 18, 2008*:

“Statistical Machine Translation at CMU”

Prof. Peter Steenkiste (CMU) at KIT, *January 13, 2009*:

“A Wireless Tested Based On Signal Propagation Emulation and its Application to Wireless Network Optimization”

Prof. David Israel (Artificial Intelligence Center SRI) at KIT, *June 25, 2009*:

“Integrated Learning in the Wild: Some Lessons from the CALO Project. ”

Dr. Chiori Hori (NICT) at KIT, *July 13, 2011*:

“The MASTAR project”

Prof. Justus Roux (University of Stellenbosch, South Afrika) at KIT, *November 10, 2011*:

“Speech Translation and African Languages”

Prof. Jaime Carbonell (CMU) at KIT, *June 12, 2012*:
“Proactive Machine Learning and its Application”

Prof. Chi Mai Luong (Vietnamese Academy of Science and Technology), *June 13, 2012*:
“Development of Vietnamese-English Speech-to-Speech Translation, Towards National ICT Program 2011-2015 ”

Prof. Manuela Veloso (CMU) at KIT, *June 26, 2012*:
“Symbiotic Autonomy for Effective Service Robots”

Prof. Randy Bryant (CMU) at KIT, *October 24, 2012*:
“Data-Intensive Scalable Computing”

Prof. Alex Fraser (Ludwig-Maximilians-Universität München) at KIT, *July 10, 2013*:
“Improving Translation to Morphologically Rich Languages”

Sample of some of the abstracts



Prof. Jaime Carbonell (CMU) at KIT, *June 12, 2012*:
“PROACTIVE MACHINE LEARNING AND ITS APPLICATION”

We are in the golden age of statistical machine learning, with new powerful methods proliferating and an ever increasing array of useful applications. However, the bottleneck to applying machine learning to many practical problems is the paucity of accurately labeled training data and the cost in time and money to obtain human expert judgments or conduct definitive experiments. Active learning strives to find the most informative instances to label by an external “oracle”, but to achieve widespread practicality we must do more, i.e.: cope with multiple external information sources (experts, crowds, experiments, observations, etc.), estimate their reliability, their availability and their cost, and jointly optimize selections of instances and sources of expertise in an amortized setting to maximize learning in any given time horizon.

This joint optimization process is called Proactive Learning; we discuss how to do it for increasingly complex cases. Then we touch on several applications, including crowd source learning for machine translation, wind turbine farm optimization, and proteomic analysis.



Prof. Manuela Veloso (CMU) at KIT, *June 26, 2012:*

“SYMBIOTIC AUTONOMY FOR EFFECTIVE SERVICE ROBOTS”

We envision ubiquitous autonomous mobile robots that can help and cohabitate with humans performing tasks to service humans. Such robots are still far from common, as our environments offer great challenges to robust robot perception, cognition, and action. In this talk, I present a significant step to move us closer to our ultimate goal, namely our novel symbi-

otic autonomy: robots are aware of their limitations and proactively ask for help from humans or access the web. Such symbiotic autonomy has enabled our CoBot robots to move daily in our multifloor buildings performing a variety of service tasks, including escorting visitors and transporting packages between locations. I will describe CoBot’s fully autonomous effective mobile robot indoor localization and navigation algorithms, its human centered task planning, and its symbiotic interaction with the humans and with the internet. I will further introduce the multirobot task scheduling algorithm for our multiple CoBots, discuss CoBot’s semi autonomous telepresence behavior, and describe our ongoing research on grounding of speech and language for the robot interaction with users. The talk will be illustrated with results and examples from many hours long runs of the robots in our buildings. This is joint work with Joydeep Biswas, Brian Coltin, Stephanie Rosenthal, and Thomas Kollar.



Prof. Randy Bryant (CMU) at KIT, *October 24, 2012:*

“DATA-INTENSIVE SCALABLE COMPUTING”

Web search engines have become fixtures in our society, but few people realize that they are actually publicly accessible, massive computing systems, where a single query can unleash the power of several hundred processors operating on a data set of over 200 terabytes. With Internet search, computing has risen to entirely new levels of scale, especially in terms of the sizes of the data sets involved. Google and its competitors have created

a new class of large scale computer systems, which we label “Data Intensive Scalable Computer” (DISC) systems. DISC systems differ from conventional supercomputers in their focus on data: they acquire and maintain continually changing data sets, in addition to performing large scale computations over the data. DISC points the way to new ways of organizing large scale computing systems to be more robust, scalable, and cost effective than are current high performance computing systems. Programs for DISC systems must be written in ways that allows them to be executed in a loosely coupled asynchronous environment, such as the Map/Reduce framework pioneered by Google. Although Map/Reduce has surprisingly broad applicability, a richer set of programming languages and models is required to realize the full potential of DISC.



interACT SUMMER ACADEMIES AND WORKSHOPS



interACT Summer Academies and Workshops

Research workshops and academies with a cross-institutional and cross-national emphasis are also part of interACT's mission to achieve strong research collaboration and significant results among the faculty, students and staff.

interACT organises international summer academies on various topics. These events encourage researchers and students to work together in an international environment. Over the past years, participants have explored and discussed creative approaches and new ideas.

interACT organised six summer academies:

- Simultaneous Speech Translation of Fluent Speech, France, 2011
- Multilingual Language Recognition and Machine Translation, HKUST, 2008
- Chinese-English Language Recognition and Speech Translation, UKA, 2007
- Image Processing, France, 2006
- Speech-to-Speech-Translation and Evaluation, CMU, 2005
- Summarization of Spoken Language, Pittsburgh & Tokyo, 2004



Left: Summer School 2004: Prof. Waibel (left) and Prof. Furui

Right above: Prof. Furui, Tokyo Institute of Technology, holding a lecture at the summer school 2004

Right middle: Kai Nickel, KIT, during his summer school lecture 2006

Right below: Prof. Kevin Knight, University of Southern California giving a lecture at the summer school 2004



The International Workshop on Spoken Language Translation (IWSLT) is a yearly scientific workshop associated with an open evaluation campaign on spoken language translation where both scientific papers and system descriptions are presented. This international evaluation and workshop was mainly invented by the interACT partners and is still strongly supported by them. The interACT director Prof. Alex Waibel is the workshop and steering committee chair. Further members of the steering committee are Satoshi Nakamura (interACT associate director at NAIST), Chiori Hori (interACT associate director at NICT) and Dekai Wu (HKUST). Members from KIT and CMU play important roles in organising the workshop as they are chairs of the evaluation campaign, program chair or local chair.

- IWSLT 2013, 05-06 Dec. 2013 – Heidelberg, Germany
- IWSLT 2012, 05-06 Dec. 2012 – Hong Kong, China
- IWSLT 2011, 08-09 Dec. 2011 – San Francisco, USA
- IWSLT 2010, 02-03 Dec. 2010 – Paris, France
- IWSLT 2009, 01-02 Dec. 2009 – Tokyo, Japan
- IWSLT 2008, 20-21 Oct. 2008 – Honolulu, USA
- IWSLT 2007, 15-16 Oct. 2007 – Trento, Italy
- IWSLT 2006, 27-28 Nov. 2006 – Kyoto, Japan
- IWSLT 2005, 24-25 Oct. 2005 – Pittsburgh, USA
- IWSLT 2004, 30 Sep. - 1 Oct. 2004 – Kyoto, Japan



Above left: The 10th IWSLT took place in the old castle of Heidelberg

Above right: Participants in IWSLT 2013, Heidelberg

Below left: interACT partners at IWSLT 2012 in Hong Kong

Below middle: interACT Steering Committee with interACT partners D. Wu (HKUST, left), A. Waibel (CMU&KIT middle) and S. Nakamura (NAIST, right)

Below right: Susanne Altenberg, European Parliament giving a key note at IWSLT 2013



interACT DIRECTOR AND ASSOCIATE DIRECTORS

interACT Director and Associate Directors

The collaborative center follows local organizational principles at the eight institutions and operates in a collaborative manner. The director of interACT is Prof. Alex Waibel. Each partner appointed an associate director. The center has an Advisory Board that reviews and oversees the collaborative venture. All partners maintain interACT-offices. They serve as a contact point for researchers and students wishing to do research in the other countries or institutions.

interACT Director – Prof. Alexander Waibel



Prof. Alex Waibel

Carnegie Mellon University
Interactive Systems Labs
407, S. Craig Street
Pittsburgh, PA 15213, USA

Karlsruhe Institute of Technology
Institute of Anthropomatics
Prof. Alex Waibel
Adenauerring 2
76131 Karlsruhe, Germany
Office: +49 721 608 44730
eMail: waibel@kit.edu

interACT Associate Directors



Prof. Rüdiger Dillmann

Karlsruhe Institute of Technology
Institute of Anthropomatics
Prof. Rüdiger Dillmann
Adenauerring 2
76131 Karlsruhe, Germany
Phone: +49 721 608 48430
eMail: ruediger.dillmann@kit.edu



Prof. Florian Metze

Carnegie Mellon University
School of Computer Science
Prof. Florian Metze
470 S. Craig Street
Pittsburgh, PA 15213, USA
Phone: +1 412 268 8984
eMail: fmetze@cs.cmu.edu



Prof. Pascale Fung

Hong Kong University of Science and Technology
Department of Electronic & Computer Engineering
Prof. Pascale Fung
Clear Water Bay
Kowloon, Hong Kong
Phone: +852 2358 7087
eMail: pascale@ee.ust.hk



Prof. Atsuo Takanishi

Waseda University
Humanoid Robotics Institute
Prof. Atsuo Takanishi
2-2, Wakamatsu-cho
Shinjuku-ku Tokyo, Japan
Phone: +81 3 5369 7329
eMail: contact@takanishi.mech.waseda.ac.jp



Prof. Giulio Sandini

Italian Institute of Technology
Robotic, Brain and Cognitive Sciences
Prof. Giulio Sandini
Via Morego 30
16163 Genova Italia
Phone: + 39 010 71781 416



Dr. Chiori Hori

National Institute of Information and Communications Center
Knowledge Creating Communication
Research Center - MASTAR Project
Dr. Chiori Hori
3-5 Hikaridai, Seika-cho, Soraku-gun
Kyoto, Japan
Phone: + 81 774 98 6328



Prof. Stefan Schaal

University of Southern California
Computer Science, Neuroscience, and Biomedical Engineering
Prof. Stefan Schaal
3710 S. McClintock Avenue, RTH 401
Los Angeles, CA 90089-2905, USA
Phone: +1 310 740 1976
eMail: sschaal@usc.edu



Prof. Satoshi Nakamura

Nara Institute of Science and Technology
Prof. Satoshi Nakamura
8916-5 Takayama, Ikoma
NARA 630-0192 Japan
Phone: +81 743 72 5111



interACT IN THE PUBLIC AND THE PRESS



CeBIT 2013: Alex Waibel presents the lecture translation system to Neelie Kroes, vice-president of the European Commission and commissioner for the digital agenda

interACT in the Public and the Press

InterACT aims at making its research known to the research community, to decision makers and to the general public. Therefore, interACT organizes press conferences, participates in exhibitions, conferences and public events and gives key-note lectures. Below is a sample of some of the PR events interACT has organised since its inception in 2004.

PRESS CONFERENCES

July 16, 2004:

Press Conference Barcelona FORUM Language Technology Day

interACT organized the Language Technology Day in cooperation with Joan CLOS, mayor of Barcelona (Spain), and researchers from Europe, the US and China. A press conference and several demonstrations showed the latest news in the field of language technology. The Language Technology Day also marked the end of the first interACT-summer school. Twenty-five press articles were published in the international press.

October 27, 2005:

Press Conference on Simultaneous Speech Translation, Carnegie Mellon University and the University of Karlsruhe

In 2005 Prof. Waibel and his team presented the first simultaneous translation system for lectures in real time. The joint press event was captivated by this historical event. Twenty articles appeared in the printed international press (including German Spiegel, Wirtschaftswoche, Stern), 200 articles were posted on the web and about 15 radio and television pieces were broadcasted.

June 30, 2006:

Press Conference on the Occasion of 15 Years interACT, University of Karlsruhe

UKA-president Hippler and CMU-president Cohon presented interACT and its research to journalists.

July, 2007:

Chil Technology Transfer Day, Karlsruhe

interACT partners presented their technologies to the press; articles were published in the German VDI-Nachrichten among others.

June 11, 2012:

Press Conference: University without Language Barriers, KIT

In June of 2012 the simultaneous translation service for university lectures from German into English was presented for the first time: Printed press, Radio, TV on online media reported on the results.

Copies of the press conferences and of articles published by or about interACT can be found on the interACT-homepage (interact.ira.uka.de) under "press".

EVENTS

June 2006:

Research live on Stage (radio) and interACT Presentation at the Karlsruhe City Hall

During the "Night of Computer Science," Alex Waibel gave an interview and performed live translation demonstrations of a German radio station. Also a few days later interACT was presented to the public during the "University at City Hall" at the Karlsruhe City Hall.

November 2006:

interACT at IST in Helsinki

interACT partners presented their joint research at the "Information Society Technology Conference, IST" in Helsinki and won the best exhibit award.

September 26, 2008:

Journée Européenne des Langues, la Diversité des Langues, et Chance pour l'Europe

Invited by the European Commission and the French Ministry for Culture (on the occasion of the French Presidency), Prof. Alex Waibel gave a lecture on the current status of speech translation. Information desks at the entrance distributed information about interACT.

November 05-06, 2008:

Swiss Innovation Forum and Future Expo

interACT presented its research at the Swiss Innovation Forum and Future Expo where the latest research, innovations, technologies and future trends were displayed.

March 02-06, 2010:

interACT @ CeBIT

interACT presented the automatic translation of fluent speech from English into Spanish and on mobile devices.

October 19, 2012:

interACT @ European Parliament, Rectors Conference

Prof. A. Waibel delivered a keynote address to the delegates of the European Parliament and to a conference of invited presidents from European and non-European universities on the subject of simultaneous interpretation by machine. His lecture entitled "Simultaneous Machine Interpretation - Utopia?" was translated automatically by the team's lecture translation computer system into Spanish. It was at the same time also interpreted by the European Parliament's human simultaneous interpreters into 24 languages of the European Community.

March 04-08, 2013:

interACT @ CeBIT

The simultaneous translation of university lectures was presented by interACT at CeBIT, a.o. to EU-Commissioner Neelie Kroes on March 05, 2013.

November 06-08, 2013:

interACT presents at ICT in Vilnius

"Create, Connect, Grow" – interACT presented its research at the ICT 2013, the major exhibition in the field of computer science organized by the European Commission.



Above left: Alex Waibel giving interviews at the press conference in Barcelona

Above right: Press panel with Joan Clos (mayor of Barcelona) and Alex Waibel (both middle)

Middle: Joan Clos, mayor of Barcelona (right) and Alex Waibel (left) during the Language Technology Day

Below: Jaime Carbonell (CMU) and Susanne Altenberg (European Parliament) @ the press conference on June 11, 2012



Above left: Alex Waibel giving a lecture at the European Parliament (EP) during the Rectors Conference
 Above right: Alex Waibel's lecture at the EP was simultaneously translated by machines and by translators from the EP
 Middle left: Oct. 2005: Joint press conference at CMU...
 Middle right: ... and at UKA
 Below left: Booth at ICT in Vilnius, Nov. 2013
 Below right: IST – best exhibit award for joint interACT-work, Helsinki 2006

IMPRESSUM

Editors:

Alex Waibel, Karlsruhe Institute of Technology and Carnegie Mellon University

Margit Rödder, Andrea Kröhnert, Karlsruhe Institute of Technology

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CONTACT

Center Director

Prof. Alex Waibel
waibel@kit.edu

Press and Communication

Margit Rödder
margit.roedder@kit.edu
Tel: +49 721 608-48676

More information:

<http://interact.ira.uka.de>