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The Next Word

ECML / PKDD '08

Dutch Supercomputer Beats Go Professional

Human Factors Day

News from the Belgium-Netherlands Association for Artificial Intelligence

The Next One

Editor-in-chief

As a start, let me, on behalf of the BNVKI Board and the whole BNVKI community, congratulate Prof. Antal van den Bosch with his professorship. Of course, he is full professor already since January 1 of this year, but some people feel that professors are not really professors before having given an inaugural address. Antal did this on the 10th of October, with a lecture entitled 'Het Volgende Woord' (The Next Word). Antal argues among other things that predicting the next word can be done considerably better by taking into account the environment and circumstances. For a much more detailed account, see the report by Wilco Moerman and Ildikó Flesch on pp. 106-107 of this issue. By the way, the complete text of his inaugural address, including all animations, can be found at the internet (see the URL below).

When writing this editorial we just have had a very successful 20th edition of the BNAIC series, this time in Bad Boekelo. Taking this into account and seeing the contents of the newsletter issues over the last years, it is not difficult for me to predict that the next one will be largely filled with reports on the BNAIC 2008. For now let me just say that the conference was very well organized, took place at a nice location, and was held in a warm atmosphere. In short, chapeau for Anton Nijholt and his whole team of organizers!

During the BNAIC there was also, as always, the General Assembly Meeting of the BNVKI. Of course, the next issue will also contain the minutes of this meeting. But for the ones not present, let me inform you already of the (in my opinion) two most important decisions. First, the meeting agreed on a follow-up of the BNAIC series. The next one will be held on October 29-30, 2008, at the TU/e Eindhoven. So reserve these dates already in your agenda. And second, Luxembourg is now part of our community. Welcome! Although, for practical reasons, the name BNVKI and BNAIC will not be changed, we will acknowledge Luxembourg's partnership by adding the phrase "the BeNeLux Association for Artificial Intelligence" and "the BeNeLux Conference for Artificial Intelligence" to the BNVKI and BNAIC names, respectively. So, since formally the present issue is made before the General Assembly's decisions, the next one will be the first issue of the *BNVKI Newsletter, News from the BeNeLux Association for Artificial Intelligence*! The Board has meanwhile informed the European Coordinating Committee for Artificial Intelligence (ECCAI) of Luxembourg's joining, and has suggested using from now on the BeNeLux flag on ECCAI's welcome page. You didn't even know there was a BeNeLux flag? Here it is!

Antal van den Bosch' inaugural address: **http://ilk.uvt.nl/hetvolgendewoord**
ECCAI's welcoming home page: **http://www.eccai.org/**
Wikipedia's entry on the BeNeLux: **http://en.wikipedia.org/wiki/Benelux**

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Front cover: Predicting the next word (see pp. 106-107 of this issue).

The deadline for the next issue is: **December 1, 2008**.

BNVKI-Board News

Antal van den Bosch

As I am writing this, the 20th BNAIC is still a week away. Two times ten; a respectable number! The board is looking forward to the event as well as to have the opportunity to talk and share thoughts with you, member of our association. The location, Bad Boekelo, promises to offer a fantastic backdrop for our conference.

There is one particular issue that we want to bring forward at the general assembly held during the conference, and that I would like to bring to your attention here as well. For years, BNVKI has been sponsoring AI events in the Low Countries. Several symposia, for example around Ph.D. defenses, have been organized with a financial contribution of the BNVKI – you have been able to read about them throughout the years in this newsletter. Apart from helping budgets fit better, BNVKI also advertises the events it sponsors by sending announcements around through our own membership email list, and if the announcement is early enough, the event is announced in the newsletter as well.

If you are organizing or planning an AI-related event in Belgium, the Netherlands, or Luxembourg, and you are a BNVKI member, we would like to encourage you to submit a sponsoring request to us. Please be in time (at least two months before the event occurs), and provide us with a description of the event and the audience – and a (preliminary) budget. Please contact us for more information. And keep it in mind!

ECML / PKDD '08

Joaquin Vanschoren and Celine Vens
Department of Computer Science
KU Leuven, Belgium

The 2008 edition of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/ PKDD) was set in Antwerp from 15 to 19 September, bringing together 434 researchers from 37 countries. In all, the organizers received 510 paper submissions, of which 99 got accepted (yielding an acceptance rate of 19%).

The premier annual European conference in the areas of machine learning and data mining saw some important changes with respect to previous editions. First of all, the two conferences ECML and PKDD, which had been collocated since 2001, were now merged into one conference, with one common proceedings. Also, each paper had a shortened 20-minutes slot for oral presentation, but could be discussed in depth at the poster reception. Moreover, in a move warmly welcomed by the authors, each paper was allotted 16 pages instead of 12 or 8. Fourteen of these papers were published directly in the *Machine Learning* and *Data Mining and Knowledge Discovery* journals.

A glance at this years topics reveals the 'hot' subfields in machine-learning and data-mining research. Looking at the number of accepted papers, most work concentrated on classification, pattern discovery, clustering, kernels, mining complex structures, feature selection and construction, and reinforcement learning. Still, next to these topics, there seemed to be a lot of interest into matrix factorization, transfer learning, dimensionality reduction, classifier evaluation, regression, text mining, semi-supervised learning, social networks and multi-relational learning.

In another organizational innovation, heavy backpacks were eliminated by providing the proceedings on a USB stick, including tutorials and workshop papers, while printed copies were optional. Additionally, all participants had free online access to the conference proceedings one week ahead of the conference until two weeks after.

Finding your way through all the talks and events was facilitated by the excellent program brochure and daily newsletters, both of which received much enthusiasm. Without the latter, we would have missed many insider tips on where to go for lunch and many interesting facts, such as key demographics, tips on how to get your paper accepted and a clustering of related papers to find your topic buddies.

On Monday evening, the main conference was officially opened by the program chairs with the Opening and Awards ceremony. The best machine learning paper award went to M. Weimer, A. Karatzoglou, and A. Smola for their paper *Improving Maximum Margin Matrix Factorization*. The best knowledge-discovery paper was *Skygraph: An Algorithm for Important Subgraph Discovery in Relational Graphs* by A. Papadopoulos, A. Lyritsis, and Y. Manolopoulos. In addition, two best student paper awards were presented.

After the ceremony, Anil K. Jain, professor at Michigan State University, gave the first invited talk on *Data Clustering: 50 Years Beyond K-means*. He presented a historical overview, discussed current trends and key challenges and described some emerging research directions of cluster analysis.


The "Ambrassband" playing at the opening.

On Tuesday morning, Ray Mooney (University of Texas at Austin) talked about *Learning Language from its Perceptual Context*. He discussed his work and ideas on how computers should learn natural language, and presented a system that learns to sportscast simulated robot soccer games by training on textual human commentaries.

Wednesday's keynote talk was given by Françoise Fogelman-Soulie from KXEN, a company specialized in automated data mining, about *Industrializing Data Mining, Challenges and Perspectives*. She discussed the problem of data explosion in industrial data-mining applications, such as telecommunications, finance, and retail, and showed how theoretical solutions are brought to practice.

Raghu Ramakrishnan (Yahoo! Research) talked about *The Role of Hierarchies in Exploratory Data Mining* on Thursday morning. He focused on one of the fundamental challenges in data mining: how to efficiently explore a very large space of alternatives. He then showed how the use of hierarchies (e.g., taxonomies, or the OLAP multi-dimensional model) can help to deal with data scarcity, data imprecision, and experiment planning and management.

The conference's last invited talk was given on Friday morning by Yoav Freund from the University of California and was titled *From Microscopy Images to Models of Cellular Processes*. He described how machine-learning techniques can help biologists to enhance image-processing methods used to analyze images of biochemical processes.

The paper presentations were scheduled in three parallel tracks, with two additional tracks on Wednesday. These included firstly an industrial track with invited talks from data-mining companies, focusing on fraud risk management, how to live on free data-mining software, commercial document-understanding systems and semantic unification. Secondly, there were four demonstrations showing new tools for classifier-performance visualization, edit-distance learning, pattern monitoring and inductive databases.

The first and the last day of the conference were reserved for tutorials and workshops. Tutorials were organized on text mining, data mining in mobile communications, embedded machine learning, discovery from evolving data, link analysis, relational learning, web mining, anomaly detection and regularization. This year's workshops focused on the current challenges in feature selection, pattern mining, third-generation data-mining tools, induction of process models, web mining, bioinformatics, ubiquitous knowledge discovery, multidimensional data mining, preference learning and information extraction.

Last but not least, the social program was certainly worthy of remembrance. On Monday, after the invited talk and award ceremony, all participants were treated on a lavish welcoming reception. Starting off with a selection of typical Belgian hot dishes (try translating *Gentse waterzooi* in an appetizing way), the reception quickly turned festive when a local brass band marched in playing lively and vibrant folk music. To top it all off, Belgium's proficiency in the dessert department was highlighted with a fountain of molten chocolate, and the accompanying fruits and biscuits for dipping. On Tuesday and Thursday, there were the equally enjoyable (and tasty) poster receptions on two enticing locations. The first of these was held in a refurbished harbor hall commanding beautiful views over the river Scheldt and was complemented with a live band, while the second one was set in the quiet seclusion of a former hospital and convent, appropriately enlivened by harp and flutes. On Wednesday, Antwerp's rich history was unraveled during a guided tour, leading the participants from medieval fortresses to the Art Nouveau styled banquet hall, where they were welcomed with a glass of sparkling champagne. And when we say sparkling, this is to be taken literally. Every glass contained a zirconia, and three glasses even contained a real diamond, each of which was worth more than all the zirconia put together. Diamond experts were present to check each stone for authenticity, and for those who did not win there was still a silver lining: a festive banquet and yummy dessert!

At the end of the conference, one of the organizers of this year's ECML/PKDD conference approached the organizer of the next edition with the words "There is one thing I didn't manage to do this year,

and that's fireworks! Just write 'ECML/PKDD' in giant letters in the sky." Needless to say, we are already looking forward to next year's ECML/ PKDD in Bled, Slovenia, and the year after that in Barcelona, Spain!

Bart Goethals, one of the organisers, standing near the ECML/PKDD flag.

Dutch Supercomputer Beats Go Professional

August 7, 2008

Guillaume Chaslot
MICC, Universiteit Maastricht

For the very first time in history, and after 40 years of research, a program defeated a professional Go player in a 9-stones handicap game. This success was the result of revolutionary algorithms that were invented in the period of 2006-2008. The match involved the collaboration between French and Dutch researchers. "MoGo played really well," said Kim, who estimated its current strength at "two or maybe three dan," though he noted that the program – which had 1,000 times more processing power than the chess program Deep Blue – "made some 5-dan moves". "I think there's no chance with nine stones, it would even be difficult with eight stones. MoGo played really well; after getting a lead, every time I played aggressively, it just played safely, even when it meant sacrificing some stones. It didn't try to maximize the win and just played the most sure way to win. It's like a machine." The game was played live at the U.S. Go Congress the 7th of August, with over 500 watching online on the internet Go server KGS.

"Congratulations on making history today," game organizer Peter Drake told Olivier Teytaud, one of MoGo's programmers.

Kim Myungwan

Kim Myungwan was born in 1978 in South Korea and became professional Go player in 1994. He improved steadily from 1 dan to reach nowadays 8 dan, which is the second-best rating that can be reached by professionals (the first being 9 dan). He participated in numerous international competitions, and won the US OPEN on the 9th of August 2008, two days after the match against MoGo.


Kim Myungwan.

MoGo

The MoGo project was started in 2006 as a Master project at the LRI of the University of Paris-Sud. Less than six months later, the program developed by Sylvain Gelly and Yizao Wang was already the highest-ranked program on the 9×9 Computer Go Server. It still holds the first place on this server since August 2006. In June 2007, MoGo also proved its strength on full boards by winning the 12th Computer Olympiad in Amsterdam. A few months later, it was the first program to win a 9×9 game against a Go professional. The fast level increase of the program is caused by a new method, called "Monte-Carlo Tree Search". The new method is remarkably scalable with computing power, which makes the use of supercomputers particularly fruitful. Many innovations were invented by the developers of MoGo, and by the games group of Maastricht University. Maastricht University was initially developing its own Go sofware, "MaNGo". Since 2008 they are collaborating with the MoGo team.

The program is funded by the French research organizations INRIA and CNRS, the university of Paris XI, the Dutch research organization NWO and the Pascal network. The current MoGo team consists of Guillaume Chaslot, Jean-Baptiste Hoock, Julien Perez, Arpad Rimmel, and Olivier Teytaud.

THE SUPERCOMPUTER HUYGENS

MOGO was running on the supercomputer *Huygens*, located in Amsterdam, and provided by the Dutch research organizations SARA and NCF. MOGO was using 25 out of the 104 nodes of the supercomputer, i.e., 800 cores at 4.7 GHz, with a floating-point processing power of 15 Teraflop (more than 1000 times DEEP BLUE). This was the most powerful supercomputer ever used for a board game in Artificial Intelligence.

Impressions of the D-CIS Human Factors Day 2008

Eefje Rondeel, Niek Wijngaards, Masja Kempen, and Rianne Gouman
D-CIS Lab

At September the 10th, a sunny Wednesday in Delft, the first D-CIS Human Factors Day was held at the D-CIS Lab. The aim of the day was to bring together technology developers and researchers with an interest in human factors. The D-CIS Human Factors Day was the perfect opportunity to gain insight in the latest technology and research on human factors, to establish cooperation between technology providers and researchers and to discuss specific research needs in the field of human factors.

Keynote speaker of the D-CIS Human Factors Day was Sylvia Horner, from Thales Consulting and Engineering UK. She gave a good overview of the human-factors domain in the context of a large company such as Thales, including human-factors research, engineering and integration.

Keynote speaker Sylvia Horner.

Ingrid Mulder (Hogeschool Rotterdam) discussed a toolkit for human-centered ICT and Betsy van Dijk (Universiteit Twente) outlined a number of projects on interaction and evaluation in emerging Human Computer Interaction environments.

A number of other projects were introduced in which human factors play a central role, e.g., EVIDENS, about the evaluation, design and ergonomics of new services, presented by Gilles Coppin (Telecom Bretagne).

In addition to a more general description of projects, a number of experiments conducted in the human-factors field were also presented. Elena Zudilova-Seinstra (University of Amsterdam) presented a study in which a glove (initially intended for gaming) was used to interact with visualized 2D and 3D medical data. This indicates that also in the domain of medical specialists the focus on human factors is ever so important.

Elena Zudilova-Seinstra.

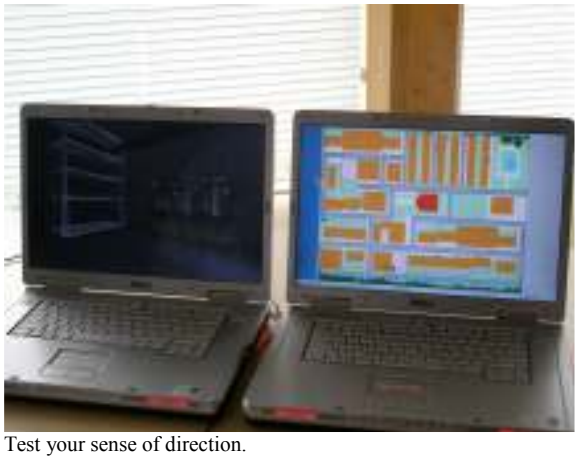
Another presentation with a focus on health care was on social connectedness for people who are away from home for a lengthy recovery. The presentation, by Margit Biemans from Twente University, discussed possible new technologies in combination with personalization techniques.

The D-CIS Human Factors Day not only consisted of scientific presentations, there was also an interactive and lively demonstration & poster session. Every poster and demonstration was shortly introduced plenary. This was a good time to test everyone's stress level with the stress cards that were included in the program booklet, as there were some small technical problems with beamers and computers. After keeping a finger on the stress card for 10 seconds you instantly find out whether you were calm, relaxed, nervous or tense. Luckily, everyone got the chance to enthusiastically introduce their poster or demonstration.

Posters included topics such as guidelines for measuring emotions in website users (Peter van Waart and colleagues from Hogeschool Rotterdam), the influence of culture of decision making in trade (Tim Verwaart and colleagues from LEI Wageningen, TU Delft and Wageningen University)

and the influence of mood and stress on decision making (Eefje Rondeel, D-CIS Lab).

Demonstrations varied from neurofeedback equipment (by Suzan Ogink and Henk Kraaijenhof from Allosta BV/Nemesis BV) and facereaders (by Albert Willemsen from Noldus BV) to a demonstration in which you could put on a virtual reality helmet to experience what a flying unmanned helicopter 'sees' while flying (by Matthijs Amelink from the D-CIS Lab). One of the participants remarked that it was like an out-of-body-experience. There was also a robot that was afraid of other robot-like objects, but could be trained to be less scared of other robots. The demonstration, given by Henriette Cramer (University of Amsterdam), was appropriately named the 'Phobot'. You could even test your sense of direction while trying to rescue a virtual victim, at a demonstration given by Nanja Smets and Guido te Brake (TNO). Eric Buiel (TNO) combined a poster and a demonstration in which you could see a tunnel-operator agent at work. Finally, you could see how your bodily sensations could be measured in a low intrusive and mobile manner, at the TMS International demonstration, given by Jan Peuscher.


Test your sense of direction.


Stereo-vision while flying.


Facereader in action.

The demonstrations were held in D-CIS Lab's newest addition, the Security Innovation Centre. Kees Nieuwenhuis, managing director of the D-CIS Lab, spent a few words about this new high-tech centre during the opening of the D-CIS Human Factors Day. The Security Innovation Centre is intended for human-factor research, experimentation, simulation, serious gaming sessions and other activities. Although the centre has not yet been officially opened, participants of the D-CIS Human Factors Day got the chance to walk around the brand new centre during the poster and demonstration session. After some more interesting presentations, for example about the trust in a computer agent assisting a driver to join the motorway, presented by Henriette Cramer, it was already time for the closure of the first D-CIS Human Factors Day.

Eefje Rondeel, organizer of the day, concluded with a short movie on the Emotiv Epoc headset, a headset for 'reading minds' and with which you can, for instance, steer an avatar in a computer game. Hopefully, such new technologies can be included in human-factors research in the near future to foster progress in both research and technologies. The D-CIS Human Factors Day was definitely a step in the right direction, in which researchers and technology developers were brought together and got the chance to share thoughts and demonstrate their newest developments in the research field as well as the latest technologies.

During the 'human factors' drinks there were some interesting discussions and conversations while enjoying a glass of wine. All in all, it was a real 'human factors' day.

ADDITIONAL INFORMATION

The D-CIS Human Factors Website
All presentations and abstracts can be found on the website: www.humanfactors.decis.nl. This website

is also used for further communication about D-CIS Human Factors activities as well as for other upcoming human-factors events.

D-CIS Human Factors on LinkedIn
Join the D-CIS Human Factors Group on LinkedIn! The D-CIS Human Factors Group aims at bringing together researchers and technology developers working in the human-factors field. Check the D-CIS Human Factors website for more information.

Organisation
The D-CIS Human Factors Day 2008 was organized by Drs. E.W.M. Rondeel and hosted by the D-CIS Lab. For more information about the D-CIS lab please visit the website: www.decis.nl.

For more information about the D-CIS Human Factors Day, contact Drs. Eefje Rondeel, Tel. +31-(0)15-2517865, Email: HumanFactors@icis.decis.nl

Participants from the following organisations attended the D-CIS Human Factors Day 2008: Hogeschool Rotterdam, TNO, University of Amsterdam, LEI Wageningen UR, Telecom Bretagne, France, Nemesis/Allosta, University of Twente, Thales Netherlands, Telematica Instituut, Thales France, TMS International, Noldus Information Technology, Vrije Universiteit Brussel, Almende, Peak & Valley, Technical University of Delft, Thales Consulting and Engineering UK.

The 16th WCCC and 13th Computer Olympiad

September 28 - October 5, 2008

Mark Winands
MICC, Universiteit Maastricht

The 16th World Computer Chess Championship and 13th Computer Olympiad were held from September 28 to October 5 at the Beijing Golden Century Golf club, Fangshan, Beijing, China. The organiser was the International Computer Games Association (ICGA). The events, together with the *Conference on Computers and Games 2008*, were sponsored by CAAI (Chinese Association for Artifical Intelligence), Northeastern University, ChessBase and Beijing Longlife Group. Below we describe the World Computer Chess Championship and Computer Olympiad in detail.

WORLD COMPUTER CHESS CHAMPIONSHIP

The World Computer Chess Championship (WCCC) is an annual event where computer chess engines compete against each other. The WCCC is open to all types of computers including microprocessors, supercomputers, and dedicated chess hardware. Twelve programs registered for the competition, but two of them were withdrawn by their authors for various reasons. So in the end only ten programs took part in the round-robin event this year. Nevertheless, the top-rated programs were present, being RYBKA (Vasik Rajlich, USA), SHREDDER (Stefan Meyer-Kahlen, Germany), HIARCS (Mark Uniacke, UK) and JUNIOR (Amir Ban and Shay Bushinsky, Israel). A curiosity was the brave participation of MOBILE CHESS (Huang Chen, China), the program running on a mobile phone. Probably, the program competed with the weakest hardware configuration in the WCCC since the eighties.

After a week of interesting battles, the winner was RYBKA. It was RYBKA's second world title and her performance was again impressive. She scored 8 points out of 9 games, allowing only two draws. HIARCS, whose last WCCC participation was in 1999, made a convincing comeback by securing the second place. Three times world-champion JUNIOR finished third. A side event of the WCCC was the blitz world championship. The program SJENG (Gian-Carlo Pascutto, Belgium) won this tournament for the first time. And what happened with MOBILE CHESS? The program finished last in both tournaments, scoring no point at all.


RYBKA's author Vasik Rajlich.

COMPUTER OLYMPIAD

The Computer Olympiad is a multi-games event in which computer programs compete against each other. For many board games the Computer Olympiad is an opportunity to take the "world's best computer player" title. This year a total of 75 programs participated from eleven different countries. There were competitions in 12 games: Amazons, Chinese Chess, Connect6, Dots and Boxes, 19×19 Go, 9×9 Go, Hex, International Draughts, Phantom Go, Pool, Shogi and Surakarta. Due to legal issues the 13th Computer Olympiad was temporarily renamed as the 13th International Computer Games Championship.

The most prestigious tournaments were both Go tournaments (9×9 and 19×19). Recently, there has been a paradigm shift in Computer Go from selective searchers equipped with lots of domain knowledge to so-called Monte-Carlo Tree Search (MCTS) programs. This year the MCTS program MOGO (INRIA, France) defeated a professional Go player in a 9-stones handicap game. MOGO, who won the 19x19 tournament last year, was therefore the clear favourite to win both tournaments. Another contender for the title was MANY FACES OF GO (David Fotland, USA). It is a commercial program, which won quite some tournaments in the past. However, recently the program was outperformed by all kind of freely available MCTS programs. Under the threat of losing his software publisher, David Fotland had to switch to the Monte-Carlo paradigm. This paid off because MANY FACES OF GO won both Go tournaments this year. In 9×9 it scored 15 out of 18, losing two games against MOGO. The French program finished third after losing the play-off for the silver medal against LEELA (Gian-Carlo Pascutto, Belgium). In 19×19 MANY FACES OF GO had a perfect score of 12 out of 12. MOGO and LEELA finished second and third, respectively.

The game of Amazons was a battle field between two paradigms. MCTS-based program INVADER (Richard Lorentz, USA) and alpha-beta searcher 8QP (De Koning, the Netherlands) fought for the gold medal. After 11 games both programs were on a par with 9 points. In a dramatic twelfth game INVADER defeated 8QP. This year MCTS won, but if it is the superior method for Amazons is unclear.

For the remaining tournaments, I will briefly list the winners. The Chinese Chess tournament was won by INTELLA (Chen and Wei, China). NCTU6-LITE (Lin *et al.*, Taiwan) took the first place in the Connect6 tournament. Dots and Boxes was won by THE SHARK (Fraser, USA). Good old draughts attracted 2 participants and was won by TDKING (Tillemans, Switzerland). WOLVE 2008 (Alberta Games Group, Canada) snatched the first spot in Hex. Tristan Cazenave (France) was able to win the Phantom Go competition for the second time with his program GOLOIS. The Computational Pool tournament was won by newcomer CUECARD (Stanford AI Lab, USA). TACOS (Iida Lab, Japan) received the gold medal in Shogi. SIA (Winands, The Netherlands) secured relative easily its tournament victory for Surakarta.

It is not known where next year the WCCC and Computer Olympiad will be held. ICGA president David Levy announced that there are five candidates to host the event next year. For more information visit http://tournaments.icga.org.

Inaugural Lecture 'Het Volgende Woord'

Antal van den Bosch, Tilburg University

Wilco Moerman and Ildikó Flesch
Tilburg University

On the 10th of October 2008, dr. Antal van den Bosch held his inaugural address at the Tilburg University, titled *Het volgende woord*. Professor Antal van den Bosch is developing tools for machine learning and language technology. The main contribution of his research lies on the intersection of these two fields. In particular, he is interested in computers that learn to understand and generate natural language.

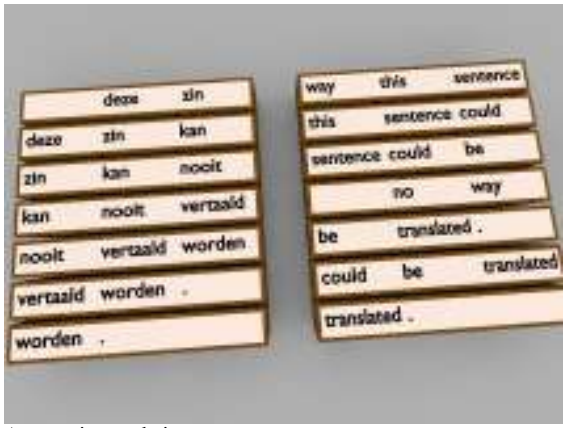
Professor Antal van den Bosch thinking about his next word.

During his inaugural lecture he demonstrated some of the work that is done in his group. Words in natural language are related to each other and come in pairs. Some combinations of words (like 'ik zeg maar zo') nearly always appear together. Statistical correlations between words can be distilled from data: a computer program can scan texts for word groups that have the following property: if you have all words in a group, except for the last word, you can predict the last word with a high probability. In fact, as Antal demonstrated, when you have enough data (some 50 million words), the accuracy of this prediction reaches some 50 percent. Obviously, some words are harder to predict than others: words at the start of a new part in a sentence are more difficult.

For a first investigation of the above prediction on the difficulty of the place of 'the following word', two examples were given to illustrate the strength of the statistical approach. The first concerns a typically Dutch problem: where to put a 'd' and where to put a 'dt'. Verbs can have either ending depending on the grammar. Conventional grammar checkers do not perform well on this problem. However, the statistical approach that Antal

developed is easily adapted to this problem. Instead of predicting the next word, we are now interested in predicting a word, based on the words preceding and following it. The program now needs to scan for these kinds of combinations.

The second example concerns automatic translation. Based on many examples of sentences and their translations, statistical correspondences between groups of words and their counterparts in another language, can be found.



Automatic translation.

Although his approach may not seem shocking to people working with large statistical models, it certainly is for those working with explicit grammar models. The question would be: 'where is the knowledge?' The answer is that the knowledge about grammar is encoded implicitly in the statistical correlations between words.

http://ilk.uvt.nl/hetvolgendewoord

The KION Prize for the Best Master Thesis in AI in the Year 2007-2008

Maarten van Someren
University of Amsterdam

KION is an informal meeting of the Dutch university programmes in Artificial Intelligence. In the Netherlands there are AI programmes at Maastricht, UvA and VU Amsterdam, Utrecht (CKI and Technical AI), Groningen and Nijmegen. Representatives of these AI programmes meet every year to exchange their experiences and discuss current topics like accreditations, student AI conference, entry regulations, etc. One of the activities of KION is to organize a competition for the best Master thesis in AI. Earlier prizes were awarded to Remco de Boer & Jelle Kok (University of Amsterdam) for a project on multi-agent systems and Viktor de Boer (University of Amsterdam) for a model of the spacing effect in human memory. This year each AI programme could submit one candidate who finished the thesis in the academic year 2007-2008. Other universities teach courses on AI and students also do Master projects on topics that are in the field of AI, but for practical reasons this KION prize only included KION AI programmes. LogicaCMG is funding the prize which consists of travel costs for the BNAIC (or a comparable conference).

The members of the jury were John-Jules Meyer (UU), Stefan Schlobach (VU), Jos Uiterwijk (Maastricht), Marco Wiering (Groningen), Maarten van Someren (UvA), Paul Kamsteeg (Radboud Nijmegen), and Thomas Mueller (UU CKI). They ranked all theses except the entry of their own programme. The final rankings were as follows.

University	Title	Author	Rank
Vrije Universiteit	Graph-Based Quantification of Self-Organisation in Molecular Simulations	Konrad Diwold	2
Utrecht CKI	Implementation of Argument-Based Practical Reasoning	Wietske Visser	7
Utrecht Technical AI	Emerging Symbols	Stefan Leijnen	6
Groningen	The Effects of Speech Rate on Pronoun Inter-pretation: Evidence of Bidirectional Optimization in Language?	Jacolien van Rij	1
Radboud Nijmegen	Actual Avatar Behavior Tracking in Second Life	Patrick Ozer	5
Maastricht	Adaptive Spatial Reasoning for Turn-Based Strategy Games	Maurice Bergsma	3-4
Univ. Amsterdam	Visual Trajectory Based SLAM	Isaac Esteban	3-4

The submissions vary quite substantially. Stefan Leijnen addressed the philosophical problem of grounding language in experience. After an extensive, well-written discussion of "grounding" and the Searle's Chinese Room thought experiment, a simulation with neural networks with a genetic algorithm on top is used to learn a coupling between (abstract) images and (abstract) lexical items. The network can also associate lexical items with each other, which gives a kind of grounding effect. Wietske Visser built an implementation of an argument-based reasoning model using the formally specified semantics, and cleared up some holes and inconsistencies on the way. Konrad Diwold

designed and implemented a simulation of molecular processes of molecules re-organizing themselves during chemical processes, using graphs as models and graph properties to model the molecular physics. The result is a tool that can be used in molecular chemistry and biology to explain and predict experimental results. Patrick Ozer collected behavioral data from avatars in Second Life and used these to find patterns that can predict if they will remain active in Second Life or how much virtual money they will spend. Maurice Bergsma shows how in a turn-based gaming environment, an agent can adaptively learn strategies that are effective against other agents. The system is completely operational which involved a large amount of work and many decisions on modeling space and spatial reasoning, agents' strategies and environments. Isaac Esteban shows that an omnivideo (360 degree view) system can build an accurate map of indoor office environments even under low light conditions. Two panoramic images and the relative heading and orientation of these yield enough information to create a consistent trajectory map and compensate for the accumulation of error in odometry. A mobile robot can then create and maintain accurate maps of a small office environment in real time.

Marco Wiering hands over the KION-prize certificate to Dirkjan Krijnders, as representative for Jacolien van Rij.

The winning thesis by Jacolien van Rij, supervised by Hedderik van Rijn, Petra Hendriks, and Jennifer Spenader, concerns a computational model of comprehension of reflexive pronouns. Children learn these relatively late. An explanation for this is that using these pronouns requires a shift in perspective to the audience. For younger children this takes too much time. An experiment in which children were given more time shows that this indeed reduces their errors. Van Rij modeled the results using John Andersons ACT-R model of human memory. This project gives an excellent combination of ideas from linguistics and psycholinguistics, experimental data from psychology and computational modeling from AI. It is very clear from the report that much work was done in all these areas. ACT-R was used in an elegant way to provide a detailed explanation of the behavioral data, making the global ideas of the psycholinguists more concrete and relating them to properties of the human cognitive system. Congratulations!

Several evaluators commented that they found all reports of high quality and that they found it very hard to compare such different types of research and different styles of reports. I was in general quite impressed by the amount of work that was done in the projects to end up with complete running systems. I am already looking forward to next year's submissions!

PH.D. THESIS ABSTRACTS

Essays on Some Recent Penalization Methods with Applications in Finance and Marketing

Ph.D. thesis abstract
Georgi Nalbantov

Promotor: Prof.dr. P.J.F. Groenen
Date of defense: September 11, 2008

The subject of this Ph.D. research is within the areas of Econometrics and Artificial Intelligence. More concretely, it deals with the tasks of statistical

regression and classification analysis. New classification methods have been proposed, as well as new applications of established ones in the areas of Finance and Marketing.

The bulk of this Ph.D. research centres on extending standard methods that fall under the general term of loss-versus-penalty classification techniques. These techniques build on the premises that a model that uses a finite amount of available data to be trained on should neither be too complex nor too simple in order to possess a good forecasting ability. New proposed classification techniques in this area are Support Hyperplanes, Nearest Convex Hull classification and Soft Nearest Neighbor.

Next to the new techniques, new applications of some standard loss-versus-penalty methods have been put forward. Specifically, these are the application of the so-called Support Vector Machines (SVMs) for classification and regression analysis to financial time series forecasting, solving the Market Share Attraction model and solving and interpreting binary classification tasks in Marketing.

In addition, this research focuses on new efficient solutions to SVMs using the so-called majorization algorithm. This algorithm provides for the possibility to incorporate various so-called loss functions while solving general SVM-like methods.

Communication of IT-Architecture

Ph.D. thesis abstract
Henk Koning

Promotores: Prof.dr. S. Brinkkemper and Prof.dr. J.C. van Vliet
Date of defense: September 24, 2008

This Ph.D. thesis contains the results of various research activities that fall under the topic 'communication of IT-architecture'. The term IT-architecture defines the various types of architecture that can be found in the domain of Information Technology (software architecture, enterprise architecture, etc.).

Our overall conclusion is that good communication of IT-architecture is a matter of "meaningful structuring". This has been worked out in the following sub-topics.

A collection of 158 guidelines is presented to improve the readability of IT-architecture diagrams. These guidelines cover visual attributes like layout, hierarchy, colour, lines, graphics and text. Additional guidelines address the design of diagrams and give support for integrating diagrams in text.

IEEE Std 1471 proposes a conceptual model for documenting IT-architecture. Central concepts are 'stakeholder concern' and 'views'. For four real life, pre-IEEE 1471, IT-architecture documents we investigated the pattern of relevancy to the stakeholder concerns. For each document a table was compiled that shows the relation between the parts of the document and the concerns of the stakeholders, as perceived by the authors. These tables show scattered patterns. For a stakeholder concern often only 25% - 50% of the document is relevant. The patterns show no evident way to convert the documents into IEEE 1471 views. We conclude that a structure of IEEE 1471 views needs to be incorporated in the setup of an IT-architecture description right from the start.

To achieve this, we propose a method to define IEEE 1471 viewpoints. The method consists of four steps: compile stakeholder profiles, summarize architectural design, relate the summary to the concerns of the stakeholders, and define viewpoints. For each step support is offered in the form of Word templates or Visio diagrams.

The IT-architects of one of the companies that took part in our research indicated that they did not like to define their own viewpoints, but rather work from available library viewpoints. To produce these for them, a round of stakeholder interviews was designed and an inquiry tool was compiled to solicit concerns (topics that are meaningful to the stakeholders). The tool is a questionnaire that covers a range of strategic IT-aspects. The tool was used to evaluate the existing architectural documentation practice.

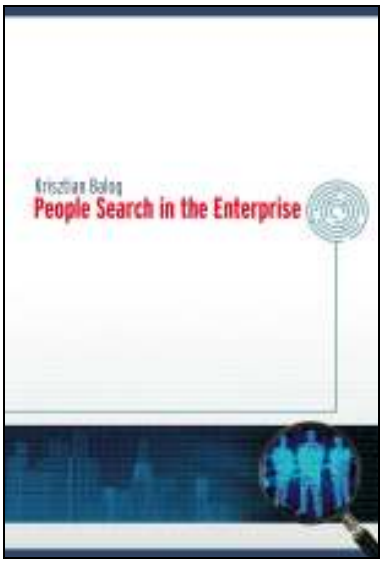
So many architecture frameworks have been proposed in the past 15 years. We wondered which lessons could be learned from them. Based on an overview of 23 architecture frameworks we present nine base dimensions that structure collections of architecture documents: Type of information, Scope, Detail level, Stakeholder, Transformation, Quality attribute, Meta level, Nature and Representation. Architectural information is most often structured in two dimensions: one dimension addresses the type of information, and a second one has a sequential order.

Finally, for easy communication a lightweight Enterprise Architecture Modeling method is presented, based on these key architectural concepts: Enterprise, Information flow, Enterprise function, Flow of products & service, Scenario step, Application, Computer, Network. EAM structures the information in five diagram types: Supply Chain Diagram, Enterprise Function Diagram, Scenario Overlay, Application Overlay, and System Infrastructure Diagram.

People Search in the Enterprise

Ph.D. thesis abstract
Krisztian Balog

Promotor: Prof.dr. M. de Rijke
Date of defense: September 30, 2008



The enormous increase in recent years in the amount of information available online has led to a renewed interest in a broad range of Information Retrieval (IR)-related areas that go beyond plain document retrieval. Some of this new attention has fallen on a subset of IR tasks, in particular *entity retrieval*. This emerging area of entity retrieval differs from traditional document retrieval in a number of ways. Entities are not represented directly (as retrievable units such as documents), and we need to identify them "indirectly" through occurrences in documents. This brings new, exciting challenges to the information retrieval and extraction fields. In this thesis we focus on one particular type of entity: *people*.

In an enterprise setting, a key criterion by which people are selected and characterized is their level of expertise with respect to some topic. Finding the right person in an organization with the appropriate skills and knowledge is often crucial to the success of projects being undertaken.

The work described in this thesis focuses exclusively on core algorithms for two information access tasks: expert finding and expert profiling. The goal of *expert finding* is to identify a list of people who are knowledgeable about a given topic ("*Who are the experts on topic X?*"). This task is usually addressed by uncovering associations between people and topics; commonly, a co-occurrence of the name of a person with topics is assumed to be evidence of expertise of the person on the topic. An alternative task, using the same idea of people-topic associations, is *expert profiling*, where the task is to return a list of topics that a person is knowledgeable about ("*What topics does person Y know about?*").

The main contribution of the thesis is a generative probabilistic modeling framework for capturing the expert finding and profiling tasks in a uniform way. On top of this general framework two main families of models are introduced, by adapting generative language modeling techniques for document retrieval in a transparent and theoretically sound way.

Throughout the thesis we extensively evaluate and compare these baseline models across different organizational settings, and perform a systematic exploration and analysis of the experimental results obtained. We show that our baseline models are robust yet deliver very competitive performance.

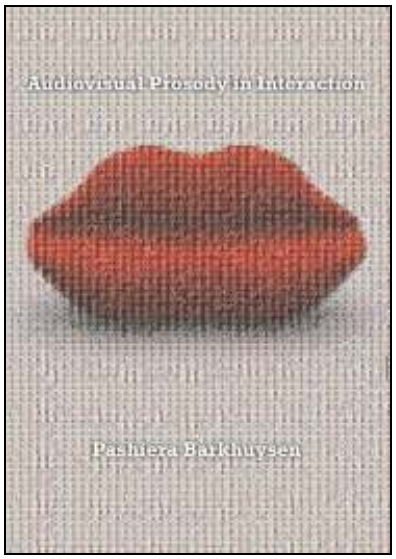
Through a series of examples we demonstrate that our generic models are able to incorporate and exploit special characteristics and features of test collections and/or the organizational settings that they represent.

We provide further examples that illustrate the generic nature of our baseline models and apply them to finding associations between topics and entities other than people.

Audiovisual Prosody in Interaction

Ph.D. thesis abstract
Pashiera Barkhuysen

Promotores: Prof.dr. M.G.J. Swerts and Prof.dr. E.J. Krahmer
Date of defense: October 3, 2008



People talk to exchange information. Yet understanding another person involves far more than just the content of the message. Only with the correct intonation and facial expression does the message acquire meaning. People can improve their communication skills by deliberately managing these non-verbal messages.

The extra layer of information that you add to a message when speaking is called prosody. The most important conclusion is that prosody lies not only in the voice but also in the facial expression. Further it appears that auditory and visual information together are more effective than the same information separately.

That a text is more than a series of words becomes clear as soon as you read a story aloud, for example, Little Red Riding Hood. At the end of a sentence you drop your voice. The pitch of your voice also changes when the Wolf speaks. Certain words receive extra emphasis. For example, 'Grandmother, what a great mouth you have!' 'That is to eat you up!'. Not only do you use your voice to make the story frightening but your face adopts a frightening expression as well. When reading aloud you do that deliberately. Unconsciously, you do the same when talking to somebody.

Barkhuysen used different methods to distinguish the effect of the content and the other information. Czech study subjects were shown video clips with Dutch sentences such as 'God, I feel great!, or 'I want to sleep and never wake up again.' Some were shown both the images and the sound and others just the sound or the images. The Czechs could indicate in all cases whether the sentence had a positive or negative meaning. Research with Dutch study subjects revealed, for example, that people can both see and hear when somebody has finished speaking.

Research into prosody provides information about the interactions between speakers and listeners. That is relevant for the development of speech computers, such as the NS-reisplanner (Travel planner for the Dutch National Railways). It also explains certain communication problems. For example, some people are interrupted a lot. That is not due to a lack of domination. The former British Prime Minister Margaret Thatcher was also regularly interrupted. The Iron Lady took no notice of this and carried on talking. Yet unconsciously she gave signals that she had finished speaking. One possible solution is to adjust the intonation and only to return eye contact when you have finished speaking.

Efficient and Equitable Exchange in Air Traffic Management Plan Repair using Spender-signed Currency

Ph.D. thesis abstract
Geert Jonker

Promotor: Prof.dr. J-J.Ch. Meyer
Date of defense: October 6, 2008

Air traffic management (ATM) is concerned with planning of air traffic in the air and on the ground. At any moment up to the moment of execution, a plan may become infeasible, for instance as a result of delays or mechanical failures. In that case a plan needs to be repaired. This may involve delays, advances and resource changes for one or more aircraft.

A current trend in aviation research is that of Collaborative Decision Making. In this philosophy, operational decisions are the result of a negotiation between all parties involved, rather than taken by a single authority.

We studied the problem of facilitating collaborative plan repair in ATM. Airlines are competitors, who care primarily about their own efficiency. However, they can often help each other. Airlines will be willing to help each other if they know that given help will be reciprocated. In fact, the process of giving and receiving help can be viewed as a social exchange process. An established fact in the social sciences is that a social exchange is perceived to be equitable by its participants if each agent gives as much to others as it receives from others. We derive from this a measure for the equity and thus the acceptability of the exchange.

Money is an administrative system for reciprocal exchange. If agents pay each other for received services, and the prices correspond to the utilities of the tasks performed, the financial balances of agents indicate their entitlements and debts to the society. We show that, if balances of agents are bounded from below, the resulting exchange is bounded inequitable.

However, agents might choose to lie about utilities. Especially if a service is of much value to the receiver, an agent can increase its price. We call this exploitation. An exploiting agent earns more money than it should, and can spend this to receive extra help from others. The result is that the inequity of exchange can grow arbitrarily large.

Agents could in principle penalize exploiters if they can estimate the amounts of exploitation well enough. But this strategy is not robust, as it is attractive to deviate from it. This can result in ever growing inequity.

We propose a new currency system, the spender-signed currency system. In this system, each agent signs every credit it uses. The value of a single credit is determined by multiplying the reputations of the agents that have signed that credit. If an exploiter is given a low reputation by the others, it will find that the credits it uses lose value. In this way exploiters are penalized. Importantly, it is not attractive to deviate from the penalizing strategy.

We prove the effectiveness of the spender-signed currency system analytically for a relatively specific case, and empirically for a more general case. We show that the spender-signed currency system functions well under reduced levels of trust. Also, we explore some other interesting properties. For instance, the system enables agents to exchange, also indirectly, predominantly with allies. This in contrast with standard currency, where agents usually trade, indirectly, with all other agents, including rivals.

Pro-Active Medical Information Retrieval

Ph.D. thesis abstract
Loes Braun

Promotores: Prof.dr. H.J. van den Herik and Prof.dr. A. Hasman
Date of defense: October 29, 2008

Over the past years, various studies have proven that the retrieval of relevant, patient-related literature is vital to the quality of care. The number of medical errors has reached alarming heights and there is evidence that the use of information technology may reduce the number of medical errors. However, several obstacles in the medical domain obstruct successful medical information retrieval (IR).

In this thesis we investigate how to support physicians in the IR process. We believe that tailored IR support provides physicians with patient-related

information and improves the quality of care. We investigate how to overcome two specific obstacles to medical IR: (a) the inadequate expression of information needs and (b) the time-consuming nature of the IR task. Consequently, we formulate a two-fold problem statement.

PROBLEM STATEMENT (PS)

PS1: *To what extent can a physician's information needs – implicit and suppressed – be formulated automatically?*

PS2: *To what extent can the automatically formulated information needs be used as a starting point for the retrieval of relevant and patient-related literature?*

The problem statement results in five research questions. PS1 gives rise to three research questions (RQ1, RQ2, and RQ3), PS2 gives rise to two research questions (RQ4 and RQ5).

RQ1: *How can the information needs of a physician be modelled?*

RQ2: *How can patient-related information needs be formulated?*

RQ3: *How can different medical terminologies be mapped?*

RQ4: *How can a literature overload be prevented?*

RQ5: *How can the* IR *system be designed to be unobtrusive?*

The answers to the research questions are incorporated into a medical IR system: the Medical Information Retrieval Agent (MIRA).

In Chapter 2 we focus on RQ1: *How can the information needs of a physician be modelled?* We explain that modelling of information needs is an important step in the process of automatically formulating information needs. Without a model, it is impossible to handle all possible information needs that physicians may have. We use two distinct methods to identify the physicians' information needs, viz. a literature study and interviews with physicians. These methods result in a set of 181 identified information needs. Subsequently, the information needs are transformed into information-need templates: abstract representations of information needs. For the transformation, three methods are used: analysis, abstraction, and refinement. The application of these methods results in a set of 102 templates. These templates constitute INMOD, a model of physicians' information needs. INMOD is used to formulate a physician's information needs in a specific care situation.

Chapter 3 focuses on RQ2: *How can patient-related information needs be formulated?* and RQ3: *How can different medical terminologies be mapped?* In response to RQ2, we design an approach to bridge the gap from patient data to retrieved literature. The approach comprises five steps: (1) selecting templates, (2) extracting appropriate patient data, (3) translating patient data, (4) formulating information needs, and (5) retrieving literature. From the evaluation of MIRA we may conclude that our approach is feasible and can be generalized to other electronic medical records (EMRs), as long as they use a clear information structure that is programmatically accessible. However, the evaluation indicates that the number of formulated information needs per interaction is still high, as is the number of retrieved documents per interaction. In this way, physicians would be overloaded by information. So, we may conclude that our approach (up to this point) is not sufficiently adequate. In response to RQ3, we explain that Dutch non-standardized terms in the EMR present an obstacle to our approach. To address this obstacle, we investigate two different translation mechanisms, an automatic translation mechanism (AUTOTRANS) and a translation mechanism employing a manually constructed mapping (MANUTRANS). Experiments show that MANUTRANS provides us with the best translation results.

Chapter 4 focuses on RQ4: *How can a literature overload be prevented?* We investigate two approaches meant to prevent a literature overload. The first approach is to reduce the number of information needs. One way to achieve this is to discard information needs directly. There are four knowledge types that may be used to determine whether an information need should be discarded, viz. (a) formulation history, (b) entry order, (c) domain knowledge, and (d) number of retrieved documents. According to our experiments, the optimal formulation performance of MIRA is reached by using all four knowledge types as a discarding approach. The results of our tuning experiment indicate that this discarding approach reduces the average number of formulated information needs to a manageable number. The second way to reduce the number of information needs is to rank information needs according to their relevance and select the ten most-relevant ones (if more than ten information needs are formulated). There are three knowledge types that may be used to determine the relevance of an information need: (a) specialism, (b) entry time, and (c) number of retrieved documents. Optimal ranking performance is expected by using knowledge concerning the number of retrieved

documents. The second approach to prevent a literature overload is to improve the precision of the retrieved documents. We investigate two precision enhancements: (a) patient-related document scoring and (b) patient-related document clipping. Optimal retrieval performance is expected when using patient-related document clipping as our precision-enhancement approach.

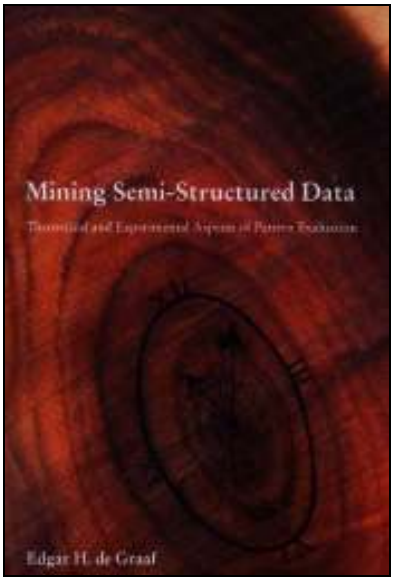
Chapter 5 provides an evaluation of MIRA and answers RQ5: *How can the* IR *system be designed to be unobtrusive?* The assessment of MIRA's performance is provided by nine physicians with three distinct levels of medical experience, viz. attending physicians, resident physicians, and recently graduated physicians. MIRA is evaluated with respect to four evaluation criteria: (a) retrieval performance, (b) formulation performance, (c) ranking performance, and (d) unobtrusiveness. With respect to the retrieval performance, we observe that the investigated precision enhancements (patient-related document scoring and patient-related document clipping) do not enhance the precision of the retrieved document set. Consequently, the final version of MIRA does not incorporate any of the precision-enhancement approaches. The evaluation of the formulation performance indicates that MIRA's performance is adequate according to the attending physicians and the resident physicians. For the recently graduated physicians, the results indicate that MIRA is capable of generating implicit information needs and retrieving documents answering the implicit information needs. With respect to the ranking performance, we observe that the ranking method to be used depends on the type of physician using MIRA. Attending physicians prefer ranking according to their specialism, resident physicians prefer ranking according to entry time of the patient data, and recently graduated physicians have no explicit preference for any of the ranking criteria. With respect to the unobtrusiveness of MIRA (in response to RQ5), we may state that MIRA can be designed to be unobtrusive by (a) preventing workflow interruptions, (b) preventing literature overload, and (c) preventing retrieval of non-relevant literature. The current version of MIRA is unobtrusive with respect to prevention of workflow interruptions. However, MIRA is obtrusive with respect to literature overload and the retrieval of non-relevant literature. Consequently, MIRA has to be improved with respect to the latter two aspects.

In Chapter 6 we use the answers to the five research questions to give an answer to our problem statement. With respect to PS1, we may conclude that it is possible to formulate a physician's information needs automatically. This statement holds for explicit, implicit, and suppressed information needs. With respect to PS2, we may conclude that the information needs formulated by MIRA can be used as a starting point for information retrieval under certain conditions. Finally, Chapter 6 discusses four topics with respect to our research and provides three directions for future research.

Mining Semi-Structured Data: Theoretical and Experimental Aspects of Pattern Evaluation

Ph.D. thesis abstract
Edgar H. de Graaf

Promotores: Prof.dr. J.N. Kok
Date of defense: October 29, 2008



The thesis, within the data-mining research area, deals in particular with the discovery of patterns in semi-structured data in the form of itemsets, sequences, trees and graphs. Examples of possible datasets are:

- datasets with molecules satisfying certain properties,
- datasets with information about the behaviour of users of a website,
- datasets with XML documents.

One could for instance observe that certain (trans)actions occur close together in time, or at regular intervals. In order to discover such patterns, new measures of interestingness (besides the classical support that just counts the number of occurrences) are developed. It is important that these measures have the property that subpatterns of

interesting ones are also interesting. If this applies, efficient computation of interesting patterns is possible even for large datasets. The thesis presents several possible measures, e.g., for so-called consecutive, stable and balanced patterns, and discusses their merits.

Another aspect of this approach is the presentation, or rather visualization, of the interesting patterns. Because of the abundance of such patterns, special care has to be taken. In the thesis several possibilities are discussed for the case of graph patterns. Here one is looking for the co-occurrence of subgraphs in a large set of graphs, e.g., fragments of molecules with some biological activity. Network techniques are used to produce attractive visualizations that might be of help for chemists.

New Positions and New Faces

Jaap van den Herik
TiCC, Tilburg

The academic world is shifting towards a world in which ambitions and preferences are clustered. In this procedure, the first step is performed by the students when they choose a place for their Bachelor study and thereafter for their Master study. The second step is by the Ph.D. students. It is still a good advice to Master Students to choose another University for their Ph.D. study than the University where they will receive their Master title. Currently, in our list of announcements, we have many Ph.D. students and an investigation with respect to their selection mechanism/selection criteria would be interesting. In the academic world, the next step is then finding a post-doc position, and so on.

For a long time it seemed that a full professor position would be the final destination, but recently we saw that the trend started by Professor Catholijn Jonker (moving from Amsterdam to Nijmegen for a step to the professor ranks and then clustering in Delft) was followed by Eric Postma and Jaap van den Herik. We see them mentioned below in the list of inaugural addresses and farewell speeches. The new clusters are in Delft and Tilburg.

Further congratulations are due to Antal van den Bosch, Jan Scholtes, Frank Harmsen, and Wessel Kraaij for their appointments and their (already realised) intentions to accept the dignity of a professorship with an inaugural address.

The list of successful Ph.D. students is large, meaning that the production of the scientific researchers in the environment of Artificial Intelligence is considerable. The diversity of the contents is large, moreover all topics are attractive and many of them would not have been thought of some ten years ago.

The list of promovendi clearly shows the capability of the current computers and the development of ideas among the *intelligentia*. The BNVKI Editorial Board wholeheartedly congratulates all promovendi and their supervisors.

Pashiera Barkhuysen (October 3, 2008). *Audiovisual Prosody in Interaction*. Universiteit van Tilburg. Promotores: Prof.dr. M.G.J. Swerts (UvT), Prof.dr. E.J. Krahmer (UvT).

Geert Jonker (October 6, 2008). *Efficient and Equitable Exchange in Air Traffic Management Plan Repair using Spender-signed Currency*. Universiteit Utrecht. Promotor: Prof.dr. J-J. Ch. Meyer (UU). Co-promotor: Dr. F. Dignum (UU).

Rex Arendsen (October 7, 2008). *Geen Bericht, Goed Bericht. Een onderzoek naar de effecten van de introductie van elektronisch berichtenverkeer met de overheid op de administratieve lasten van bedrijven*. Universiteit van Amsterdam. Promotor: Prof.dr. T.M. van Engers (UvA).

Ayman Khedr (October 8, 2008). *Adoption of New Technologies in a Highly Uncertain Environment*. Universiteit Leiden. Promotores: Prof.dr. J. Kok (UL) and Prof.dr. H. Borgman (UL).

Dennis Reidsma (October 9, 2008). *Annotations and Subjective Machines – Of Annotators, Embodied Agents, Users, and Other Humans*. Universiteit van Twente. Promotor: Prof.dr.ir. A. Nijholt (UT). Co-promotor: Dr.ir. H.J.A. op den Akker (UT).

Trung H. Bui (October 9, 2008). *Toward Affective Dialogue Management using Partially Observable Markov Decision Processes*. Universiteit van Twente. Promotor: Prof.dr.ir. A. Nijholt (UT). Co-promotor: Dr. J. Zwiers (UT).

Loes Braun (October 29, 2008). *Pro-Active Medical Information Retrieval*. Maastricht University. Promotores: Prof.dr. H.J. van den Herik (UvT) and Prof.dr. A. Hasman (UvA). Co-promotor: Dr. F. Wiesman (UvA).

Edgar H. de Graaf (October 29, 2008). *Mining Semi-Structured Data: Theoretical and experimental aspects of pattern evaluation*. Universiteit Leiden. Promotor: Prof.dr. J.N. Kok (UL). Co-promotor: Dr. W.A. Kosters (UL).

Frank Terpstra (November 6, 2008). *Scientific Workflow Design; theoretical and practical issues.* Universiteit van Amsterdam. Promotor: Prof.dr. P.W. Adriaans (UVA). Co-promotor: Dr. G.R. Meijer (UVA).

Hubert Vogten (November 7, 2008). *Design and Implementation Strategies for IMS Learning Design*. Open Universiteit Nederland. Promotor: Prof.dr. E.J.R. Koper (OU). Co-promotor: Dr. J.M. van Bruggen (OU).

Anne Helsdingen (November 7, 2008). *Training Complex Judgment:The Effects of Critical Thinking and Contextual Interference*. Open Universiteit Nederland. Promotor: Prof.dr. J.J.G. van Merriënboer (OU). Co-promotor: Dr. T. van Gog (OU).

Wouter van Attevelt (November 11, 2008). *Semantic Network Analysis: Techniques for Extracting, Representing and Querying Media Content.* Vrije Universiteit. Promotor: Prof.dr. F. van Harmelen (VU), Prof.dr. J. Kleinnijenhuis (VU). Co-promotor: Dr. S. Schlobach (VU).

Jeroen de Knijf (November 19, 2008). *Studies in Frequent Tree Mining*. Universiteit Utrecht. Promotor: Prof. dr. A.P.J.M. Siebes (UU). Co-promotor: Dr. A.J. Feelders (UU).

Marijn Huijbregts (November 21, 2008). *Segmentation, Diarization and Speech Transcription: Surprise Data Unraveled*. University of Twente. Promotor: Prof. dr. F.M.G. de Jong (UT). Co-promotor: dr. R.J.F. Ordelman (UT).

Ildikó Flesch (November 27, 2008). *On the Use of Independence Relations in Bayesian Networks*. Radboud Universiteit Nijmegen. Promotor: Prof.dr. Th. van der Weide (RUN). Co-promotor: Dr. P. Lucas (RUN).

Ben Torben-Nielsen (December 3, 2008). *Dendritic Morphology: Function Shapes Structure.* Universiteit van Tilburg. Promotores: Prof.dr. H.J. van den Herik (UvT), Prof.dr. E.O. Postma (UvT). Co-promotor: Dr. K. Tuyls (TU/e).

Gijs Geleijnse (December 8, 2008). *Information Extraction from the Web using a Search Engine.* Eindhoven University of Technology. Promotor: Prof. dr. E. Aarts (TU/e). Co-promotor: Dr. J. Korst (TU/e).

INAUGURAL ADDRESSES

With much pleasure we announce the following five inaugural addresses.

Prof.dr. Antal van den Bosch (October 10, 2008). *Het Volgende Woord*. Tilburg University, Aula, Tilburg, 16.15 hours.

Prof.dr. C. Jonker (December 10, 2008). *Met Machines Meer Mens: samen sterk in onderhandelen*. Delft University of Technology, 15.00 hours.

Prof.dr. J. Scholtes (January 23, 2009). Maastricht University, Aula, Maastricht, 16.30 hours.

Prof.dr. A.F. Harmsen (April 17, 2009). *Knowledge Management of Global Work*. Maastricht University, Aula, Maastricht, 16.30 hours.

Prof.dr.ir. W. Kraaij (June 25, 2009). *Information Filtering and Aggregation*. Radboud University Nijmegen.

FAREWELL SPEECH

Prof.dr. H.J. van den Herik and Prof.dr. E.O. Postma (October 16, 2008). *Veertig Jaar, Zes Doorbraken.* Maastricht University, Aula, Maastricht, 16.00-17.00 hours.

Section Editor
Richard Starmans

Advanced SIKS Course "Business Process Management"

INTRODUCTION

On November 6 and 7, 2008 the School for Information and Knowledge Systems (SIKS) will organize an advanced course on "Business Process Management". The course takes two days, will be given in English and is part of the so-called Advanced Components Stage of the Educational Program for SIKS-Ph.D. students. Although these courses are primarily intended for SIKS-Ph.D. students, other participants are not excluded. However, their number of passes will be restricted and depends on the number of students taking the

course. The course is given by experienced lecturers actively involved in the research areas related to the topics of the course. Especially Ph.D. students working on the SIKS-focus "Enterprise Information Systems" are strongly encouraged to participate.

Location: Conference center Landgoed Huize Bergen in Vught.

SCIENTIFIC DIRECTORS

- Prof. dr.ir. W.M.P. van der Aalst (TU/e)
- Prof. dr. M.U. Reichert (Universität Ulm)

PROGRAM

Thursday, November 6, 2008

09.00 - 09.30	Coffee/opening
09.30 - 11.00	*Basic Concepts and Technologies for Business Process Management* (Manfred Reichert)
11.00 - 11.15	Break
11.15 - 12.45	*Formal Foundations of Business Process Management (Systems)* (Wil van der Aalst)
12.45 - 13.45	Lunch
13.45 - 15.15	*Intelligent Design ... of Business Processes!* (Hajo Reijers)
15.15 - 15.45	Break
15.45 - 17.15	*Workflow Patterns: Towards a Foundation for BPM* (Nick Russell

Friday, November 7, 2008

09.00 - 10.30	*Process Mining* (Wil van der Aalst)
10.30 - 11.00	Break
11.00 - 12.30	*Flexibility in Business Process Management* (Manfred Reichert)
12.30 - 13.30	Lunch
13.30 - 15.00	*iTasks – Specifying Workflows in a Functional Language* (Rinus Plasmeijer)
15.00 - 15.30	Break
15.30 - 17.00	*BPM|one by Pallas Athena, use of BPM concepts and technology in commercial software* (Paul Eertink)

For more information about the content of the course, contact Wil van der Aalst or Manfred Reichert. For all details on SIKS educational program, contact office@siks.nl.

REGISTRATION

In the conference center there is a limited number of places and there is interest from other groups in the topic as well. Therefore, an early registration is required.

Deadline for registration for SIKS-Ph.D. students: October 21, 2008.

Basic SIKS Course "Research Methods and Methodology for IKS"

INTRODUCTION

On November 24-26, 2008, the School for Information and Knowledge Systems (SIKS) organizes the annual three-day course "Research Methods and Methodology for IKS". The location will be Conference Center Woudschoten in Zeist. The course will be given in English and is part of the educational Program for SIKS-Ph.D. students. Although the course is primarily intended for SIKS-Ph.D. students, other participants are not excluded. However, their number of passes will be restricted and depends on the number of SIKS-Ph.D. students taking the course.

"Research Methods and Methodology for IKS" is relevant for all SIKS-Ph.D. students (whether working in computer science or in information science). The primary goal of this hands-on course is to enable these Ph.D. students to make a good research design for their own research project. To this end, it provides an interactive training in various elements of research design, such as the conceptual design and the research planning. But the course also contains a general introduction to the philosophy of science (and particularly to the philosophy of mathematics, computer science and AI). And, it addresses such divergent topics as "the case-study method", "elementary research methodology for the empirical sciences" and "empirical methods for computer science".

"Research Methods and Methodology for IKS" is an intense and interactive course. First, all students enrolling for this course are asked to read some pre-course reading material, comprising some papers that address key problems in IKS-methodology. These papers will be sent to the participants after registration. Secondly, all participants are expected to give a brief characterization of their own research project/proposal**,** by answering a set of questions, formulated by the course directors, and based on the aforementioned literature.

COURSE COORDINATORS

Hans Weigand (UvT), Roel Wieringa (UT), John-Jules Meyer (UU), Hans Akkermans (VU), and Richard Starmans (UU).

PROGRAM

Monday, November 24, 2008

09.30	Coffee
10.00-10.15	Opening (dr. Richard Starmans)
10.15-11.15	*Introduction* (dr. Hans Weigand)
11.15-12.30	*Conceptual design* (dr. Hans Weigand) (including assignment)
12.30	Lunch
13.45-15.15	*Philosophy of formal sciences* (prof. dr. J.-J. Meyer)
15.15-15.45	break
15.45-17.15	*Philosophy of empirical sciences* (dr. Richard Starmans)

Tuesday, November 25, 2008

09.00-09.45	*Research Design* (prof.dr. Roel Wieringa) (including assignment)
09.45-10.00	break
10.00-12.30	*Research Design* (prof.dr. Roel Wieringa) (including assignment) Example research project Guido de Croon
12.30	Lunch
13.30-15.30	*Research Design* (prof.dr. Roel Wieringa) (including assignment)
15.30-16.00	break
16.00-17.15	*Research methods I* (prof.dr. Hans Akkermans)

Wednesday, November 26, 2008

09.00-09.30	Assignment/discussion
09.30-09.45	break
09.45-11.00	*Research methods in MAS* (prof.dr. Catholijn Jonker)
11.00-12.00	*Research challenges in the Netherlands* (prof.dr. Peter Apers)
12.00-13.00	Lunch
13.00-14.30	*Simulation as a research method* (prof.dr. Jack Kleijnen)
14.30-15.00	Break
15.00-16.00	*Research methods II* (prof.dr. Hans Akkermans)
16.00	Farewell

REGISTRATION

For registration you are kindly requested to fill in the registration form at the SIKS-website. In the conference centre there is a limited number of places and there is interest from other groups in the topic as well. Therefore, an early registration is required.

Deadline for registration for SIKS-Ph.D. students: November 1, 2008.

CAI-SIKS Symposium "New Directions in Evolutionary Computation"

Date: Thursday, November 27, 2008

ORGANISATION

CAI group of the Donders Centre for Cognition (former NICI), Study Organisation AI Cognac and the Netherlands Research School for Information and Knowledge Systems (SIKS).

The event is part of the Advanced Components stage of SIKS educational program. Therefore Ph.D. students working on the SIKS-focus Computational Intelligence are strongly encouraged to participate.

VENUE

Radboud University Nijmegen, Erasmuslaan 9, room 1.15. See: http://www.ru.nl/contact/bereikbaarheid/.

PROGRAM

14:00-14:15	Opening by Pim Haselager
14:15-14:45	*Application of Evolutionary Algorithms to a Better Understanding of Cognitive Processes* (Ida Sprinkhuizen-Kuyper, Radboud University Nijmegen)
14:45-15:45	*Principled Approaches to Tuning Parameters of Evolutionary Algorithms* (Gusz Eiben, VU, Amsterdam)
15:45-16:00	Break
16:00-17:00	*New Directions in Parameterless Evolutionary Algorithms* (Daniel Tauritz, Missouri University of Science and Technology, USA)
17:00	Drinks

Abstracts available on: http://www.ru.nl/kunstmatigeintelligentie/good_aifternoon/good_aifternoon/

ORGANIZERS

Ida Sprinkhuizen-Kuyper and Pim Haselager.

Participation in the symposium is free. Please register by sending an e-mail to Ida Sprinkhuizen-Kuyper (i.kuyper@donders.ru.nl) before Tuesday November 25, 2008.

RU-SIKS Symposium "Trends in Artificial Intelligence"

Date: Friday, November 28, 2008; 12.00-17.30

Location: Huize Heyendael, Geert Grooteplein-Noord 9, 6525 EZ Nijmegen, www.ru.nl/facultyclub.

On Friday, November 28, 2008 the Section on Model-Based System Development (MBSD) of the Institute for Computing and Information Sciences of Radboud University Nijmegen in cooperation with SIKS will organize a symposium about current Trends in Research on Artificial Intelligence, in which a number of well-known researchers participate. The symposium is intended for researchers and students with an interest in current developments in research on model-based reasoning and probabilistic graphical models. You are cordially invited to participate. Please inform Irma Haerkens (I.Haerkens@cs.ru.nl) whether you wish to attend, and whether you will make use of the free lunch.

The Workshop is part of the Advanced Components Stage of SIKS educational program. Therefore, Ph.D. students working on the SIKS-foci "Knowledge Representation and Reasoning" and "Computational Intelligence" are strongly encouraged to participate.

PROGRAM

Friday, November 28, 2008

12.00-12.50	Lunch
12.50-13.00	Opening (Peter Lucas, Radboud University)
13.00-13.40	*The MTE model for hybrid Bayesian networks and its applications* (Antonio Salmeron, University of Almeria)
13.40-14.20	*Optimization by learning and simulation of Bayesian networks* (Pedro Larranaga, Technical University of Madrid)
14.20-14.40	Coffee & tea break
14.40-15.20	*Diagnosis of plan violation* (Cees Witteveen, Delft University of Technology)
15.20-16.00	*Using model-based diagnosis to solve Bayes nets* (Johan de Kleer, Palo Alto Research Center)
16.00-16.20	Drinks
16.20-17.00	*Recognizing patterns in images* (Eric Postma, Tilburg University)
17.00-17.30	Drinks & Closing

DIRECTIONS

How to reach Huize Heyendael? Huize Heyendael is part of Radboud University Nijmegen and is located on the site of the St Radboud University Medical Center. For detailed information on travelling to Huize Heyendael, consult the following online campus map: http://www.ru.nl/english/visitors/how_to_get_there/.

It is a 15-minutes walk from the train station Nijmegen-Heyendaal to Huize Heyendael. There are also direct bus connections from Nijmegen Central Station to the bus station of the St Radboud University Medical Center, which is in front of Huize Heyendael. Travelling by bus takes about 10 minutes.

For information about the symposium, please contact Irma Haerkens (I.Haerkens@cs.ru.nl), Institute for Computing and Information Sciences, Radboud University Nijmegen (www.cs.ru.nl).

TiCC-SIKS Workshop on "Single Neuron Modelling"

Organisation: Tilburg Centre for Creative Computing in cooperation with SIKS

Date: Tuesday, December 2, 2008

Venue: Tilburg University

Sponsored by SIKS, NWO and the ICIS project

The workshop is part of the Advanced Components Stage of SIKS educational program. Therefor SIKS-Ph.D. students working on the SIKS-focus "Computational Intelligence" are strongly encouraged tot participate.

DESCRIPTION

Models of neurons are used in both computer science and neuroscience. In this workshop, the focus is on morphologically detailed model neurons. The aim of the workshop is cross-fertilization between the two research areas in which such model neurons are used. The setting will be informal with ample time for discussion.

PRELIMINARY PROGRAM

13.00-13.30	Prof.dr. Eric Postma (Universiteit van Tilburg), title tba
13.30-14.00	Guest speaker from ICIS/ESA project, title tba
14.00-14.45	Dr. Jaap van Pelt (Vrije Universiteit Amsterdam), title tba
14.45-15.15	Coffee break

15.15-16.00 Dr. Klaus Stiefel (Okinawa Institute of Science andTechnology, Japan), *Discovering single neuron morphology-function relationships*

16.00-16.30 Ben Torben-Nielsen (UvT/OIST), *Can morphological model neurons be the next generation robot-controllers?*

16.30-17.00 Discussion and closing.

ADDITIONAL INFORMATION

Attendence is free but registration is desired. Please register by sending a mail to Joke Hellemons (j.w.hellemons@uvt.nl). More information and an up-to-date schedule can be found on the website: http://www.irp.oist.jp/tenu/btn/snm/main.php, or send a mail to: Ben Torben-Nielsen, btorbennielsen@gmail.com.

First International Working Conference on Human Factors and Computational Models in Negotiation (HuCom 2008)

December 8-9, 2008
Delft, the Netherlands

http://mmi.tudelft.nl/hucom08

Free participation for SIKS-Ph.D. students.

IMPORTANT DATES

- October 17, 2008: Paper submissions due
- November 3, 2008: Notification of paper acceptance/rejection
- November 21, 2008: Camera-ready copies of accepted papers
- December 8-9, 2008: Working Conference on Human Factors and Computational Models in Negotiation
- December 10, 2008: Inaugural lecture Catholijn Jonkers

PUBLICATION

We are pleased to solicit original and unpublished papers for publication and presentation in the Working Conference on Human Factors and Computational Models in Negotiation (http://mmi.tudelft.nl/hucom08). Articles describing novel ideas and applications in all areas related to human factors and computational models in negotiation are of interest. We also invite submissions of statements of interests or position papers. Submit your paper electronically in either PDF or postscript format. Papers should not be more than 15 pages. Submission is entirely automated by a paper management tool, which is available from the main web site: http:// www.easychair.org/conferences/?conf=hucom08.

A selection of accepted papers will be considered for publication in the *Group Decision and Negotiation Journal*.

AIMS AND SCOPE

Negotiation is a complex and sometimes emotional decision-making process aiming to reach an agreement to exchange goods or services. Although a daily activity, extensive research has shown that few people are effective negotiators. Current state of the art negotiation-support systems can help make a significant improvement in negotiation performance. In particular, when the negotiation space is well-understood such systems can make a difference, partly because machines can much better deal with the computational complexity involved. However, the negotiation space can only be properly developed if the human parties jointly explore their interests. The inherent semantic problem and the emotional issues involved make that negotiation cannot be handled by artificial intelligence alone, and a human-machine collaborative system is required. Such systems are not only to support humans in providing strategic advice but also in coping with emotions and moods in human-human interactions.

In order to develop human-machine collaborative negotiation-support systems there is a need for the development of computational models, frameworks, and experimental, user-centred and ergonomic methods that enable the engineering of negotiation-support systems. It is important for this purpose to study the role of human factors in negotiation as well as computational models to enable intelligent support for negotiation. To develop the next generation of negotiation-support systems there are still many, diverse challenges: models of (qualitative, incomplete) preferences, preference change and strategies, preference elicitation, assessment methods for negotiation performance, learning and adaptativeness in negotiation, models of emotion and user awareness, the use and creation of domain knowledge, user interfaces for negotiation support, human-supported assessment of opponent, conflict handling styles, experimental methods.

Topics covered include but are not limited to: negotiation strategies (bidding, acceptance); argumentation for negotiation; negotiation interaction; learning in negotiation; negotiation domain knowledge; case studies; preference elicitation; qualitative preferences; incomplete preferences; ontologies for negotiation (protocols, preferences, domain knowledge); negotiation-

support systems; user interfaces for negotiation-support systems; human-machine negotiation; negotiation, conflict handling, and experiments related to, e.g., consensus building; personality in negotiation (e.g., Big Five); emotions in negotiation; cultural factors in negotiation; negotiation bidding advice; negotiation conflict styles; trust in automatically generated negotiation advice; negotiation applications; e-commerce; methods and tools for negotiation tasks; design and evaluation of support systems; conflict handling styles and consensus building; HCI aspects and human factors of negotiation.

ORGANIZERS

- Willem-Paul Brinkman – Delft University of Technology, Delft, the Netherlands
- Koen Hindriks – Delft University of Technology, Delft, the Netherlands
- Dmytro Tykhonov – Delft University of Technology, Delft, the Netherlands

PROGRAM CHAIRS

- Koen Hindriks – Delft University of Technology, Delft, the Netherlands
- Catholijn Jonker – Delft University of Technology, Delft, the Netherlands
- Liz Sonenberg – The University of Melbourne, Australia

Advanced SIKS Course "Multi Agent Systems: Theory, Technology and Applications"

INTRODUCTION

On December 11–12, 2008, the Netherlands Research School on Transport, Infrastructure and Logistics (TRAIL) in cooperation with the School for Information and Knowledge Systems (SIKS) organizes the course "Multi Agent Systems: Theory, Technology and Applications".

The location will be TRAIL, Kluyverweg 4, Delft. The course will be given in English. Although the course is primarily intended for TRAIL and SIKS-Ph.D. students, other participants are not excluded. However, their number of passes will be restricted and depends on the number of SIKS and TRAIL students taking the course.

SCIENTIFIC DIRECTORS

Prof.dr. B. De Schutter (TUD), and Prof.dr. C. Witteveen (TUD).

PROGRAM

Thursday, December 11, 2008

09.00-09.30	*Introduction TRAIL themes* (prof.dr. H.J. van Zuylen, TUD)
09.30-12.30	*Game Theory: an introduction* (prof.dr.ir. G.J. Olsder, TUD)
12.30-13.30	lunch
13.30-15.00	*Mechanism Design* (dr. M.M. de Weerdt, TUD)
15.30-17.00	*Traffic Control* (ir. R. van Katwijk, TNO)

Friday, December 12, 2008

09.00-10.30	*Swarm Intelligence + Applications* (prof.dr. R. Babuska, TUD)
10.45-11.30	*Multi-agent Control in Networks* (dr.ir. R. Negenborn, TUD)
11.30-12.30	*Context-aware Routing and Applications* (ir. A.W. Ter Mors, TUD)
12.30-13.30	lunch
13.30-15.00	*Agent-based Models and Simulation of Pedestrian Flows* (prof.dr.ir. S. Hoogendoorn, TUD)
15.00-15.15	Closing

Advanced SIKS Course "Organizational Principles for IKS"

INTRODUCTION

On February 16 and 17, 2009 the School for Information and Knowledge Systems (SIKS) will organize an advanced course on "Organizational Principles for Information and Knowledge Systems". The course takes two days, will be given in English and is part of the Advanced Components Stage of the Educational Program for SIKS-Ph.D. students. Although these courses are primarily intended for SIKS-Ph.D. students, other participants are not excluded. However, their number of passes will be restricted and depends on the number of students taking the course. The course is given by experienced lecturers actively involved in the research areas related to the topics of the course. Especially Ph.D. students working on the SIKS-focus "Agent Systems" and "Enterprise Information Systems" are strongly encouraged to participate.

Organization concepts and models are increasingly being adopted for the design and specification of complex computational systems. As systems grow to include hundreds or thousands of components, it is necessary to move from an agent-centric view of coordination and control to an organization-centric one. Furthermore, open environments pose new demands on traditional architectures. These demands include the integration of organizational

and individual perspectives and the dynamic adaptation of models to organizational and environmental changes. Organizational design plays a critical role in the development of larger and more complex (information) systems.

On the other hand, human organizations can be seen as a set of entities regulated by mechanisms of social order and created by more or less autonomous actors to achieve common goals. Organization supports an individual (be it a person, a computer system, or an institution) to recognize its role, and the roles of others, in accomplishing these collective goals. Organizational Theory sees organizations as instruments of purpose, as they are seen as coordinated by intentions and goals. Agent models are therefore increasingly used to model, simulate and support human organizations.

In this advanced SIKS course, we will discuss these two perspectives and present different approaches to the study of organizations both from the perspective of social science and management sciences, as from the perspective of information science and artificial intelligence. Speakers will cover a wide range of topics, and we will have an hands-on session on the design of organization models.

Location: Conference Center Woudschoten, Zeist

Date: February 16-17, 2009

Scientific Director: Dr. Virginia Dignum (UU)

PROGRAM

The program is not available yet, but the course will cover the following subjects:

- Fundamentals of Organization Theory
- Structural and normative dimensions of organization
- Modeling actors in the organization
- Work practice vs. Work process
- Organizational dynamics
- Organizational learning
- Social simulation
- Social networks
- Design and analysis of organizational models using OperettA (hands-on tutorial)

REGISTRATION

Details on registration will be made available later this year.

CONFERENCES, SYMPOSIA, WORKSHOPS

NOVEMBER 7-9, 2008
AAAI Fall 2008 Symposium; AI in Eldercare: New Solutions to Old Problems. Washington, DC, USA.
http://eldertech.missouri.edu/aaai/
http://www.aaai.org/Symposia/Fall/fss08.php

NOVEMBER 17-19, 2008
DIGITEL 2008: 2nd IEEE International Conference on Digital Games and Intelligent Toys Based Education. Banff, Canada.
http://www.ask4research.info/digitel/2008/

NOVEMBER 17-19, 2008
GAMEON'2008. UPV, Valencia, Spain.
http://85.255.195.219/cms/?q=node/763

NOVEMBER 24-26, 2008
iiWAS2008: 10th @WAS International Conference on Information Integration and Web-based Applications & Services. Linz, Austria.
http://www.iiwas.org/conferences/iiwas2008

DECEMBER 9, 2008
FLOW 2008: First International Workshop on Fuzzy Logic On the Web. Sydney, Australia.
http://www.cwi.ugent.be/flow2008/
In conjunction with the IEEE/WIC/ACM International Conferences on Web Intelligence and Intelligent Agent Technology (WI-IAT 2008).

DECEMBER 9-12, 2008
WI'08: IEEE/WIC/ACM International Conference on Web Intelligence, and IAT'08: IEEE/WIC/ACM International Conference on Intelligent Agent Technology. Sydney, Australia.
http://datamining.it.uts.edu.au/wi08/html

DECEMBER 9-12, 2008
ADMI2008: IEEE/WIC/ACM Workshop on Agents and Data Mining Interaction 2008. Sydney, Australia.
http://www.agentmining.org/admi08
In conjunction with the IEEE/WIC/ACM International Conferences on Web Intelligence and Intelligent Agent Technology (WI-IAT 2008).

DECEMBER 9-12, 2008
IEEE APSCC'08. the 3rd IEEE Asia-Pacific Service Computing Conference. Yilan, Taiwan.
http://apscc2008.csie.chu.edu.tw

DECEMBER 10-13, 2008
JURIX 2008: the 21st International Conference on Legal Knowledge and Information Systems. Florence, Italy.
http://www.ittig.cnr.it/jurix08

DECEMBER 13-15, 2008
SH 2008: the Third International Symposium on Smart Home; and FGCN 2008: the Second International Conference on Future Generation Communication and Networking, Hainan Island, China.
http://www.sersc.org/SH08
http://www.sersc.org/FGCN2008

DECEMBER 15-18, 2008
CIG'08: 2008 IEEE Symposium on Computational Intelligence and Games. Perth, Australia.
http://www.csse.uwa.edu.au/cig08/

DECEMBER 17-20, 2008
EUC 2008: the 2008 IEEE/IFIP International Conference on Embedded and Ubiquitous Computing, Shanghai, China.
http://epcc.sjtu.edu.cn/euc2008

DECEMBER 18-20, 2008
ICS 2008: the 2008 International Computer Symposium. Tamkang University, Damsui, Taipei County, Taiwan, R.O.C.
http://ics2008.csie.tku.edu.tw

FEBRUARY 2-3, 2009
The 9th Dutch-Belgian Information Retrieval Workshop (DIR). Enschede, The Netherlands.
http://dir2009.cs.utwente.nl

MARCH 3-31, 2009
ENLG2009: 12th European Workshop on Natural Language Generation. Athens, Greece.
http://enlg2009.uvt.nl/

MARCH 31-APRIL 1, 2009
Second International Workshop on Social Computing, Behavior Modeling, and Prediction. Phoenix, AZ, USA.
http://www.public.asu.edu/~huanliu/sbp09/

MAY 10-13, 2009
ACS/IEEE AICCSA'09: the 7th ACS/IEEE International Conference on Computer Systems and Applications. Rabat, Morocco.
http://www.congreso.us.es/aiccsa2009

MAY 29-30, 2009
3IA'2009: The Twelfth International Conference On Computer Graphics And Artificial Intelligence. Athens, Greece.
http://3ia.teiath.gr/main_page.php

JUNE 3-5, 2009
The 3rd KES International Symposium on Agents and Multi-Agent Systems – Technologies and Applications (KES-AMSTA-09). Uppsala, Sweden.
http://amsta-09.kesinternational.org

JUNE 18-23, 2009
SENSORCOMM 2009: The Third International Conference on Sensor Technologies and Applications. Athens, Greece.
http://www.iaria.org/conferences2009/SENSORCOMM09.html

JUNE 25-27, 2009
HPCC-09: The 11th IEEE International Conference on High Performance Computing and Communications. Jointly with ISA-09: The 3rd IEEE International Conference on Information Security and Assurance. Korea University, Seoul, Korea.
http://www.sersc.org/HPCC2009
http://www.sersc.org/ISA2009

JULY 23-25, 2009
MLDM 2009: the 6th International Conference on Machine Learning and Data Mining. Leipzig, Germany.
http://www.mldm.de

JULY 25-27, 2009
DMAMH'2009: 4th Workshop on Digital Media and its Application in Museum & Heritage. Qingdao, China
http://cise.sdkd.net.cn/dmamh

AUGUST 9-11, 2009
The 4th International Conference on E-Learning and Games (Edutainment 2009). Banff, Canada.
http://www.ask4research.info/edutainment/2009

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The editorial board welcomes product announcements, book reviews, product reviews, overviews of AI education, AI research in business, and interviews. Contributions stating controversial opinions or otherwise stimulating discussions are highly encouraged. Please send your submission by E-mail (MS Word or text) to newsletter@micc.unimaas.nl.

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