
VITA

RENSE LANGE, Ph.D.

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- 2018 - Partner and Chief Data Scientist at Global Psychtech, Sdn. Bhd.**, Cyberjaya, Selangor, Malaysia – Senior Scientist for the Design, Implementation and Development of General Financial Index (GFI) using **Machine Learning system for credit scoring in banking** using psychological factors.
- 2015 – Present: Director and Research Professor at the Laboratory for Statistics and Computation**, ISLA – Gaia, Portugal.
- 2015 - Present: Investigador Associado, GTIC** – Grupo de Tecnologias de Informação, CEPESE – Centro de Estudos da População, Economia e Sociedade.
- 2012 – 2017:** Visiting scientist to MIMOS Berhad, Kuala Lumpur, Malaysia. Research and publication of **CAT, and LSA-based grading of student open-ended answers** to essay questions, quality control, multi-faceted Rasch scaling, integrating into CAT the use of LSI based computerized essay grading. Software development.
- 2003 – Present: CEO and Founder of Integrated Knowledge Systems (see:)** with branches in the USA and East Asia (Malaysia). IKS provides solutions in computer adaptive testing (CAT), Item-Response Theory, computational linguistics, Machine Learning, and Process Mining.
- *Design and implementation of **CAT systems*** for online multinational (US, UK, Canada, Australia) academic tests to assess reading and mathematics, including algorithm design and implementation, item calibration, stopping and decision rules, and calibration of new test items, developing vertical scales from Kindergarten to Grade 8, report design, and conference presentations (Symphony.com).
 - **Online compatibility** testing related to social networking and dating. Since 2003, TRUE (based in Dallas, USA), Plenty-of-Fish (Vancouver, Canada), and Zhenai (Shenzhen, China) matched millions of couples using IKS' (CAT based) testing products.
 - *Personnel section testing* via AETHOS' Rasch-based 2020Skills test, which measures 10 core competencies for job performance and personnel selection.
 - *Quality control in **crowdsourcing*** and design of large-scale autonomous self-calibrating systems with over 10M entries using Rasch scaling.
 - **Computer analysis of human written statements**, including: interpretation of written customer feedback statements, the evaluation of students' typed answers to open-ended questions during CAT, identifying personality traits via computer based linguistic analysis of written artifacts, and brand-protection.
 - With *AssayDepot*, designed and implemented LSI and related methods to dynamically **analyze large databases of product reviews and evaluations**, the system determines clients' cost for online advertisements at the AssayDepot website.
- 1997 – 2012: Consultant Psychometrician** at the Illinois State Board of Education, Springfield, IL.
- Technical design, pilot testing, IRT scaling, quality control, (vertical) scaling/ equating, design of technical manuals, and DIF analyses in annual testing of **1.5 million Illinois students**, including analyses of "No Child Left Behind" issues.

- Quality control of **scoring of open-ended** (short-) answer questions on reading and mathematics tests using classical methods, as well as multifaceted Rasch modeling.
- Psychometric review of the equating of the legally required **Illinois Teacher Certification Test** (ICTS) taken by all Illinois teacher candidates. This test covers reading, language arts, mathematics, and writing.
- Conduct statewide **workshops for teachers and administrators** to explain state testing results, including presentations of basic statistical concepts, test construction, IRT, and introduction to analyzing school and student data with Excel.
- Psychometric **liaison with large-scale testing contractors** (ACT, Harcourt, Metri-tech, NCS-Pearson), organize and contribute to advisory and technical committees, bias review and standard setting groups.
- Analysis of Illinois' and **international TIMSS data sets**.
- Respond to FOIA requests and **provide press interviews** with national papers.

1999 – 2003: Adjunct Associate Professor of Psychiatry. Southern Illinois School of Medicine (SIU), Springfield, IL. Research on the early detection of Alzheimer's disease using the University of Pennsylvania Smell Identification Tests (UPSIT) via standard and CAT based Rasch scaling models. Redesign to increase sensitivity to younger (i.e., healthier) respondents in order to detect early onset of Alzheimer's related diseases.

1988 – 1996: Assistant Professor of Computer Science and Psychology. University of Illinois at Springfield, IL (UIS).

- **Computer Science:** Taught computer organization, operating systems, computer languages (undergraduate level), compilers, artificial intelligence (graduate level).
- **Psychology:** Taught general psychology, experimental psychology and research methods, elementary to intermediate social statistics, cognitive psychology, social psychology of attitudes and impression formation (graduate level).
- **(Co-) Advisor** on students' Master's level theses in computer science, education, and psychology. Headed undergraduate psychology research teaching laboratory.

1981 – 1983: Visiting Assistant Professor of Psychology, University of Illinois at Urbana-Champaign. Taught statistics, social, experimental, and organizational psychology, and using computer systems for research purposes.

Member American Psychological Association, American Educational Research Association, Institute for Objective Measurement, American Marketing Association.

Languages Dutch: native. English: near native. French: fluent in speaking, reading, listening, less fluent in writing. German: fluent in reading and understanding, less fluent in speaking and writing. Portuguese/Spanish: student.

Software TensorFlow, R, Bilog, ConQuest, Winsteps, Facets, SPSS, R, Multilog, Pascal, C, C#, Delphi, Fortran, scikit-learn, Lisp, Python, Gensim and NLTK Language Toolkit, Ruby, Haskell, and Prolog. Windows, UNIX, Linux, Mac OS. Attended CEO-EDF-INRIA **Haskell** Functional Programming, June 2012, Cadarache, France.

EDUCATIONAL ACHIEVEMENT

1989: **ABD in Computer Science** (Artificial Intelligence), U. of Illinois at Urbana-Champaign.

1986: **MA in Computer Science** (software / Artificial Intelligence), U. of Illinois at U-C.

1981: **PhD in Psychology** w. Martin Fishbein (social/experimental), U. of Illinois at U-C.

1977: **Masters in Psychology**, (social/quant.) Rijks Universiteit Groningen, the Netherlands.

SCIENTIFIC ADVISORY BOARDS / HONORS

- AETHOS Consulting Group: Hospitality Advisory Board (New York, NY)
- Honorary Fellow at the Rasch Measurement Malaysian Chapter (myRasch)

GRANTS

Fundação Bial: Six grants were awarded from 2007-2019 for a total of over \$250,000 (with James Houran and Bruce Greyson). Most recently, A Rasch Scaling Validation of a Core “Near-Death Experience (NDE)” – with Bruce Greyson and James Houran.

SOFTWARE

- Lange, R. (1998-Present). *GEMCAT II, V1.0 - V1.3. Delphi 6.0 software for estimating multivariate catastrophe models*. Features: Jackknife and bootstrap tests for indicator weights, *Pseudo-R²* and *Pseudo-F* tests for model comparison.

EDITORIAL BOARD

- *Psychology of Consciousness: Theory, Research, and Practice*

REVIEWER

- *Personality and Individual Differences*
- *Psychology of Consciousness: Theory, Research, and Practice*
- *Journal of Nursing and Health Care Research*
- *Journal of Social and Personal Relationships*
- *Interpersona: An International Journal on Personal Relationships*
- *Perceptual and Motor Skills*
- *Psychological Reports*
- *Psychology of Popular Media Culture*
- *Pain Management Nursing*

SELECTED PUBLICATIONS

- Lange, R., Ross, R. M., Dagnall, N., Irwin, H. J., Houran, J., & Drinkwater, K. (2019). Anomalous Experiences and Paranormal Attributions: Psychometric Challenges in Studying Their Measurement and Relationship. *Psychology of Consciousness: Theory, Research, and Practice*. Advance online publication. <http://dx.doi.org/10.1037/cns0000187>
- Martinez-Garrido, C. & Lange, R. (In Press). Rendimiento académico y Miedo. Un estudio exploratorio. *Revista de curriculum y formación del profesorado*.
- Lange, R. (2019). Quality Control in Large-Scale Online Knowledge Integration Using OBJECTIVE. Paper presented at the 62nd ISI World Statistics Congress, August 18-23, 2019, Kuala Lumpur, Malaysia (to appear in proceedings).
- Lange, R., de Oliveira Maraldi, E., Zangari, W., Corredato, V., Machado, F.R., & Alvarado, C. (2018). A Cross-Cultural Validation of the Revised Transliminality Scale in Brazil. *Psychology of Consciousness: Theory, Research, and Practice*. In Press.
- Evans, J., Lange, R., Houran, J., & Lynn, S. J. (2018). Further psychometric exploration of the transliminality construct. *Psychology of Consciousness: Theory, Research and Practice*. Advance online publication. doi.org/10.1037/cns0000163
- Lange, R., Houran, J., Evans, J., & Lynn, S. J. (2018). A review and re-evaluation of the Revised Transliminality Scale. *Psychology of Consciousness: Theory, Research and Practice*. Advance online publication. doi.org/10.1037/cns0000153
- Lange, R. (2018). Using Parallel Processing to Speed Up JMLE. *Rasch Measurement Transactions, 2018, 31:4 p. 1654-1655*
- Lange, R. (2018). Dynamic Testing: The Future of HR. Paper presented at the National HR in Hospitality Conference at the Cosmopolitan Hotel in Las Vegas, USA, March 5-7, 2018.
- Houran, J., Tracey, B. & Lange, R. (2017). The Hospitality 'X Factor' in Non-Management Employees, Psychometrically Speaking. 4th Cornell Hospitality Research Summit (CHRS) Oct 5-7, 2017.
- Yon, H. Lange, R, Abd Kadir, N., & Johar, N.A. Live Grading of Essay Questions Contributing to Computer Adaptive Testing (2017). Paper presented at the Pacific Rim Objective Measurement Symposium (PROMS) 2017, August 7-9, Kota Kinabalu, Sabah, Malaysia.
- Houran, J., Tracey, B. & Lange, R. (2017). Construction of an unbiased Rasch-based scorecard to evaluate hospitality personnel. *Cornell Hospitality Quarterly*. Accepted pending revision.
- Lange, R., Martínez-Garrido, C., & Ventura, A. (2017). I'm scared to go to School! Capturing the Effects of Chronic Daily Fears on Students'

- Concept of Self. *Journal of Applied Measurement*. 18, 420-433.
- Lange, R., Martínez-Garrido, C., & Ventura, A. (2017). The Effects of Chronic Daily Fears on Students' Concept of Self: Towards Identifying Students being Bullied. *Paper presented at PROMS2017, Kota Kinabalu (Borneo), Sabah August 5-9, 2017*.
- Yon, H., Lange, R., Abd Kadir, N. & Johar, N.A. (2016). Development of a Malaysian Adaptive Integrity Test. In Aziz, N., Zulkepli Hew, J. & Abdul Hamid, MN., Proceedings of the Innovation and Analytics Conference & Exhibition (IACE) 2016. *Paper presented at the Innovation & Analytics Conference & Exhibition (IACE) 2016*, UUM, Kedah, Malaysia, 31st October-1st November (pp. 100-105). Sintok, Kedah, Malaysia: UUM.
- Lange, R. (2017). Rasch Scaling and Cumulative Theory-Building in Consciousness Research. *Psychology of Consciousness: Theory, Research, and Practice*, 4, 135-160.
- Lange, R. (2016). Design, Implementation, and Application of PROXerver to the Targeted Piloting of Multiple Choice and Computer Graded Essay Questions. *Paper presented at the 10th Conference of the International Testing Committee*, Vancouver, July 1-4.
- Lange, R. (2015). My thanks to Professor Benjamin Wright: A Personal Perspective. *Rasch Measurement Transactions*, 29:3, 1543-1544.
- Lange, R. (2015). Quality Control in Crowdsourcing: An Objective Measurement Approach to Identifying and Correcting Rater Effects in the Social Evaluation of Products and Services. *Paper Presented at the Meeting of the Malaysian Psychometric Society, Kuala Lumpur, March 2015*.
- Lange, R. (2015). Early Detection of Alzheimer's disease by assessing olfactory abilities with the University of Pennsylvania Smell Identification Test (UPSIT). *Paper Presented at the Meeting of the Malaysian Psychometric Society, Kuala Lumpur, March 2015*.
- Yon, H., Lange, R., Abd Kadir, A., Lange, R., Johar, N.A., & Mutalib, N. (2015). Development of a computerized adaptive integrity test, MIT. *Presented at the IACAT Conference, Queens College, Cambridge, UK. September 14-16, 2015*.
- Yon, H., Lange, R., Abdul Mutalib, N., Altaf, A., & Abd Kadir, N. (2015). CLOUDCAT: Towards Implementing CAT as a Web-Service. Paper presented at the International Association for Computerized Adaptive Testing (IACAT), September 14-16, 2017, Queens College, Cambridge, UK.
- Lange, R., Verhulst, S.J., Roberts, N.K., & Dorsey, J.K. (2015). Rasch Analysis of Professional Behavior in Medical Education. *Advances in Health Sciences Education*, 20(5), 1179-1194. doi: 10.1007/s10459-015-9594-0.
- Lange, R. (2015). Validating Quantitative Measurement using Qualitative Data: Combining Rasch Scaling and Latent Semantic Analysis in Psychiatry. *Journal of Physics-Conference Series*, 588,012028
- Lange, R., Houran, J. and Li (2015). Drive to Marry and Social Prescription in Chinese Online Daters. *Interpersona*, 2015,Vol. 9(2), 135-147, doi:10.5964/ijpr.v9i2.179
- Lange, R. and Houran, J. (2015). "A Picture is Worth a Thousand Words: "Perceptual-Personality Profiling via a Free-Response Imagery Task. *North American Journal of Psychology*, 17(3), 387.
- Lange, R., Houran, J. and Greyson (2015). Using Computational Linguistics to Understand Near-Death Experiences: Concurrent Validity for the Near Death Experience Scale. *Psychology of Consciousness: Theory, Research, and Practice*, 21, 79-89.
- Lange, R. and Houran, J. (2015). Giving up the Ghost to Psychology. In: Martin, M. and Augustine, K., *The Myth of an Afterlife*. Rowman & Littlefield, pp. 503-517.
- Lange, R., Houran, J., & Li, S. (2015). Dyadic relationship values in Chinese online daters: love American style? *Sexuality & Culture*, 19, 190-215.
- Lange, R., & Houran, J. (2015). Quality of Measurement – The Implicit Legal Cornerstone of HR Assessments. *Employee Relations Law Journal*. Vol. 40, No. 4, 46-60.
- Houran, J., Lange, R., & Kefgen, K. (2013). Industry Trends: Fascinating Rhythms in the Career Paths of Hospitality Executives. *Cornell Hospitality Quarterly*, 54, 1, pp. 6 - 9.
- Lange, R. and Lange, X. (2012). Quality Control in Crowdsourcing: An Objective Measurement Approach to Identifying and Correcting Rater Effects in the Social Evaluation of Products and Services. *AAAI Spring Symposium Series*, North America, Stanford, CA, 2012. (<http://www.aaai.org/ocs/index.php/SSS/SSS12/paper/view/4322/4691>. Accessed: 29 May 2012)
- Arce-Ferrer, A., and Lange, R. (2012). Assessing incidence and consequence of rater effects on open-ended scoring. *Paper presented at the 8th Conference of the International Test Commission (ITC)*. Amsterdam, The Netherlands, July 3-5, 2012.
- Arce-Ferrer, A., and Lange, R. (2012). Effects of linguistic accommodations on mathematics test scores and reported skills diagnostics. *Paper presented at the 2012 NCME Annual Meeting*. Vancouver, BC. April 12-16.
- Arce-Ferrer, A., and Lange, R. (2012). *Using*

- cognitive modeling to investigate effects of linguistic simplifications of a source assessment.* Paper presented at the 8-th Conference of the International Test Commission (ITC). Amsterdam, The Netherlands, July 3-5, 2012.
- Lange, R., Houran, J., and McCutcheon, L.E. (2011). Celebrity and Parasocial Interaction. In: Brewer, G., *Media Psychology*. Basinstoke, UK: Palgrave MacMillan, p. 115-132.
- Lange, X., and Lange, R. (2011). *Haskell Possibilities for CAT.* Paper presented at the 2011 International Association for Computerized Adaptive Testing Conference. Pacific Grove, California, October 3-5, 2011.
- Lange, R., Stevens, D., and Schwarz, P. (2011). *Some Surprising Dynamics of "Technology Enhanced" Item Types: Taking Additional Time is Associated with Increased Student Performance on Some Types of Items, while Decreasing Performance on Others.* 2011 International Association for Computerized Adaptive Testing Conference. Pacific Grove, California, Oct 3-5.
- Birjandi, P., Daftarifard, P., and Lange, R. (2011). The effects of dynamic assessment on Rasch item and person hierarchies in second language testing. *International Journal of Language Studies (IJLS)*, Vol. 5, Issue 1, 125-140.
- Lange, R. (2010, June 6 – 9). An adaptive scheme for the dynamic Rasch calibration of pilot items. *Poster presented at the first IACAT*, Arnhem, the Netherlands.
- Lange, R., and Houran, J. (2010). A transliminal view of intuitions in the workplace. *North American Journal of Psychology*, 2010, Vol. 12, No. 3, 501-516.
- Daftari Fard, P., and Lange, R. (2008). Theoretical complexity vs. Rasch item difficulty in reading tests. *Rasch Measurement Transactions*, 2009, 23:2, p. 1212-1213.
- Fishbein, M., & Lange, R. (1990). The effects of crossing the midpoint on belief change: A replication and extension. *Personality and Social Psychology Bulletin*, 16, 189-199.
- Harandi, M.T. & Lange, R. (1990). Model Based Knowledge Acquisition. In: Adeli (Ed.). *Knowledge Engineering*. New York, NY: Addison-Wesley.
- Houran, J., Lange, R., Rentfrow, P. J., & Bruckner, K. H. (2004). Do online matchmaking tests work? An assessment of preliminary evidence for a publicized 'predictive model of marital success.' *North American Journal of Psychology*, 6, 507-526.
- Illinois TIMSS Task Force (1997). *An initial analysis of the Illinois results from the Third International Mathematics and Science Study (TIMSS)*. Illinois State Board of Education, Springfield, Illinois, September 17, 1997.
- Kazuaki, U. and Lange, R. (2000, April 24-28). *An International Perspective on Eight Grade Mathematics in Rural, Urban, and Suburban Schools: The United States vs. Korea.* Paper at the 81st Annual Meeting of the American Educational Research Association, New Orleans.
- Lange, R. (2008). Binary Items and Beyond: Simulation of Computer Adaptive Testing Using the Rasch Partial Credit Model. *Journal of Applied Measurement*, Vol. 9.
- Lange, R. (2007, Feb 15-20). Technical Demands on the Large Scale Implementation of Student Assessments. *I Bienal da Aprendizagem da Matemática e do Português (ISCTEM)*. Maputo, Mozambique.
- Lange, R. (2007). Binary Items and Beyond: A Simulation of Computer Adaptive Testing Using the Rasch Partial Credit Model. In: Smith, E. and Smith, R. (Eds.) *Rasch Measurement: Advanced and Specialized Applications*. Pp. 148-180, Maple Grove, MN: JAM Press.
- Lange, R. (1999). A cusp catastrophe approach to the prediction of temporal patterns in the kill dates of individual serial murderers. *Nonlinear Dynamics, Psychology, and Life Sciences*, 3, 143-159.
- Lange, R., and Harandi, M.T. (1985). Human Engineering Aspects of a Program Debugging Expert System. *The IEEE Computer Society's Ninth International Computer Software and Applications Conference*, Chicago, IL.
- Lange, R. and Harandi, M.T.(1988). Using Causal Domain Knowledge in the Control Structure of Deductive Systems. *Computational Intelligence: Proceedings of the International Conference*, Milan Italy, 26-30 Sept.
- Lange, R., Houran, J., & McCutcheon, L. E. (2011). Celebrity worship and parasocial Interaction. In G. Brewer (Ed.), *Media Psychology* (pp. 115-132). Basinstoke, UK: Palgrave MacMillan.
- Lange, R. (1996). An empirical test of the weighted effect approach to generalized prediction using recursive neural nets. In: E. Simoudis, J. Han, & U. Fayyad. *Proceedings of the Second International Conference on Knowledge Discovery and Data Mining*. Menlo Park: AAAI Press. Pp. 183-188.
- Lange, R. & Rentfrow, L. (2007). Color and personality: Strong's interest inventory and Cattell's 16PF. *North American Journal of Psychology*, 9, 423-438.
- Lange, R., and Houran, J. (2006, April 5-7). *Perceived importance of employees' traits and abilities for performance in hospitality jobs.* Paper presented at IOMW 2006, Berkeley, CA.
- Lange, R. (1999, October 18). Modeling catastrophes with latent variables in GEMCAT II: Applications to serial murder, paranormal delusions,

- and organizational product adoption. *Presentation to the Chicago Chapter of the American Statistical Association*. Chicago, IL.
- Lange, R. (1998). "GEMCAT II : A distribution-free method for testing the statistical properties of Thom's catastrophe equations as defined by sets of arbitrary latent variables." *Paper presented at the Eighth Annual Conference of the Society for Chaos Theory in Psychology and the Life Sciences*, Boston, MA., July 28–August 1.
- Lange, R., Jerabek, I., & Houran, J. (2005). Psychometric description of the TRUE Compatibility Test™ – a proprietary online matchmaking system. *Dynamical Psychology*.
- Lange, R., Wilson, G. D., Cousins, J., & Houran, J. (2005). *Redefining compatibility: gender differences in the building blocks of relationship satisfaction*. Presentation at the 17th Ann. APS Convention. May 26-29, Los Angeles, CA.
- Lange, R., Jerabeck, I., & Houran, J. (2004, April 11–12). Building Blocks for Satisfaction in Long-Term Romantic Relationships: Evidence for the Complementarity Hypothesis of Romantic Compatibility. *Paper presented at the 2004 Annual meeting of the AERA*. San Diego, CA.
- Lange, R., Greiff, W. R., Moran, J., and Ferro, L. (2004, May 2-7). A probabilistic Rasch analysis of question answering evaluations. *Proceedings of the Human Language Technology Conference of the North American Chapter of the Association for Computational Linguistics: HLT-NAACL 2004 [N04-1009]*.
- Lange, R., Greyson, B., & Houran, J. (2004). A Rasch scaling validation of a "core" near-death experience. *British Journal of Psychology*, 95, 161-177.
- Lange, R., McDade, S., and Oliva, T. (2004). The Estimation of a Catastrophe Model of a Cusp Model to Describe the Adoption of Word for Windows. *Journal of Product Innovation Management*, 21: 15-32.
- Lange, R., & Hughes, L. (2004, June 23-25). A computer adaptive Version of the Pennsylvania Smell Identification Test (UPSIT). *Advances in Health Outcomes Measurement: Exploring the Current State and the Future Applications of Item Response Theory, Item Banks, and Computer-Adaptive Testing*. Bethesda, MD.
- Lange, R., Thalbourne, M.A., Houran, J., & Lester, D. (2002). Depressive response sets due to gender and culture-based differential item functioning. *Personality and Individual Differences*, 33, 937-954.
- Lange, R., Donathan, C.L., & Hughes, L.F. (2002). Assessing olfactory abilities with the University of Pennsylvania smell identification test: A Rasch scaling approach. *Journal of Alzheimer's Disease*, 4, 77-91.
- Lange, R. & Houran, J. (2000). Belief vs. fear: Modeling Maher's attribution theory of delusions as a cusp catastrophe using GEMCAT II, *Journal of Nonlinear Dynamics in Psychology and the Life Sciences*, 4, 235-254
- Lange, R., McDade, S., & Oliva, T.A. (2001). Technological choice and network externalities: A catastrophe model analysis of firm software adoption for competing operating systems. *Structural Change and Economic Dynamics*, 12, 39-57.
- Lange, R., Oliva, T.A., & McDade, S. (2001). An algorithm for estimating multivariate catastrophe models: GEMCAT II. *Studies in Nonlinear Dynamics and Econometrics*, 4(3), 137-168. Also appears at <http://www.bepress.com/snede/vol4/iss3/algorithm1>.
- Lange, R., & Hughes, L.F. (2001, Oct. 20). Rasch Scaling the UPSIT: Using Smell Recognition to Identify Alzheimer's Disease, *Paper presented on the International Conference on Objective Measurement: Focus on Health Care (ICOM 2001)*, U. of Illinois at Chicago, Chicago, IL
- Lange, R., Thalbourne, M. A., Houran, J., & Storm, L. (2000). The revised Transliminality scale: Reliability and validity data from a Rasch Top-Down Purification procedure. *Consciousness and Cognition*, 9, 591-617.
- Lange, R., Oliva, T.A., & McDade, S. (1999, June 13-16). Multivariate catastrophe modeling with GEMCAT II: An organizational product adoption example. *Paper presented at the AMA ART Forum*. Sante Fe, NM.
- Lange, R. & Houran, J. (1999). Scaling the AT-20 using item response theory. *Personality and Individual Differences*, 26, 467-475.
- Lange, R. & Harandi, M.T. (1986). The elements of a distributed knowledge acquisition system. *Proceedings of the Sixth International Workshop on Expert Systems and Their Applications*. Avignon, France.
- Lange, R., Hearn, L., & Kearney, F.W. (1986). The use of knowledge engineering teams as a method for the development of expert systems. In: Sriram, D. and Adey, R. (Eds.). *Applications of Artificial Intelligence in Engineering Problems*. Boston, MA: Computational Mechanics Publications, pp. 45-54.
- Lange, R., & Fishbein, M. (1983). The effects of category differences on belief change and agreement with the source of a persuasive communication. *Journal of Personality and Social Psychology*, 44, 933-941.
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- Transactions*, 19:3 p. 1033-44.
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- Laughlin, P., Lange, R., and Adamopoulos, J. (1982). Selection strategies for "Mastermind" problems. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, Volume 8, Issue 5, Pages 475-483.
- Komorita, S. S. Lange, R. Hamilton, T. (1983). Effects of level of aspiration in coalition bargaining. In R. Tietz (Ed.), *Aspiration levels in bargaining and decision making: proceedings of the Third Conference on Experimental Economics*, Winzenhohl, Germany, August 29-September 3, 1982.
- Lange, R., & Houran, J. (1998). Delusions of the paranormal: a haunting question of perception. *Journal of Nervous and Mental Disease*, 186, 637-645.
- Lange, R., & Houran, J. (1999). The role of fear in delusions of the paranormal. *Journal of Nervous and Mental Disease*, 187, 159-166.
- Lange, R., & Houran, J. (2000). Modeling Maher's attribution theory of delusions as a cusp catastrophe. *Nonlinear Dynamics, Psychology, and Life Sciences*, 4, 235-254.
- Lange, R., Irwin, H. J., & Houran, J. (2000). Top-down purification of Tobacyk's Revised Paranormal Belief Scale. *Personality and Individual Differences*, 29, 131-156.
- Houran, J., & Lange, R. (2004). Redefining delusion based on studies of subjective paranormal ideation. *Psychological Reports*, 94, 501-513.
- Houran, J., & Lange, R. (2004). Expectations of finding a 'soul mate' with online dating. *North American Journal of Psychology*, 6, 297-308.
- Houran, J., Lange, R., Rentfrow, P. J., & Bruckner, K. H. (2004). Do online matchmaking tests work? An assessment of preliminary evidence for a publicized 'predictive model of marital success.' *North American Journal of Psychology*, 6, 507-526.
- Houran, J., & Lange, R. (2007). State-of-the-art measurement in Human Resource assessment. *International Journal of Tourism and Hospitality Systems*, 1, 78-92.
- Houran, J., & Lange, R. (2009). Searching for an optimal level of transliminality in relation to putative psi. *Journal of the Society for Psychical Research*, 73, 92-102.
- Maltby, J., Houran, J., Lange, R., Ashe, D. D., & McCutcheon, L. E. (2002). Thou shalt worship no other gods— unless they are celebrities: the relationship between celebrity worship and religious orientation. *Personality and Individual Differences*, 32, 1157-1172.
- Houran, J., Thalbourne, M. A., & Lange, R. (2003). Methodological note: Erratum and comment on the use of the Revised Transliminality Scale. *Consciousness and Cognition*, 12, 140-144.
- Houran, J., Irwin, H. J., & Lange, R. (2001). Clinical relevance of the two-factor Rasch version of the Revised Paranormal Belief Scale. *Personality and Individual Differences*, 31, 371-382.
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- Harandi, M.T., Lange, R., Buchner, B. (1988). Distributed Knowledge Acquisition Using Abstract Domain Models. *Proceedings: USACERL/ASCE First Joint Conference on Expert Systems*, June 29-30, 1988, Champaign, IL, 45-49.