

ANDREAS GRAEFE

Updated on September 22, 2009

EDUCATION

Doctorate in Economics Jan. 2006 –
Karlsruhe Institute of Technology, Germany May 2009
Graduated with highest honors (summa cum laude)

Diploma* in Economics Oct. 1999 –
University of Regensburg, Germany Mar. 2005
Main focus: Public economics, theory of financial markets

Diploma* in Business Informatics (Wirtschaftsinformatik) Oct. 1999 –
University of Regensburg, Germany Dec. 2004
Main focus: Operations research, business engineering

University of Zurich, Switzerland Oct. 2001 –
Exchange student in the ERASMUS-Program Aug. 2002
Classes in economics and business informatics

* equivalent to a master's degree

AWARDS AND FELLOWSHIPS

Runner-up in the poster competition at the *Summer Institute on Bounded Rationality*, directed by G. Gigerenzer, Max Planck Institute for Human Development, Berlin, July 2009.

Travel award grant, *DAAD (German Academic Exchange Service)*, June 2009.

Foreign exchange scholarship, *Karlsruhe House of Young Scientists*, Karlsruhe Institute of Technology, January – May 2008.

Travel award grant, *International Institute of Forecasters*, June 2007.

Alumni of *TOPAZ*, the Siemens student program.

Scholarship of the European Commission's *ERASMUS*-Program, 2001 - 2002.

Scholarship, *e-fellows.net*, 2001 - 2009.

RESEARCH INTERESTS

Public policy, public choice, group and interactive decision-making, forecasting methods, experimental economics, bounded rationality, simple heuristics, technology assessment.

RESEARCH EXPERIENCE

Visiting Scholar

Wharton Business School, University of Pennsylvania, USA

Jan. 2008 –
present

Research stay with J. Scott Armstrong (Marketing Department)

- Laboratory experiment on the relative accuracy and acceptability of prediction markets, nominal groups, the Delphi method, and meetings
- Development of new models for forecasting U.S. Presidential Elections (using the index method and simple heuristics)
- Responsible for the *PollyVote.com* during the 2008 U.S. Presidential Election
- Launch (and operation) of the *Special Interest Group on Prediction Markets* at forecastingprinciples.com

Researcher

Institute for Technology Assessment and Systems Analysis (ITAS),

Jan. 2006 –
present

Karlsruhe Institute of Technology (KIT), Germany

- *PerCoMed* (www.percomed.de): funded by the *German Federal Ministry of Education and Research (BMBF)*: Analysis of the potentials and barriers of pervasive computing in health care.
- *EPIS* (<http://epis.jrc.es>), run by the *Institute for Prospective Technological Studies* of the *European Commission's Joint Research Centre*: Field experiment on the relative performance of prediction markets and the Delphi method for predicting future technological trends in the media industry.

Doctoral candidate (external)

Institute of Information Systems and Management (IISM),

Jan. 2006 –
May 2009

Karlsruhe Institute of Technology (KIT), Germany

- Dissertation: *Prediction markets versus alternative methods. Empirical tests of Accuracy and Acceptability*
- Advisors: Christof Weinhardt and Armin Grunwald

PEER-REVIEWED ARTICLES

Graefe, A., J. S. Armstrong, Cuzán, A. & R. J. Jones (2009), Forecasting the 2008 election with the PollyVote, *Foresight – The International Journal of Applied Forecasting*, 12, 41-42.

Orwat, C., Rashid, A., Wölk, M., Scheermesser M., Holtmann, C. & A. Graefe (2009), Paving the way for pervasive computing to routine use in healthcare, Accepted for publication in *IEEE Pervasive Computing*.

Graefe, A. & C. Weinhardt (2008), Long-term forecasting with prediction markets. A field experiment on applicability and expert confidence, *Journal of Prediction Markets*, 2, 71-92.

Orwat, C., Graefe, A. & T. Faulwasser (2008), Towards pervasive computing in health care – A literature review, *BMC Medical Informatics and Decision Making*, 8:26, 2008. [highly accessed, ranked 10 in most viewed articles in the past year]

Graefe, A. Luckner, S. & C. Weinhardt (2008), Prediction markets – A toolkit for foresight, Accepted for publication in *Futures*.

- Graefe, A. (2008), Prediction markets - Defining events and motivating participation, *Foresight – The International Journal of Applied Forecasting*, 9, 30-32.
- Green, K. C., Armstrong, J. S. & A. Graefe (2007), Methods to elicit forecasts from groups: Delphi and prediction markets compared, *Foresight – The International Journal of Applied Forecasting*, 8, 17-20.
- Graefe, A. & C. Orwat (2007), Prediction markets as a mechanism for public engagement? A First Classification and Open Questions, *International Journal of Technology, Knowledge and Society*, 3, 137-142.

ARTICLES REVIEWED BY EDITOR

- Graefe, A., Orwat, C. & T. Faulwasser (2008), Der Umgang mit Barrieren bei der Einführung von Pervasive Computing. Ein Literaturüberblick, *Technikfolgenabschätzung – Theorie und Praxis*, 17, 13-19.
- Graefe, A. (2007), Folgenabschätzung mit Prognosemärkten, *Technikfolgenabschätzung - Theorie und Praxis*, 16, 66-73.

ARTICLES PUBLISHED IN BOOKS

- Graefe, A. (2007), Forecasting mit Prognosemärkten, In: Bora, A., Bröchler, S. & M. Decker (Eds.): *Technology Assessment in der Weltgesellschaft*, Berlin: Edition Sigma, pp. 439-444.
- Holtmann, C., Rashid, A., Weinhardt, C., Graefe, A. & B. Griewing (2006), Time is brain. Analyse der Rettungskette im Schlaganfall, In: Eymann, T., Koop, A. (Eds.): *Mobiles Computing in der Medizin*, Frankfurt: Shaker Verlag.

OTHER ARTICLES

- Graefe, A., Holtmann, C. Rashid, A. & M. Scheermesser (2006), Pervasive Computing im Gesundheitswesen – Technologiebewertung durch interdisziplinäre Forschung, *Krankenhaus IT-Journal*, Dietzenbach: Antares Computerverlag.

ARTICLES UNDER REVIEW

- Armstrong, J. S. & A. Graefe (2009). Predicting elections from biographical information about candidates, MPRA working paper, Submitted for the *Symposium on Leadership and Individual Differences*, Lausanne, Nov. 30 – Dec. 01. Available at http://mpra.ub.uni-muenchen.de/16702/2/MPRA_paper_16702.pdf.
- Graefe, A. & J. S. Armstrong (2009), Forecasting elections from voters' perceptions of candidates' ability to handle issues, SSRN working paper, Under review with *Political Analysis*, Available at: <http://ssrn.com/abstract=1206683>.
- Graefe, A. & J. S. Armstrong (2009), Group decision making - Face-to-face meetings, nominal groups, Delphi, and prediction markets compared, Under revision (2nd round) with the *International Journal of Forecasting*, Available at: tinyurl.com/methodcomparison.

Graefe, A., Cuzán, A., Jones, R. J. & J. S. Armstrong (2009), The PollyVote – Combining forecasts to predict the 2008 election, working paper, Under review with *Public Opinion Quarterly*, Available at tinyurl.com/pollyvote2009.

WORKING PAPERS

Graefe, A. & J. S. Armstrong (2009), Predicting elections from the single most important issue, working paper, Available at tinyurl.com/pollyissues-ttb.

Graefe, A. & J. S. Armstrong (2009), Advice-taking from prediction markets, meetings, and the Delphi method, Available at tinyurl.com/advice-taking.

Graefe, A. & J. S. Armstrong (2009), The popularity heuristic. Using search query data for forecasting, working paper, Available at tinyurl.com/popularityheuristic.

Graefe, A., Armstrong, J. S. & G. Sarawgi (2009). Combining prediction market prices to improve forecast accuracy, working paper, Available from the author.

Graefe, A., Green, K. C. & J. S. Armstrong (2009), Using prediction markets to solve complex problems – An application to the climate bet, Available at: tinyurl.com/climatebetPM.

PUBLISHED ABSTRACTS

Green, K., Armstrong, S., Graefe, A. & W. Soon (2009), Forecasting for climate policy: CO₂, global temperatures, and alarms, *Proceedings of the 29th Annual International Symposium on Forecasting*, Hong Kong, 21-24 June, 2009.

Graefe, A. & S. Armstrong (2008), Group decision making - Face-to-face meetings, nominal groups, Delphi and prediction markets compared", *Proceedings of the 28th Annual International Symposium on Forecasting*, Nice, France, 22-25 June, 2008.

Armstrong, S. & A. Graefe (2008), Forecasting presidential elections from candidates' positions, *Proceedings of the 28th Annual International Symposium on Forecasting*, Nice, France, 22-25 June, 2008.

Graefe, A. & C. Weinhardt (2007), Aspects of information aggregation: A comparison of the Delphi method and prediction markets, *Proceedings of the 27th International Symposium on Forecasting*, New York City, 24-27 June, 2007.

Graefe, A., Rashid, A. & M. Scheermesser (2006), Einflüsse von aktuellen Trends und Stakeholderinteressen auf die Verbreitung von Pervasive Computing im Gesundheitswesen. Eine interdisziplinäre Betrachtung, *Tagungsband der 51. Jahrestagung der Deutschen Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie (GMDS)*, Leipzig, 10-14 September 2006.

INVITED TALKS

„Methoden für Wahlvorhersagen – Das PollyVote Projekt zur Vorhersage der U.S. Präsidentschaftswahlen“, Lecture series *Junge Talente – Wissenschaft und Musik*, Forschungszentrum Karlsruhe, 12 March, 2009.

“Harnessing collective knowledge - Use Markets to improve your forecasts”, *Forecasting Summit*, Boston, USA, 17 September, 2008.

“PollyVote – Forecasting the US Presidential Election”, *Opening ceremony for the Karlsruhe House of Young Scientists (KHYS)*, Karlsruhe, Germany, 03 July, 2008.

PRESENTATIONS

“Konjunkturprognosebörse – Ein Baustein kombinierter Prognosen“, *Workshop Neue Verfahren der Kurzfristprognose at the Federal Ministry of Economics and Technology (BMWi)*, Berlin, 30 July, 2009.

“You can't beat the market - Advice-taking from prediction markets, meetings, and the Delphi method”, *INFORMS Annual Meeting*, Washington DC, USA, 12-15 October, 2008.

“Group decision making - Face-to-face meetings, nominal groups, delphi, and prediction markets compared”, *Third Workshop on Prediction Markets*, in conjunction with *ACM Conference on Electronic Commerce (EC'08)*, Chicago, USA, 09 July, 2008.

“Can you beat the market? Accuracy of individual and group post-prediction market judgments”, *Third Workshop on Prediction Markets*, in conjunction with *ACM Conference on Electronic Commerce (EC'08)*, Chicago, USA, 09 July, 2008.

“Group decision making - Face-to-face meetings, nominal groups, delphi and prediction markets compared”, *28th Annual International Symposium on Forecasting*, Nice, France, 22-25 June, 2008.

“Forecasting presidential elections from candidates' positions on issues and policies”, *28th Annual International Symposium on Forecasting*, Nice, France, 22-25 June, 2008.

“Technologische Innovationen in der medizinischen Versorgung. Wo stehen wir? Wohin geht die Reise?”, *MedicaMedia*, Düsseldorf, Germany, 16 November 2007.

“Using markets to forecast the future”, *3rd International Conference on Organisational Foresight: Learning the Future Faster*, Glasgow, Scotland, UK, 16-18 August, 2007.

“Aspects of information aggregation - A comparison of the Delphi method and prediction markets”, *27th Annual International Symposium on Forecasting*, New York City, USA, 24-27 June, 2007.

“Prediction markets: An auspicious web-based technology for participatory decision-making”, *3rd International Conference on Technology, Knowledge and Society*, Cambridge, UK, 9-12 January, 2007.

“Information markets as a participatory method for technology assessment”, *NTA2 - Second conference of the TA Network: Technology Assessment in World Society*, Berlin, Germany, 22-24 November, 2006.

“Einflüsse von aktuellen Trends und Stakeholderinteressen auf die Verbreitung von Pervasive Computing im Gesundheitswesen. Eine interdisziplinäre Betrachtung.”, *51. Jahrestagung der Deutschen Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie (GMDS)*, Leipzig, Germany, 10-14 September, 2006.

TEACHING EXPERIENCE

Wharton Business School, University of Pennsylvania

- Lecture on *Strategic Planning* for undergraduates (coverage for Scott Armstrong)
- Lead student research assistants in collecting and analyzing data

Institute for Technology Assessment and Systems Analysis, KIT

- Lead student research assistant in the literature review on pervasive computing technologies in health care (see article published in *BMC Medical Informatics and Decision Making*)

Forecasting Summit, Boston

- Lecture on *Prediction Markets* for forecasting practitioners

MEDIA COVERAGE (selected articles, see andreas-graefe.org for an extensive list)

“Polly hatte Recht! Obama gewinnt US-Wahlen”, *KIT-Dialog*, November 2008.

“U.S. elections: Predicting the next president”, *New Scientist*, October 22, 2008.

“Obama erobert Hochburgen der Republikaner – Der Demokrat soll bereits deutlich in Führung liegen / US-Präsidentschaftswahl beschäftigt auch Karlsruher Wissenschaftler“, *Badische Neueste Nachrichten*, October 22, 2008.

“German Researcher: Obama Will Get 52.2 Percent of Vote“, *Deutsche Welle*, October 21, 2008.

“Karlsruher Forscher mit neuer Wahlprognose: Obama gewinnt US-Wahl“, *dpa*, October 21, 2008.

“50 plus X für Obama“, *n-tv.de*, October 4, 2008.

“Sind Ihre Wahlprognosen nicht überflüssig, Herr Graefe?“, *Süddeutsche Zeitung Wissen*, October 2008.

“Zauberformeln für den Wählerwillen“, *Süddeutsche Zeitung*, August 6, 2008.

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

APSA Political Forecasting Group, European Association of Decision Making, INFORMS, International Institute of Forecasters, Society for Judgment and Decision Making

ACADEMIC SERVICE

Reviewer: *International Journal of Forecasting*, *Foresight*, *Futures*, *Wirtschaftsinformatik* 2007.

Co-chair for the focused session on prediction markets at WeB 2008, the 7th Workshop on e-Business, Paris, France, December 13, 2008.

Chair of the contributed session on judgmental and scenario forecasting at the *28th International Symposium on Forecasting*, Nice, France, 22-25 June, 2008.

COMMUNITY SERVICE

Responsible for *PollyVote.com*, an information source for election forecasting.

Responsible for the *Special Interest Group on Prediction Markets* at *forecastingprinciples.com*, an information source that attempts to summarize information about prediction markets that is useful for researchers and practitioners.

INDUSTRY EXPERIENCE

Consulting Group Munich
Munich, Germany

July 2004 –
December
2004

Porsche
Stuttgart-Zuffenhausen, Germany

March 2004 –
June 2004

Siemens IT Solutions and Services
Munich, Germany

February 2003
– April 2003

Siemens VDO
Regensburg, Germany

March 2001 –
June 2001

REFERENCES

Professor Dr. J. Scott Armstrong

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