



ERC Grant voor Niels Taatgen

De European Research Council heeft **Niels Taatgen**, hoogleraar Cognitief Modelleren bij **AI@Rug**, een prestigieuze subsidie van 1,4 miljoen toegekend voor onderzoek naar multitasking. Met een team van aio's en postdocs gaat hij onderzoeken waarom mensen zo graag multitasken, en wat de hersenprocessen zijn die daaraan ten grondslag liggen.

erc.europa.eu

AI@Rug in the media

AI@Rug has received a lot of media attention recently.



Niels Taatgen participated in two Dutch television programs. In the science program "Pavlov - Waarom ben ik zo?" (Why am I like this?), the capacities of well-known Dutch people are tested in an attempt to explain their specialties. Niels tested the multitasking capacities of racing driver Tim Coronel. The results of the test suggested that the success of the racing driver was not a direct result of excellent multitasking capacities. Next, Niels participated in the Dutch program "Breingeheim" (secrets of the brain). In this series the developing brain, from baby to old age, is discussed. Niels Taatgen explained the problem of multitasking, which is a commonly encountered problem for adults. He explained this by means of his previously often used analogy of the restaurant-kitchen where steps in preparing a dish sometimes must be made serially.

www.maxbreingeheim.nl

Also **Tijn van der Zant** and his Cognitive Robotics Lab have been receiving media attention lately. On Radio 1, there was a short interview about robots, and during "De wetenschap draait door" at the night of art and science about robotic research, there was a two page story in the Leeuwarder Courant and a short version of the story about domestic service robots and elderly care in Het Dagblad van het

Noorden. A nice story is expected to be published in the university newspaper (the UK), just before the holidays. During the world-championships in Istanbul early July, Tijn was interviewed for a RoboCup documentary. There is more interesting news: the BORG team, which is the name of our RoboCup@Home team, collaborated with the foundation "The Art of Robotics", the Deltion college in Zwolle and artist Kees Klaassen of the R10 art collective, to create a new body for the robot. So on your way to the third floor you might want to pass by the robot lab and see the new robot.

www.ai.rug.nl/crl



Lambert Schomaker was a guest in the Dutch program "Labyrint" which was about "de kracht van de massa" (power of the masses). He explained how, in the MONK program, he uses "wisdom of the crowd" to unravel old handwritings. After the TV broadcast the number of hits on the MONK system increased very significantly.

tinyurl.com/6ec47jj
tinyurl.com/5w5nqaf

Tjeerd Andringa presented his opinion on the role of robots in the world at Frontiers of knowledge. He explained that robots can be either adaptive or adapted to, hence we should now discuss the tasks we wish to give to robots in the future.

tinyurl.com/5u4qvls

IEEE symposium in Paris

Marco Wiering co-organized the ADPRL'11 symposium that was held from 11 until 15 April in Paris. ADPRL stands for Adaptive Dynamic Programming and Reinforcement Learning and was one of the 33 symposia that were organized together during the IEEE symposium series on computational intelligence. There were 47 presentations, a tutorial and a keynote talk, which made ADPRL'11 the second biggest symposium that was held under SSCI'11. The

focus of ADPRL is to gather researchers from all over the world to communicate with each other. The SSCI was very well organized and included a banquet dinner on a boat floating through the Seine with beautiful views of the Eiffel tower, the Louvre, Notre Dame and more.

iee-ssci.org/2011/adprl-2011u

Marie Curie Career Integration Grant

Marieke van Vugt won a Marie Curie Career Integration Grant for Accumulation Processes in Memory Decisions.

What is logic?



Nina Gierasimczuk collaborated with the NEMO museum in Amsterdam. On May 15th Nina gave a lecture about logic for young children. It was titled "Wat is logisch?" and was a part of the "Wakker Worden" lecture series. Through a selection of games, the children discovered some aspects of logic related to reasoning about other people's reasoning.

tinyurl.com/66m5ng3

Cognitive models for neuroimaging data

Ronald van Elburg and **Niels Taatgen** chaired a session on cognitive models for neuroimaging data at the 9th Dutch Endo-Neuro-Psycho Meeting 2011 (ENP 2011) in Lunteren (May 30 - June 1, 2011). **Jelmer Borst** and **Marieke van Vugt** presented their work during the session.

enpmeeting.org/2011

Summer school on Auditory Cognition

The **AI@Rug** sensory cognition group organised the first summer school exclusively focused on the topic of "Auditory Cognition - Listening in the Real World". Invited speakers were Susan Denham, Deniz Baskent, Roy Patterson and David Prior. Also, AI@Rug member and former members, **Tjeerd Andringa**, Maria Niessen and Dirkjan Krijnders gave lectures.

www.acgsummerschool.com

ACT-R Spring School & Workshop 2011

Niels Taatgen, Hedderik van Rijn and **Jelmer Borst** organized the ACT-R Spring School &

Workshop 2011 in Groningen (April 11-15, 2011). **Marieke van Vugt** presented a talk on EEG correlates of ACT-R at the workshop. Kevin Gluck (Air Force Research Laboratory) and Eric-Jan Wagenmakers (University of Amsterdam) gave keynote lectures.

www.ai.rug.nl/actr-springschool

Mathematical Logic in the Netherlands

Jort Bergfeld, **Kohei Kishida**, **Nina Gierasimczuk** and **Sonja Smets** organized this year's workshop on "Mathematical Logic in the Netherlands (MLNL)" in Groningen on May 19 and 20, 2011. Logicians from the Netherlands and other countries presented four invited talks and sixteen contributed talks on a wide range of topics, from set theory and type theory, to modal logic and philosophy of logic. MLNL 2011 was the third issue of a series of yearly meetings on Mathematical Logic (and related areas) in the Netherlands. Rather than a specialized conference where advanced research results are reported, the aim is to strengthen the community by creating a deeper understanding of the various branches of logic represented in the Netherlands. The list of participants together with the titles and abstracts of contributed talks can be found at the workshop's website.

www.ai.rug.nl/MLNL2011

Towards carbon-low conferencing?

Frank Zenker (University of Helsinki) organized an experimental distance colloquium, the first eColloq on Argumentation (April 1, 2011), in which **Bart Verheij** gave a lecture entitled "Stories about the logic of argumentation". It used standard internet technology (Skype with group video) and was surprisingly interactive, hence effective. However, the success was presumably due to the low number of participants (four) and the use of good university networks. A second eColloq with six participants and some home networks had more glitches. Still: a useful experiment, and a look into the future. Frank Zenker has reported more extensively on the experiences (see the website).

ecolloq.wordpress.com

Marieke van Vugt spoke at Neurospin in Paris

Marieke van Vugt was invited to speak at Neurospin in Paris. The title of her talk was "Lateralized readiness potentials in decision making reveal properties of a neural mechanism for crossing a decision threshold".

neurospin.org

Organization of TARK and two workshops in Groningen

A team of local organizers chaired by **Rineke Verbrugge** and **Sonja Smets** set up this year's TARK conference in Groningen. TARK XIII is the 13rd edition of the international conference on Theoretical Aspects of Rationality and Knowledge. In addition, the team is also

organizing two one-day workshops: a pre-TARK workshop on "Reasoning about other minds" and a post-TARK workshop on "Quantum physics meets TARK". All events took place in the week of 11 July.

TARK brings together researchers from a wide variety of fields, including Artificial Intelligence, Cryptography, Distributed Computing, Economics and Game Theory, Linguistics, Philosophy and Psychology, in order to further our understanding of interdisciplinary issues involving reasoning about rationality and knowledge.

www.philos.rug.nl/TARK2011

Special sessions on logic, physics, agency and dynamics

Sonja Smets is co-organizing several events this year: she co-organizes a special workshop session "Relations between the physical world and formal models of computability" together with Prof. Viv Kendon (University of Leeds) at the international Computability in Europe conference which was held in June in Sofia, Bulgaria.

cie2011.fmi.uni-sofia.bg

Sonja also co-organizes a special session on "Logic, Information, and Agency" together with Dr. Alexandru Baltag (University of Amsterdam) at the Ninth International Tbilisi Symposium on Language, Logic and Computation in Kutaisi in Georgia (September 2011).

www.illc.uva.nl/Tbilisi/Tbilisi2011

Earlier this year (May 3), Sonja co-organized the workshop on "Dynamics in Logic" in Brussels together with Dr. Patrick Allo and Dr. Francesca Poggiolesi (from the Free University of Brussels).

sites.google.com/site/dynamicsinlogic1

Sonja Smets gave several invited lectures at workshops and seminars at Delhi (India), Dagstuhl, Prague and Munich. The presentation given at the Colloquium on Mathematical Philosophy in Munich at the Ludwig-Maximilians University has been made available as a podcast on iTunes.

RUG sportmiddag

Op 17 juni jl. was de RUG sportmiddag. Bij de prijsuitreiking bleek **AI@Rug** goed vertegenwoordigd. Zowel **Arnold Meister** als **Niels Taatgen** hebben een prijs gewonnen. Arnold Meister is eerste geworden met Golf en Niels Taatgen eerste op de 10 km trimloop.

www.rug.nl/sprsport/sportdag

Delmenhorst meeting on Cognitive Neuroscience, Educational Research, Cognitive Modelling

Niels Taatgen was a keynote speaker at the Interdisciplinary Workshop on Cognitive Neuroscience, Educational Research and Cognitive Modelling at the Hanse-Wissenschaftskolleg (Delmenhorst). The title of his talk was "Threaded Cognition, a model of human multitasking". **Jelmer Borst**, **Marieke**

van Vugt, **Katja Mehlhorn** and **Ben Meijering** also presented their work there.

www.h-w-k.de/index.php?id=1702

New PhD researcher: Marijke Beulen

In September, **Marijke Beulen** will start as a PhD researcher on the project of looking at evidence accumulation processes in memory tasks. She will be supervised by **Marieke van Vugt**. Marijke Beulen obtained her Bachelor's degree at Utrecht University College, a second BSc in Biomedical Science, and subsequently obtained a Master's degree in Neuroscience and Cognition at Utrecht University.

Computational Models of Argument

Bart Verheij was invited to Vienna to prepare the Fourth International Conference on Computational Models of Argument (to be held in September 2012), of which he is the program chair. The organization chairmen are Stefan Szeider and Stefan Woltran (both Vienna University of Technology). Bart Verheij gave a colloquium lecture entitled "The logic of argumentation: what next?".

www.kr.tuwien.ac.at/events/comma2012

Many new faces

Within **Sonja Smets'** Vidi project 'Reasoning about Quantum Interaction', two new postdocs introduce themselves:

Nina Gierasimczuk is a postdoc researcher within the Vidi project 'Reasoning about Quantum Interaction'. Her research interests include formal learning theory, epistemology, belief revision theory, computability and computational complexity theory, cognitive science, and philosophy of science. She obtained her PhD at the Institute for Logic, Language and Computation, University of Amsterdam, under the supervision of Johan van Benthem and Dick de Jongh. Her thesis deals with the interface of formal learning theory and dynamic epistemic logic. Before coming to Groningen, she was a post-doc researcher in the Talentenkraft project in Amsterdam. She also collaborated on the development of the logical part of RekenTuin, an online tool for training mathematical and logical abilities in children. During her PhD studies, she was also teaching logic at Amsterdam University College. She recently gave invited talks at the Entia et Nomina Workshop 2011 (Gdansk, Poland) and at the 3rd Workshop on Semantic Processing, Logic and Cognition 2011 (Tübingen, Germany).

Kohei Kishida is a postdoc researcher within the Vidi project 'Reasoning about Quantum Interaction'. He studied logic and mathematics at the University of Pittsburgh and Carnegie Mellon University, and earned his PhD degree in December 2010 at the Department of Philosophy, University of Pittsburgh, under Nuel Belnap and Steve Awodey, before coming to Groningen. His PhD dissertation discussed first-order modal logic, applying methods in mathematics (topology and category theory, in

particular) to express philosophical notions, most notably, epistemic and metaphysical ones. In addition to logic and mathematics, his interests lie in the philosophy of logic and mathematics, the philosophy of science (in particular, physics and spacetime), and formal epistemology.

Also in **Rineke Verbrugge's** Vici project there have been new staff additions:

Cédric Dégrement is a post-doc in the Vici project: 'Cognitive systems in interaction: logical and computational models of higher-order social cognition'. He obtained a PhD at the Institute for Logic, Language and Computation, University of Amsterdam, and an MA in philosophy at the University of Lille. His research deals with the formal modeling of epistemic, interactive and strategic reasoning.

Daniel van der Post is a post-doc at the Institute of Artificial Intelligence and the Behavioural Ecology and Self-Organization group at the University of Groningen. He will be studying the evolution of social cognition and theory of mind, using individual-based models (agent-based models) with structured environments. The emphasis is on the feedback between self-organizing group-level phenomena and individual-level cognition. Daniel received his PhD on emergence of cultural transmission of diet preferences at the Theoretical Biology and Bioinformatics department, Utrecht University with Prof. Paulien Hogeweg. This work showed how traditional inheritance of diet preference as well as cumulative cultural diet improvement could arise as a side-effect of grouping through self-organizing processes without active social learning mechanisms. Subsequently Daniel was a post-doc at the Courant Research Center Evolution of Social Behaviour in Dirk Semmann's group, where he worked on the evolution of cooperative foraging and predator avoidance via grouping.

Jakub Szymanik is a post-doc in the project. He studies the cognitive and computational constraints on social interaction by combining logic with experimental studies. His research interests include applied logic, cognitive science, mathematical linguistics, complexity theory, psycholinguistics, philosophy and any combination thereof. Jakub received a PhD at the Institute for Logic, Language and Computation, University of Amsterdam. In his dissertation and the following publications, he investigated the computational complexity of natural language quantifiers and its influence on language processing. Subsequently, he was a postdoc researcher at the Department of Philosophy, Stockholm University. In the meantime he also briefly taught at Utrecht University and was a consultant for a company in machine translation. He obtained a MA (cum laude) in philosophy at the Warsaw University.

www.ai.rug.nl/SocialCognition

Goodbye and hello

The MAS group has new post-docs: **Jakub Szymanik** (1-1-2011), **Cédric Dégrement** (1-2-2011), **Nina Gierasimczuk** (1-2-2011), **Kohei Kishida** (16-2-2011) and **Daniel van der Post** (1-5-2011). **Robert van der Linden** (15-4-2011) and **Jolie Lanser** (1-5-2011) have joined the SC group to perform research and teaching tasks. We have said goodbye to **Margriet Halbersma** (12-7-2011).

Afgestudeerden

Bachelor degrees

Eva van Viegen, Ben van Os, Peter Jorritsma, Matthijs Dorst, Jolie Lanser, Nino van Hooff, Jurjen Wierda, Ciaran Lier, Trudy Buwalda, Frank Doesburg, Jarno Kuipers

Master degrees

Jelle Dalenberg

Spaced learning: an eye opener

Michal de Vries

The attentional blink in different modalities: a neuroscientific and computational approach

Menno Nijboer

Optimal Fact Learning

Popke Altenburg

Content-Based Refinement of Keyword-Based Image Retrieval

Marijn Stollenga

Using Guided Autoencoders on Face Recognition

Robert van der Linden

Development of a tool for soundscape annotation

Maaïke Waalkens

A comparative evaluation of single and multi-path tutors for solving linear equations

Theije Visser

Emergence of social dynamics among affectively motivated agents

Harrie de Groot

iNewsReader: A Personal Netnews Recommender

Mart van de Sanden

Humanlike Walking with Echo-state Networks

Colophon

AI@Rug Newsletter is a newsletter for students and staff members of the department of Artificial Intelligence of the University of Groningen. The archive of the newsletter can be found at www.ai.rug.nl/newsletter. You can be added to the mailing list by sending a message to Hanneke Niessink (J.H.Niessink@rug.nl).

Redactie:

Bart Verheij, Bea Valkenier, Hanneke Niessink, Lambert Schomaker.