清华大学—阿姆斯特丹大学逻辑学联合研究中心

Tsinghua University - The University of Amsterdam Joint Research Centre for Logic
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Joint Research Centre for Logic
Mission

After several years of successful cooperation, Tsinghua University and the University of Amsterdam (UvA) have created a joint research centre for logic, the first of its kind between The Netherlands and China. The aim of the centre is to create an active interface between the Institute for Logic, Language and Computation (ILLC) and the community at Tsinghua around a broad interdisciplinary conception of logic, and act as a bridge for contacts between China and the international community. Activities include

• collaborative research projects, including joint publications and mutual visits
• teacher and student exchanges for concentrated courses and seminars
• a joint Tsinghua - UvA graduate program in logic
• new publication initiatives
• regular meetings, workshops, and strategic international flagship events
• public outreach.

The centre will also act as a hub for collaboration with individual logicians and groups in China, and congenial research centres in Asia, Europe and the US.
Description
Logic started as the exact study of reasoning by human actors, and over time also, by computing machines. The tools developed in this study now cover a much wider range of informational actions, including observation and communication, and interactive patterns of rational agency depending on these. This project is devoted to developing the logic of information-driven social agency, bridging the gap from individual to social information behavior, and studying the role of constantly emerging structured social entities such as groups and networks. The resulting questions lie at the intersection of logic, philosophy, computer science, and the social sciences.

Participants
Natasha Alechina (The University of Nottingham), Alexandru Baltag (The University of Amsterdam), Fenrong Liu (Tsinghua University), Patrick Girard (The University of Auckland), Davide Grossi (The University of Liverpool), Kaile Su (Griffith University), Pingzhong Tang (Tsinghua University), Vincent Hendricks (The University of Copenhagen), Sonja Smets (The University of Amsterdam), Jeremy Seligman (The University of Auckland), Johan van Benthem (The University of Amsterdam)

Key publications
• Fenrong Liu, Jeremy Seligman, and Patrick Girard, Logical Dynamics of Belief Change in the Community, *Synthese*, 191(11): 2403-2431, 2014
• Johan van Benthem, *Logic in Games*, the MIT Press, 2014

Highlights
• China exchange program, *The Logical Dynamics of Information Exchange in Social Networks* (led by Alexandru Baltag and Fenrong Liu), funded by the Royal Netherlands Academy of Arts and Sciences, KNAW, 2014 - 2016
• LogiCIC project, The Logical Structure of Correlated Information Change (ERC-2011-STG No. 283963), funded by the European Research Council and the European Commission under FP7, ILLC, UvA, 2012-2017
Description
Logic arose in the context of ancient Greek philosophy, and was also an integral part of the Chinese philosophical tradition. Modern logic is used in epistemology, metaphysics, ethics and many other areas. Through its ties with the philosophy of language, logic deeply influenced modern semantics, becoming a crucial tool for linguistics. This project focuses on (a) foundations of applying logic in philosophy and semantics, and logic’s own presuppositions, (b) foundations and applications of dynamic semantics of natural language, and (c) connections between logic and analytic philosophy, and its accompanying conceptions of modernism and modernity in China and the West.

Participants
Fengkui Ju (Beijing Normal University), Martin Stokhof (The University of Amsterdam), Frank Veltman (The University of Amsterdam), Lu Wang (Tsinghua University), Yuncheng Zhou (Tsinghua University), Dag Westerståhl (Stockholm University), Liying Zhang (Central University of Finance and Economics)

Key publications

Highlights
• Workshop on Logic, Modernity, Modernism: Chinese and European Perspectives, October 9-10, 2014, Tsinghua University
Description
Do different cultures embody fundamentally different styles of thinking? An emphasis on rigorous explicit logic has often been considered a hallmark of Western culture, dating back to Greek Antiquity. But things are more complex, and cultures sometimes have surprising similarities beyond their standard images. In fact, systematic reflection on reasoning and logic started independently, roughly around the same time, in Greece, India, and China. What does this tell us about analogies in thinking across human beings and their cultures? How do we or should we perceive it? This project pursues these questions in a systematic way, while creating resources for a broader community of scholars.

Participants
Johan van Benthem (The University of Amsterdam), Peter van Emde Boas (The University of Amsterdam), Christoph Harbsmeier (The University of Oslo), Jer-Shiarn Lee (National Yunlin University of Science & Technology), Fenrong Liu (Tsinghua University), Thierry Lucas (Université Catholique de Louvain), Jeremy Seligman (The University of Auckland), Wujin Yang (Renmin University of China), Jincheng Zhai (Nankai University)

Key publications
• Fenrong Liu, Jeremy Seligman and Johan van Benthem, eds, Studies in Logic, Special Issue on the History of Logic in China, Volume 4, Number 3, 2011

Highlights
• The International Conference on the History of Logic in China (HOLIC) Amsterdam 2010, Tianjin 2013, Tianjin 2014
Future research lines:
The centre welcomes new affiliates and will actively search for strengthening old projects or forming new ones that fit with its philosophy of bottom up growth, and a small but high quality operation.

Three topics on the near horizon are Modal and Algebraic Logic, Computational Social Choice, and Quantum Information and Complexity, the latter partly in collaboration with the Institute for Interdisciplinary Information Sciences (IIIS) at Tsinghua founded by Professor Andrew Yao. But there is also a clear interest in forging links at interfaces of logic, computational linguistics, and cognitive science.
Events

The centre will organize an annual program of events, including one flagship conference, project-related workshops, and opportunity-driven occasional meetings.

2013

- Logic across the University, Foundations and Applications, October 14-16, 2013, Tsinghua University
- Workshop Tsinghua Meets the ILLC, UvA, October 18, 2013, Tsinghua University
- “A Door to Logic”, A Meeting on Logic, Language and Translation, October 19, 2013, Tsinghua University

2014

- Workshop on Knowledge, Rationality and Decision Making, March 1, 2014, Tsinghua University
- Workshop on Methodology of the History of Logic in China, June 7, 2014, Tsinghua University
- Workshop Trends in Logic, July 2, 2014, Tsinghua University
- Workshop on Logic, Modernity, Modernism: Chinese and European Perspectives, October 9-10, 2014, Tsinghua University
Events
Visitors

The centre maintains a regular visiting program at both its sites, partly using scholarships provided by the two universities. Visitors engage in joint research, and may participate in centre events, and conduct intensive courses and seminars for graduate students.

2013

Tsinghua:
• Nov: Dick de Jongh (The University of Amsterdam), Seminar on Formal Learning Theory

UvA:
• Sep-Jan: Chenwei Shi (Tsinghua University), exchange student

2014

Tsinghua:
• Feb - Mar: Mamoru Kaneko (Waseda University, Japan), Workshop on Knowledge, Rationality and Decision Making
• May - Jun: Sonja Smets (The University of Amsterdam), KNAW Joint Project
• May - Jun: Paolo Turrini (Imperial College, UK), Project Logic for Rational Agency
• Jun: Jer-Shiarn Lee (National Yunlin University of Science & Technology, Taiwan), Donald Sturgeon (Hong Kong University), Project History of Logic in China
• Autumn: Martin Stokhof (The University of Amsterdam), Weilun Professor
• Autumn: Johan van Benthem (The University of Amsterdam), Changjiang Professor
• Nov - Dec: Jeremy Seligman (The University of Auckland), Joint Research, Project History of Logic in China

UvA:
• Sep- Oct: Fenrong Liu (Tsinghua University), Amsterdam China Logic Chair
• Oct: Pingzhong Tang (Tsinghua University), Joint Research, KNAW Joint Project
• Oct: Kaile Su (Griffith University), Joint Research, KNAW Joint Project
• Sep, 2014 - Sep, 2015: Yibin Dai (Tsinghua University), visiting PhD scholar
• Sep, 2014 - Sep, 2015: Chanjuan Liu (Peking University), visiting PhD scholar
Visitors

In 2015, more researchers will visit the joint centre at both sites, to conduct joint research and teach seminars, including Sven Ove Hansson (KTH), Christoph Harbsmeier (Oslo), Thomas Icard (Stanford), Hiroakira Ono (JAIST), Kaile Su (Griffith), Pingzhong Tang (Tsinghua), Jouko Väänänen (ILLC and Helsinki), Frank Veltman (ILLC), Lu Wang (Tsinghua), Dag Westerståhl (Stockholm)

Sonja Smets
It has been a most wonderful experience for me to meet and discuss different research topics in logic with our colleagues and students in China. It didn’t take me long before I felt truly at home especially during some of the work-sessions in which we would gather in front of a whiteboard to discuss while we were offered excellent tea and coffee. This new research center opens up many opportunities for all of us, besides establishing an official environment to host our already on-going joint work it gives us a chance to reach out to a new community of students and at the same time it allows us to explore and mark new research directions for the future.

Fenrong Liu
Building a joint research center is a natural step for researchers on both sides who have been involved in collaborations. Having this platform will make our life a lot easier. I hope it will serve as a bridge not only for logic research, but also for cultural interactions. Given our good experiences in the past, I am confident that things will go well in the future.

Zoe Christoff
I feel like the new joint research center opens a wide space of exchange and collaboration possibilities! It is exciting not only in terms of research but also in terms of cultural experiences and open-minded sharing.

Chenwei Shi
It feels like magic that yesterday I still sat in a classroom at Tsinghua listening to talks by researchers from the ILLC and was immersed in the sunshine of Beijing, while today I have already been taking the same courses with students at the UvA and been drenched in the rain of Amsterdam. However, this is only one small part of the grand magic made by logic, which connects different spaces and times, different traditions and cultures. It is really inspiring to be a witness and even a part of such connections.

Kaile Su
I visited ILLC in Feb 2013 and met so many internationally leading logicians. I was very happy to meet some of them in Tsinghua Logic Conference in Oct 2013. The joint logic research center will make more such chances for me and my PhD students (in Peking University) to meet and share research advancement with them.
Education

The centre maintains a joint graduate program between Tsinghua University and the University of Amsterdam that will result in the granting of joint degrees. The program, including courses at both sites, is embedded in the Ph.D. programs at the two participating universities. The graduate program is currently in its starting phase.

Ph.D. STUDENTS IN THE PROGRAM

Yibin Dai (Ph.d student, Tsinghua)
Malvin Gattinger (Ph.d student, UvA)
Chenwei Shi (Ph.d student, UvA)
Yiyan Wang (MoL, Tsinghua)
Kaibo Xie (MoL, Tsinghua)
Zhiwei Yang (MoL, Tsinghua)
The program also engages in new educational initiatives, such as long-distance seminars and on-line educational projects, e.g. the Logic in Action Open Course Project.

(http://www.logicinaction.org).
The center aims for publications in major international journals and book series, as well as other research projects where possible, such as software. The center has started a preprint series. The center is also involved in the creation of new textbooks in logic reflecting its mission. Finally, the center will publish annual reports documenting its activities.

In addition to these publications, the center will maintain a public website that also serves as a source for colleagues, as well as a window for creating new collaborations.

Finally, the centre is contemplating broader public outreach activities once its scientific core mission is well under way.
The scientific part of the centre consists of research projects whose number will grow in a careful bottom-up fashion. Active project participants become official centre affiliates. In addition, the graduate program of the centre involves selected students from both universities. Organizationally, the centre has two co-directors, an oversight board and an advisory board. There are also some personal unions in the form of special professorships (Amsterdam-China Logic Chair Fenrong, Changjiang Johan, Weilun Martin), and the centre is eager to add further longstanding ties with international colleagues.
Organization

ADVISORY BOARD

Samson Abramsky (The University of Oxford, UK), Sergei Artemov (The Graduate Centre, CUNY, USA), Mian Feng (Huadong Normal University, China), Xiangdong He (South West University, China), Huaxin Huang (Zhejiang University, China), Shier Ju (Sun Yat-sen University, China), Kevin Kelly (Carnegie Mellon University, USA), Hiroakira Ono (JAIST, Japan), John Perry (Stanford University, USA), Francois Recanati (Institut Jean-Nicod, France), Hannes Leitgeb (Ludwig-Maximilians-Universität München, Germany), Jianjun Zhang (Nanjing University, China), Dag Westerståhl (Stockholm University, Sweden), Beihai Zhou (Peking University, China), Chongli Zou (Chinese Academy of Social Sciences, China)

CO-DIRECTORS

Fenrong Liu
Department of Philosophy, Tsinghua University

Johan van Benthem
ILLC, The University of Amsterdam
Department of Philosophy, Stanford University