

# L. Karl Branting

## Curriculum Vitae

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### Education

- Ph.D. in Computer Science, University of Texas at Austin, 1991
- M.S. in Computer Science, University of Texas at Austin, 1988
- J.D., Georgetown University Law Center, 1980
- B.A., *magna cum laude* in philosophy, University of Colorado, 1975

### Employment

- Chief Scientist, Machine Learning for Computational Law, Department of Human Language Technology, The MITRE Corporation, February 2007-present.
- Manager, AI Research and Development, BAE Systems I/TI, June 2004-January 2007.
- Principal Research Scientist, LiveWire Logic, Inc., July 2001-May 2004.
- Visiting Lecturer, Department of Computer Science, North Carolina State University, August 2003-May 2004
- Associate Professor, Department of Computer Science, University of Wyoming, September 1997-June 2001.
- Assistant Professor, Department of Computer Science, University of Wyoming, January 1991-August 1997.
- Staff attorney, Colorado Court of Appeals, December 1982-August 1985
- Associate attorney, Davis, Moorhead & Ceriani, Denver, Colorado, May 1980-November 1982

### Academic Awards and Fellowships

- United States Supreme Court Fellow, September 2000-June 2001 (study of knowledge-based systems for the judiciary).
- Fulbright Senior Scholar, September 1998-June 1999 (collaborative research in Case-Based Reasoning at the University of Kaiserslautern).
- NSF CAREER Grant, 1995-1998, "Abstraction and Hierarchical Problem Solving in Case-Based Reasoning."
- Award for Extraordinary Merit in Research, University of Wyoming College of Arts and Sciences, 1996-1997.
- Recipient (with Jeff Lockwood and John Hastings) of IAAI-2001 Innovative Application of Artificial Intelligence award for the development of CARMA (CASE-based Rangeland Management Advisor).
- University of Wyoming Sabbatical grant, 1998-1999.

- Visiting Faculty Research Fellowship (June 27-August 19, 1994), Naval Research Laboratory, Washington, D.C.
- Summer Faculty Research Fellowship (May 17-August 8, 1993), Armstrong Laboratory, Brooks Air Force, San Antonio, Texas.
- Graduate Research Assistant (June 1987-December 1990), Artificial Intelligence Laboratory, University of Texas at Austin
- MCD Doctoral Fellowship, University of Texas at Austin (September 1985-May 1987)

## Computer Science Publications

### Books

- Reasoning with Rules and Precedents (2000), Kluwer Academic Publishers, Dordrecht.

### Edited Collections

- Klaus-Dieter Althoff, Ralph Bergmann, and L. Karl Branting (Eds.), Case-Based Reasoning Research and Development, *Lecture Notes in Artificial Intelligence 1650* (1999), Springer Verlag.
- Giovanni Sartor and L. Karl Branting (Eds.), Judicial Applications of Artificial Intelligence (1998), Kluwer Academic Publishers, Dordrecht.

### Refereed Journal Articles

- Karl Branting, Bradford Brown, Chris Giannella, Sarah Howell, James Van Guilder, Jeff Harrold, Jason R. Baron, Decision Support for Detecting Sensitive Text in Government Records, under review, *Artificial Intelligence and Law*, Springer (2023).
- Karl Branting, Sarah McLeod, Sarah Howell, Brandy Weiss, Brett Proffitt, James Tanner, Ian Gross, David Shin, A Computational Model of Facilitation in Online Dispute Resolution, *Artificial Intelligence and Law*, Springer (2022).
- Michal Araszkiwicz, Kevin Ashley, Trevor Bench-Capon, L. Karl Branting, Jack G. Conrad, Serena Villata, Adam Wyner, Thirty Years of Artificial Intelligence and Law: The Third Decade, *Artificial Intelligence and Law*, Springer, to appear (2022).
- Elizabeth C. Tippet, Charlotte S. Alexander, Karl Branting, Paul Morawski, Carlos Balhana, Craig Pfeifer and Sam Bayer, Does Lawyering Matter? Predicting Judicial Decisions from Legal Briefs, and What That Means for Access to Justice, *Texas Law Review*, Volume 100, 1157 (2022).
- L. Karl Branting, Lisa Ferro, John Aberdeen, Craig Pfeifer, John Aberdeen, Bradford Brown, Mark Pfaff, Brandy Weiss, and Bill Liao, Scalable and

Explainable Legal Prediction, June 24:1-26, *Artificial Intelligence and Law*, Springer (2020).

- L. Karl Branting, Alexander Yeh, Brandy Weiss, Elizabeth Merkhofer, and Bradford Brown, Inducing Predictive Models for Decision Support in Administrative Adjudication, *AI Approaches to the Complexity of Legal Systems*, Lecture Notes in Computer Science, n. 10791 (2018).
- Ali Sadeghian, Laksshman Sundaram, Daisy Zhe Wang, William F. Hamilton, Karl Branting, and Craig Pfeifer, Semantic Edge Labeling over Legal Citation Graphs, 26 (2):127-144, *Artificial Intelligence and Law*, Springer (2018).
- L. Karl Branting, Data-centric and logic-based models for automated legal problem solving, *Artificial Intelligence and Law*, 25(1):5-27, Springer (2017).
- L. Karl Branting, Context-Sensitive Detection of Local Community Structure, *Social Network Analysis and Mining*, 1869-5450:1-11, Springer (2011).
- L. Karl Branting, Information Theoretic Criteria for Community Detection, *Lecture Notes in Computer Science*, 5498, Springer (2010).
- L. Karl Branting, Learning Feature Weights from Customer Return-Set Selections, *Knowledge and Information Systems* 6(2):188-202 March (2004).
- L. Karl Branting, A Reduction-Graph Model of Precedent for Legal Analysis, *Artificial Intelligence*, 150(1-2):59-95 (2003).
- John Hastings, L. Karl Branting, and Jeff Lockwood, CARMA: A Case-Based Rangeland Management Advisor, *AI Magazine*, 23(2):49-62 (2002).
- L. Karl Branting, Name-Matching Algorithms for Legal Case-Management Systems, *The Journal of Information, Law and Technology (JILT)*, 2002 (1), [https://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2002\\_1/branting/](https://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2002_1/branting/).
- L. Karl Branting, An Advisory System for Pro Se Protection Order Applicants, *International Review of Law, Computers & Technology*, 14(3):357-370 (2000).
- L. Karl Branting, Techniques for Automated Drafting of Judicial Documents, *International Journal of Law and Information Technology*, 6(2):214-229 (1998).
- Giovanni Sartor and L. Karl Branting, Judicial Applications of Artificial Intelligence and Law (introduction to special issue), *Artificial Intelligence and Law*, 6(2-4):105-110 (1998).
- L. Karl Branting, James Lester, and Charles Callaway, Automating Judicial Document Drafting: A Discourse-Based Approach, *Artificial Intelligence and Law*, 6(2-4):111-149 (1998).
- L. Karl Branting, John D. Hastings, and Jeffrey A. Lockwood, Integrating Cases and Models for Prediction in Biological Systems, *AI Applications*, 11(1):29-48 (1997).
- L. Karl Branting and Patrick Broos, Automated Acquisition of User Preferences, *International Journal of Human-Computer Studies*, 46:55-77 (1997).

- John Hastings, Karl Branting, and Jeff Lockwood, A Multi-Paradigm Reasoning System for Rangeland Management, *Computers and Electronics in Agriculture*, 16(1):47-67 (1996).
- L. Karl Branting, A Computational Model of Ratio Decidendi, *Artificial Intelligence and Law*, 2(1):1-31 (1994).
- L. Karl Branting, Four Challenges for Computational Models of Legal Precedent, special issue of THINK (journal of the Institute for Language Technology and Artificial Intelligence at Katholieke Universiteit Tilburg) on legal knowledge-based systems, Volume 3, June 1994.
- L. Karl Branting, Building Explanations with Rules and Structured Cases, *International Journal of Man-Machine Studies*, 34:1-41 (1991).

### Refereed Conference and Workshop Papers

- L. Karl Branting, Sarah McLeod, Karine Megerdooian, and Bryant Park, Induction of Narrative Models for Legal Case Elicitation, *Proceedings of the Sixth Workshop on Automated Semantic Analysis in Law (ASAIL)*, 23 June 2023, Braga, Portugal.
- L. Karl Branting and Sarah McLeod Narrative-Driven Case Elicitation, *Proceedings of the ICAIL 2023 Workshop on AI for Access to Justice*, 19 June 2023, Braga, Portugal.
- L. Karl Branting, The Justice Access Game: Crowd-Sourced Evaluation of Systems for Pro Se Litigants, *Proceedings of the ICAIL 2023 Workshop on AI for Access to Justice*, 19 June 2023, Braga, Portugal.
- L. Karl Branting, Elizabeth Tippet, Charlotte Alexander, Sam Bayer, Paul Morawski, Carlos Balhana, and Craig Pfeifer, Predictive Features of Persuasive Legal Texts, *Proceedings of the 2020 Workshop on Automated Semantic Analysis of Information in Legal Text (ASAIL)*, 9 December 2020.
- L. Karl Branting, Carlos Balhana, Craig Pfeifer, John Aberdeen, and Bradford Brown, Judges are from Mars, Pro Se Litigants are from Venus: Predicting Decisions from Lay Text, *33rd International Conference on Legal Knowledge and Information Systems (JURIX 2020)*, 9-11 December 2020.
- L. Karl Branting, Explanation in Hybrid, Two-Stage Models of Legal Prediction, *The EXplainable & Responsible AI in Law (XAILA) Workshop*, 9 December 2020.
- L. Karl Branting, Lisa Ferro, John Aberdeen, Craig Pfeifer, Alexander Yeh, Bradford Brown, Mark Pfaff, Brandy Weiss, and Amartya Chakraborty, Semi-Supervised Methods for Explainable Legal Prediction, *Proceedings of the 19th International Conference on AI and Law (ICAIL 2019)*, Montreal, Canada, 17-21 June 2019. Acceptance rate presented papers 17/94 = 18%. *Winner of Peter Jackson Best Innovation Application Award*.
- Lisa Ferro, John Aberdeen, L. Karl Branting, Craig Pfeifer, Alexander Yeh, Amartya Chakraborty, Scalable Methods for Annotating Legal-Decision Corpora, *Workshop in Natural Legal Language Processing (NLLP) at NAACL*

2019, Minneapolis, MN, 7 June 2019. Acceptance rate for full papers 6/20 = 30%.

- L. Karl Branting, Jim Finegan, David Shin, Stacy Petersen, Carlos Balhana, Alex Lyte, Craig Pfeifer, Automated Directive Extraction from Policy Texts, *First International Workshop on AI and the Administrative State*, Montreal, QC, Canada, Montreal, QC, Canada, June 17, 2019, <http://ceur-ws.org/Vol-2471/>
- L. Karl Branting, Automating Judicial Document Analysis, *Second Workshop on Automated Semantic Analysis of Information in Legal Texts (ASAIL 2017)*, <http://ceur-ws.org/Vol-2143/>.
- L. Karl Branting, Alexander Yeh, Brandy Weiss, Elizabeth Merkhofer, and Bradford Brown, Cognitive Assistance for Administrative Adjudication, *AAAI 2017 Fall Symposium on Cognitive Assistance in Government and Public Sector Applications*, Arlington, Virginia, 9-11 November 2017.
- L. Karl Branting, Alexander Yeh, Brandy Weiss, Elizabeth Merkhofer, and Bradford Brown, Inducing Predictive Models for Decision Support in Administrative Adjudication, *MIREL 2017*, London, UK.
- L. Karl Branting, Flo Reeder, Jeffrey Gold, and Timothy Champney, Graph Analytics for Healthcare Fraud Risk Estimation, *Proceedings of the International Symposium on Foundations of Open Source Intelligence and Security Informatics (FOSINT-IS 2016)*, San Francisco, CA, USA, August 19-20, 2016.
- L. Karl Branting, Vocabulary Reduction, Text Excision, and Contextual Features in Judicial Document Analytics, *Workshop on Text, Document, and Corpus Analytics (LTDCA-2016)*, San Diego, California, 17 June 2016.
- Ali Sadeghian, Lakshman Sundaram, Daisy Zhe Wang, William F. Hamilton, L. Karl Branting and Craig Pfeifer, Semantic Edge Labeling over Legal Citation Graphs, *Workshop on Text, Document, and Corpus Analytic (LTDCA-2016)*, San Diego, California, 17 June 2016.
- L. Karl Branting, Cognitive Assistants for Document-Related Tasks in Law and Government, *AAAI 2015 Fall Symposium on Cognitive Assistance in Government and Public Sector Applications*, Arlington, Virginia, 12-14 November 2015.
- L. Karl Branting, Distributed Pivot Clustering with Arbitrary Distance Functions, *Proceedings of the IEEE BigData'13 Workshop on Scalable Machine Learning*, Santa Clara, California, 6 October 2013.
- L. Karl Branting, 2010. Incremental Detection of Local Community Structure. *In Proceedings of the 2010 International Conference on Advances in Social Networks Analysis and Mining (ASONAM '10)*. IEEE Computer Society, Washington, DC, USA, 80-87.
- L. Karl Branting, Overcoming Resolution Limits in MDL Community Detection, *2nd SNA-KDD Workshop (SNA-KDD2008)*, Las Vegas, Nevada, USA, August 24, 2008.

- L. Karl Branting, Inducing Search Keys for Name Filtering, *Conference on Empirical Methods in Natural Language Processing*, Prague, Czech Republic, June 28-30, 2007. Acceptance rate presented papers: 66/398 = 16.6%.
- L. Karl Branting, Efficient Name Variation Detection, *Proceedings of the AAAI 2006 Fall Symposium on Capturing and Using Evidence Patterns*, Crystal City, VA, October 13-15, 2006.
- Bradford Mott, James Lester, and L. Karl Branting, The Role of Syntactic Analysis in Textual Case Retrieval, *Proceedings of the Textual Case-Based Reasoning Workshop at the Sixth International Conference on Case-Based Reasoning (TCBR 2005)*, Chicago, IL, 24 August 2005.
- L. Karl Branting, The Role of Mixed-Initiative Agent Interfaces in Intelligence Analysis, *Proceedings of the AAAI 2005 Fall Symposium on Mixed-Initiative Problem-Solving Assistants*, Arlington, VA, November 3-6, 2005.
- L. Karl Branting, Name Matching in Law Enforcement and Counter-Terrorism, *Proceedings of the ICAIL 2005 Workshop on Data Mining, Information Extraction, and Evidentiary Reasoning for Law Enforcement and Counter-Terrorism*, Bologna, Italy, 10 June 2005.
- L. Karl Branting, James Lester, and Bradford Mott, Dialogue Management for Conversational Case-Based Reasoning, *Proceedings of the Seventh European Conference on Case-Based Reasoning (ECCBR 2004)*, Madrid, Spain, August 30 - September 2, 2004.
- A Comparative Evaluation of Name-Matching Algorithms, *Proceedings of the Ninth International Conference of Artificial Intelligence and Law (ICAIL-03)*, Edinburgh, UK, June 23-26, 2003. Acceptance rate: 28/52 = 54%.
- Optimizing Return-Set Size for Requirements Satisfaction and Cognitive Load, *Proceedings of the Third International Symposium on Electronic Commerce (ISEC-02)*, Research Triangle Park, NC, October 18-19, 2002.
- L. Karl Branting, Acquiring Customer Preferences from Return Set Selections, *Proceedings of the Fourth International Conference on Case-Based Reasoning (ICCB-2001)*, Simon Fraser University, Vancouver, British Columbia, July 30-August 2, 2001. Acceptance rate for presented papers: 21/75 = 28%.
- L. Karl Branting, John Hastings, Jeffrey Lockwood, CARMA: A Case-Based Range Management Advisor, *Proceedings of the Thirteenth Innovative Applications of Artificial Intelligence (IAAI-2001)*, Seattle, Washington, August 7-9, 2001.
- L. Karl Branting, Advisory Systems for Pro Se Litigants, *Proceedings of the Eighth International Conference of Artificial Intelligence and Law (ICAIL-01)*, St. Louis, Missouri, May 21-24, 2001. Acceptance rate: 24/46 = 52%.
- L. Karl Branting, William A. Reiners, and Hongyan Wang, Induction of Landtype Classification Rules from GIS Data, *Proceedings of BESAI 2000 Workshop on Binding Environmental Sciences and Artificial Intelligence*, August 21, 2000, Berlin, Germany.

- Rosina Weber, David W. Aha, L. Karl Branting, J. Robert Lucas, and Irma-Becerra Fernandez, Active Case-Based Reasoning for Lessons Delivery Systems, *Proceedings of the The 13th International FLAIRS Conference (FLAIRS 2000)*, Hotel Royal Plaza, Orlando, Florida May 22-24, 2000.
- L. Karl Branting, Active Exploration in Instance-Based Preference Modeling, *Proceedings of the Third International Conference on Case-Based Reasoning (ICCBR-99)*, Monastery Seon, Germany, July 27-30, 1999, *Lecture Notes in Artificial Intelligence 1650*. Acceptance rate (poster-session papers):  $47/81 = 58\%$
- L. Karl Branting and Yi Tao, A Multiple-Domain Evaluation of Stratified CBR, *Proceedings of the Third International Conference on Case-Based Reasoning (ICCBR-99)*, Monastery Seon, Germany, July 27-30, 1999, *Lecture Notes in Artificial Intelligence 1650*. Acceptance rate (poster-session papers):  $47/81 = 58\%$
- L. Karl Branting, A Generative Model of Narrative Cases, *Proceedings of the Seventh International Conference on Artificial Intelligence & Law (ICAIL-99)*, Oslo, Norway, July 14-17, 1999. Acceptance rate:  $23/48 = 54\%$ .
- L. Karl Branting, Charles B. Callaway, Bradford W. Mott, and James C. Lester, Integrating Discourse and Domain Knowledge for Document Drafting, *Proceedings of the Seventh International Conference on Artificial Intelligence & Law (ICAIL-99)*, Oslo, Norway, July 14-17, 1999. Acceptance rate:  $23/48 = 54\%$ .
- L. Karl Branting, Two Paradigms of Complementary CBR Integrations, *Proceedings of the AAI-98 Workshop on CBR Integrations*, Madison, WI, July 26, 1998.
- L. Karl Branting, Integrating Cases and Models Through Approximate-Model-Based Adaptation, *Proceedings of the Stanford Spring Symposium on Multimodal Reasoning*, Stanford University, March 23-25, 1998.
- L. Karl Branting, Stratified Case-Based Reasoning in Non-Refinable Abstraction Hierarchies, *Proceedings of the Second International Conference on Case-Based Reasoning (ICCBR-97)*, Providence, Rhode Island, July 25-27, 1997, *Lecture Notes in Artificial Intelligence 1266*, pp. 519-530. Acceptance rate for presented papers:  $28/100 = 28\%$ . Appearing in condensed form in *Proceedings of the AAI-97 Workshop on Abstraction, Decisions, and Uncertainty*, July 28, 1997, Providence, RI.
- L. Karl Branting, James Lester, and Charles Callaway, Automated Drafting of Self-Explaining Documents, *Sixth International Conference on Artificial Intelligence and Law*, June 30-July 3, 1997, University of Melbourne, Melbourne, Australia, pp. 72-81. Acceptance rate for presented papers:  $27/51 = 53\%$ .
- L. Karl Branting and James C. Lester, Justification Structures for Document Reuse, *Proceedings of the Third European Workshop on Case-Based Reasoning (EWCR-96)*, Lausanne, Switzerland, November 14-16, 1996,

*Lecture Notes in Artificial Intelligence* 1168 pp. 76-90. Acceptance rate: 38/42 = 90%.

- L. Karl Branting and James C. Lester, A Framework for Self-Explaining Legal Documents, *Proceedings of the Ninth International Conference on Legal Knowledge-Based Systems (JURIX-96)*, Tilburg, the Netherlands, December 13, 1996, pp. 77-90. Acceptance rate: 12/18 = 67%.
- John Hastings and L. Karl Branting, Global and Case-Specific Model-based Adaptation, *Proceedings of the AAAI Fall Symposium on Adaptation of Knowledge for Reuse*, Cambridge, MA, November 10-12, 1995.
- John Hastings, L. Karl Branting, and Jeff Lockwood, Case Adaptation Using an Incomplete Causal Model, *Proceedings of the First International Conference on Case-Based Reasoning (ICCB-95)*, Sesimbra, Portugal, October 23-26, 1995, *Lecture Notes in Artificial Intelligence* 1010. Acceptance rate (presented papers): 22/89 = 25%.
- L. Karl Branting and David W. Aha, Stratified Case-Based Reasoning: Reusing Hierarchical Problem Solving Episodes, *Proceedings of the Fourteenth International Joint Conference on Artificial Intelligence (IJCAI-95)*, Montreal, Canada, August 20-25, 1995. Acceptance rate: 249/1112 = 22%.
- L. Karl Branting and David W. Aha, A Case-Based Approach to Hierarchical Problem Solving, *Proceedings of the AAAI Symposium on Abstraction, Reformulation, and Approximation (SARA-95)*, Ville d'Estérel, Quebec, Canada August 17-19, 1995.
- L. Karl Branting, A Hierarchical Representation for CISG Case Entry and Problem Solving, *Proceedings of the Third International Workshop on a Legal Expert System for the CISG*, College Park, MD, May 20, 1995.
- Patrick Broos and L. Karl Branting, Compositional Instance-Based Learning, *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, Seattle, Washington, July 31-August 4, 1994. Acceptance rate: 222/780 = 28%. Also accepted at the Eleventh International Conference on Machine Learning. Acceptance rate 47/186 = 25%
- L. Karl Branting and John D. Hastings, An Empirical Evaluation of Model-Based Case Matching and Adaptation, *Proceedings of the Workshop on Case-Based Reasoning*, Twelfth National Conference Conference on Artificial Intelligence (AAAI-94), Seattle, Washington, July 31-August 4, 1994. Acceptance rate (presented papers) 14/43 = 33%.
- Patrick Broos and L. Karl Branting, Compositional Instance-Based Acquisition of Preference Predicates, *Proceedings of the AAAI-93 Workshop on Case-Based Reasoning*, Washington, D.C., July 11-16, 1993. Acceptance rate: 20/48 = 42%.
- L. Karl Branting, A Reduction-Graph Model of Ratio Decidendi, *Proceedings of the Fourth International Conference on Artificial Intelligence and Law*, Vrije Universiteit, Amsterdam, The Netherlands, June 15-18, 1993. Acceptance rate: 37/78 = 47%.

- L. Karl Branting, An Issue-Oriented Approach to Judicial Document Assembly, *Proceedings of the Fourth International Conference on Artificial Intelligence and Law*, Vrije Universiteit, Amsterdam, The Netherlands, June 15-18, 1993. Acceptance rate:  $37/78 = 47\%$ .
- L. Karl Branting, A Model of the Role of Expertise in Analog Retrieval, *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, July 29-August 1, 1992, Bloomington, Indiana. Acceptance rate: (presented papers):  $113/248 = 46\%$
- L. Karl Branting, A Case-Based Approach to Problem Formulation, *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, July 29-August 1, 1992, Bloomington, Indiana. Acceptance rate (poster-session papers):  $200/248 = 81\%$ .
- L. Karl Branting, Case-Based Formulation: Automating Knowledge Acquisition for Relational Knowledge Bases, *Proceedings of the AAAI Workshop on Knowledge Representation Aspects of Knowledge Acquisition*, National Conference on Artificial Intelligence, July 12-17, 1992, San Jose, California.
- L. Karl Branting and Bruce W. Porter, Rules and Precedents as Complementary Warrants, *Proceedings of the Ninth National Conference on Artificial Intelligence (AAAI-91)*, Anaheim, California, July 14-19, 1991. Acceptance rate:  $144/604 = 24\%$ .
- L. Karl Branting, Reasoning with Portions of Precedents, *Proceedings of the Third International Conference on Artificial Intelligence and Law*, Oxford, England, June 25-28, 1991.
- L. Karl Branting, Exploiting the Complementarity of Rules and Precedents with Fairness and Reciprocity, *Proceedings of the Third DARPA Workshop on Case-Based Reasoning*, Washington, D.C., May 8-10, 1991.
- L. Karl Branting, Techniques for Retrieval of Structured Cases, *Working Papers of the AAAI Spring Symposium on Case-Based Reasoning*, Palo Alto, California, March 27-29, 1990. Acceptance rate:  $11/62 = 18\%$ .
- L. Karl Branting, Integrating Generalizations with Exemplar-Based Reasoning, *Proceedings of the Eleventh Annual Conference of the Cognitive Science Society*, Ann Arbor, Michigan, August 16-19, 1989. Acceptance rate (presented papers):  $66/250 = 25\%$  Appearing in condensed form in the *Proceedings of the Second DARPA Workshop on Case-Based Reasoning*, Pensacola, Florida, May 31-June 2, 1989.
- L. Karl Branting, Representing and Reusing Explanations of Legal Precedents, *Proceedings of the Second International Conference on Artificial Intelligence and Law*, Vancouver, British Columbia, June 13-16, 1989. Acceptance rate:  $32/75 = 41\%$ .
- L. Karl Branting, The Role of Explanation in Reasoning from Legal Precedents, *Proceedings of the DARPA Workshop on Case-Based Reasoning*, Clearwater, Florida, May 11-13, 1988. Also appearing as Technical Report AI-TR-88-77,

Artificial Intelligence Laboratory, Department of Computer Sciences,  
University of Texas at Austin, April 1988.

### **Non-Refereed Journal Articles**

- Jack Conrad and L. Karl Branting, Introduction to the special issue on legal text analytics, *Artificial Intelligence and Law*, 26 (2):99–10 (June 2018).
- L. Karl Branting, Artificial intelligence and the law from a research perspective, *The SciTech Lawyer*, 14:3 (Spring 2018).
- Klaus-Dieter Althoff, Ralph Bergmann, and L. Karl Branting, Conference Report on the Third International Conference on Case-Based Reasoning (ICCB'99), *AI Magazine*, 22(1):116-118, Spring 2001.

### **Refereed Book Chapter**

- James Lester, Karl Branting, and Brad Mott, *Conversational Agents*, Practical Handbook of Internet Computing, Munindar Singh (Ed.), CRC Press (2004).

### **Non-refereed Conference and Workshop Papers**

- James P. Bagrow, Suma Desu, Morgan R. Frank, Narine Manukyan, Lewis Mitchell, Andrew Reagan, Eric E. Bloedorn, Lashon B. Booker, Luther K. Branting, Michael J. Smith, Brian F. Tivnan, Christopher M. Danforth, Peter S. Dodds, Joshua C. Bongard, Shadow networks: Discovering hidden nodes with models of information flow, *arXiv:1312.6122* [physics.soc-ph] (20 Dec 2013).
- John D. Hastings, Jeffrey Lockwood, L. Karl Branting, Scott P. Schell, The New CARMA: Keeping Pace with Changes in Grasshopper Management, *Proceedings of the National Grasshopper Management Board meeting*, Denver, CO, Jan 29-30, 2002.
- L. Karl Branting, Automated Judicial Document Drafting, *Proceedings of the ICAIL-97 Judicial Decision Support Systems Workshop*, July 4, 1997.
- L. Karl Branting, Balancing Expressiveness and Tractability: Expectation-Driven Problem Formulation, *Working Papers of the ICOT Workshop on Representation of Legal Knowledge*, Boston MA, March 18, 1994.
- L. Karl Branting, Precedent Retrieval by Match Refinement, *Notes of the AAAI Workshop on Law and Artificial Intelligence*, Boston, MA, July 30, 1990.
- Ray Bareiss, Bruce Porter, and L. Karl Branting, The Role of Explanation in Exemplar-Based Classification and Learning, *Proceedings of the AAAI Workshop on Case-Based Reasoning*, St. Paul, Minnesota, August 23, 1988.
- Bruce Porter, Kenneth Murray, and L. Karl Branting, What Use is Explanation? *Proceedings of the AAAI Workshop on Explanation*, St. Paul, Minnesota, August 23, 1988.

### **Newsletter Articles**

- L. Karl Branting, Legal Expert Systems Enter the Marketplace, *AI and Law News*, 6(1):1-2 (2001).
- L. Karl Branting, Synergy in the Antipodes: ICAIL-97 Conference Report, *AI and Law News*, 4(1):1-2 (1998).

### **Transcribed Symposia**

- L. Karl Branting, Kevin Ashley, and Cass Sunstein, Legal Reasoning & Artificial Intelligence: How Computers "Think" Like Lawyers, *University of Chicago Law School Roundtable*, 8(1) (2001).

### **Technical Reports**

- L. Karl Branting and Jack Conrad, LTDCA 2016 Workshop Report, 29 June 2016.
- L. Karl Branting, Pattern Matching for Conflict Detection in Electronic Case Management Systems, Administrative Office of U.S. Courts (13 pages), June 14, 2001.
- L. Karl Branting, Electronic Case Filing for Pro Se Litigants: Alternatives and Issues, Administrative Office of U.S. Courts (8 pages), January 30, 2001.
- L. Karl Branting, Integrating Rules and Precedents for Explanation and Classification: Automating Legal Reasoning, (Ph.D. Thesis), Technical Report AI-TR90-146, Artificial Intelligence Laboratory, Department of Computer Sciences, University of Texas at Austin, December 1990.
- L. Karl Branting, Representation and Reuse of Explanations in Case-Based Reasoning, Technical Report AI-TR89-101, Artificial Intelligence Laboratory, Department of Computer Sciences, University of Texas at Austin, March 1989.
- L. Karl Branting, A Prototype Natural Language Understanding Legal Consultant, Technical Report AI-TR87-49, Artificial Intelligence Laboratory, Department of Computer Sciences, University of Texas at Austin, February 1987.

### **Book Reviews**

- Review of *Computers, Artificial Intelligence and the Law*, Mervyn E. Bennun, ed., (Chichester, West Sussex: Ellis Horwood Limited 1991) and *Law, Computer Science, and Artificial Intelligence*, A. Narayanan & M. Bennun, eds. (Norwood, New Jersey: Ablex Publishing Corporation, 1991), *Artificial Intelligence and Law: An International Journal*, 2(3):233-238 (1994).

### **Legal Publications**

- Employee's Right to Compensation Accruing After Termination, *The Colorado Lawyer*, October 1984.

- Reconciliation of Conflicting Goals in the Export Administration Act of 1979-A Delicate Balance, 12 *Law and Policy in International Business* 425-460, 1980.

## **Professional Affiliations and Activities**

### **Offices in Professional Organizations**

- President, International Association for Artificial Intelligence and Law (2004-2005).

### **Editorial Position**

- Associate Editor, *Technology and Law* section of *Frontiers in Artificial Intelligence*
- Editorial board member, *Artificial Intelligence and Law Journal* (Kluwer).
- Newsletter editor, *AI & Law News*, the newsletter of the International Association for Artificial Intelligence and Law (IAAIL), 1991-2001.

### **Program Chair**

- CCML Workshop on Legal Text, Document, and Corpus Analytics (LTDC-2016), University of San Diego, San Diego California, USA, June 12, 2016.
- ICAIL 2015 Workshop on Law and Big Data, University of San Diego, San Diego California, USA, June 12, 2015.
- Workshop on Applying Human Language Technology and Law AHLTL-2011, University of Pittsburgh School of Law, Pittsburgh, PA, USA, June 10, 2011.
- Workshop on Data Mining, Information Extraction, and Evidentiary Reasoning for Law Enforcement and Counter-Terrorism, Bologna, Italy, 10 June 2005.
- North American Co-Chair, Third International Conference on Case-Based Reasoning (ICCB-99), Munich, Germany, July 27-30, 1999.
- Sixth International Conference on Artificial Intelligence and Law (ICAIL-97), University of Melbourne, Melbourne, Australia, June 30-July 3, 1997.

### **Workshop Organizing Committees**

- AAAI 2005 Fall Symposium on Mixed-Initiative Problem-Solving Assistants, Arlington, VA, USA, 3-6 November 2005.
- ICCBR 2005 Workshop on Textual Case-Based Reasoning, Chicago, IL, USA, 24 August 2005.
- ICAIL-2003 Workshop on Evaluation of Legal Reasoning and Problem-Solving Systems, June 28, 2003, Edinburgh, Scotland, UK.
- ICAIL-1999 Workshop on Automated Document Drafting, June 14, 1999, Oslo, Norway (Co-Chair).
- ECML-97 Workshop on "Case-Based Learning: Beyond Classification of Feature Vectors," Ninth European Conference on Machine Learning, April 23-26 1997, Prague, Czech Republic.
- AAAI-94 Workshop on Case-Based Reasoning, Twelfth National Conference on Artificial Intelligence, Seattle, WA, July 31-August 4, 1994.

### **Program Committees**

- Twelfth International Conference on Artificial Intelligence and Law (ICAIL 2009), Institute of Law and Technology, Autonomous University of Barcelona.8 - 12 June 2009.
- Seventh International Conference on Case-Based Reasoning (ICCBR 2007), Belfast, Northern Ireland, 13-16 August 2007.
- Eleventh International Conference on Artificial Intelligence and Law (ICAIL 2007), Palo Alto, CA USA, June 4 - June 8, 2007.
- The Twentieth International Joint Conference on Artificial Intelligence (IJCAI 2007), January 6 -12, 2007, Hyderabad, India.
- The Twenty-First National Conference on Artificial Intelligence, (AAAI-06) July 16-20, 2006, Boston, Massachusetts.
- 18th International JURIX Conference on Legal Knowledge Systems (JURIX 2005), Brussels, BE, 8-10 Dec. 2005.
- The Sixth International Conference on Case-Based Reasoning (ICCBR 2005), Chicago, USA, 23-26 August 2005.
- The Tenth International Conference on Artificial Intelligence and Law (ICAIL-05) , Bologna, Italy, 6-10 June 200
- IJCAI-03 Workshop on Environmental Decision Support Systems, August 9-11, 2003, Acapulco, Mexico.
- Fifth International Conference on Case-Based Reasoning (ICCBR'03), June 23-26, 2003, Trondheim, Norway.
- Ninth International Conference on Artificial Intelligence and Law (ICAIL-2003), June 23-27, 2003, Edinburgh, Scotland, UK
- Fourth International Conference on Case-Based Reasoning (ICCBR'01), July 30-August 2, 2001, Simon Fraser University, Vancouver, British Columbia.
- Eighth International Conference on Artificial Intelligence and Law (ICAIL-2001), May 21-25, 2001, St. Louis, Missouri.
- The 14th International FLAIRS 2001 Conference, Special Track on CBR, May 21-23, 2001, Wyndham Casa Marina Resort, Key West, Florida.
- ECAI 2000 Workshop on Binding Environmental Sciences and Artificial Intelligence, August 21, 2000.
- Symposium on Abstraction, Reformulation and Approximation (SARA 2000), Lago Vista, Texas, July 26-29, 2000.
- Seventh International Conference on Artificial Intelligence and Law (ICAIL-1999), June 15-18, 1999, Oslo, Norway.
- Fifteenth National Conference on Artificial Intelligence, (AAAI-98) July 26-30, 1998, Madison, Wisconsin.
- AAAI-98 Workshop on CBR Integrations, July 26, 1998, Madison, Wisconsin.
- 1998 Stanford Spring Symposium on Multimodal Reasoning, March 20-25, 1998, Palo Alto, CA.
- Second International Conference on Case-Based Reasoning (ICCBR-97), Providence, Rhode Island, July 25-27 1997.

- First International Conference on Case-Based Reasoning (ICCBR-95), Sesimbra, Portugal, October 23-26, 1995.
- Fifth International Conference on Artificial Intelligence and Law (ICAIL-95), College Park, Maryland, May 21-24, 1995.
- International Joint Conference on Artificial Intelligence, Montreal, Canada, August 20-25, 1995 (IJCAI-95).
- Case-Based Reasoning Workshop, Eleventh National Conference on Artificial Intelligence, Washington D.C., July 11-16, 1993 (AAAI-93).
- Fourth International Conference on Artificial Intelligence and Law, Vrije Universiteit, Amsterdam, The Netherlands, June 15-18, 1993 (ICAIL-93).

#### **Professional Affiliations**

- American Association for Artificial Intelligence
- Association for Computational Linguistics
- Association for Computing Machines

## **Student Advising/Graduate Supervision**

#### **Ph.D. Dissertations Directed**

- John Hastings (1996), A Mixed-Paradigm Reasoning Approach to Problem Solving in Incomplete Causal-Theory Domains. Dr. Hastings is now assistant professor at the University of Nebraska, Kearney.

#### **M.S. Theses Directed**

- Natalya B. Muzinich (2005), A Conversational Legal Advisory System.
- Eric Plummer (2000), Time Series Forecasting With Feed-Forward Neural Networks: Guidelines and Limitations.
- Jon Leshner (2000), Automated Music Analysis: Implementing Narmour's Implication-Realization Model on a Low-Level Analysis of a Type 0 MIDI File.
- Xiubo Xu (2000), User-Modeling Algorithms for Electronic Commerce.
- Xijun Wang (2000), A Web-Based Case-Based Reasoning Tool.
- Yi Tao (1998), A Multiple-Domain Evaluation of Stratified Case-Based Reasoning.
- Tighe Fagan (1998), A Web-Based Dialogue Interface for Expert Systems
- Hongyan Wang (1998), Data Mining in GIS Databases for Expert Landtype Classifications.
- Susan Hanna (1998), An Expert System for Pro Se Protection Order Applicants.
- Yulan Wei (1997), Integration of Geographical Information Systems, Machine Learning, and Wind Flow Modeling for Prediction of Alpine Vegetation Patterns.
- Pat Broos (1993), An Expert System for Telescope Scheduling.

## **Other Service Activities**

- Developer of the name-matching algorithm used in CM/ECF, the U.S. Federal Courts' case management system.
- Developer (with Jeff Lockwood and John Hastings) of CARMA (CAsE-based Range Management Advisor), an advisory system for ranchers on grasshopper infestations, distributed by the USDA and by Cooperative Extension Service offices and Weed and Pest district offices for use by Wyoming ranchers.
- Sponsor of post-doctoral visit by Sandra Aluisio, Assistant Professor of Computer Science, Department of Computer Science and Statistics, University of Sao Paulo, April 1996-March 1997.
- Minority High School Student Apprentice Program (MHSSRAP) Mentor, June-July 1996. Student mentored: Cori Kerr.
- Supervised Honors research project by Tighe Fagan on simulation of the emergence of group behavior from collections of autonomous agents, Spring 1995.
- Developed and taught a course entitled "Computers and the Mind" at the University of Wyoming High School Summer Institute, June 1994.

## Contact Information

9734 Summer Park Ct.

Columbia, MD 21046

Phone: (410) 660-9094

Email: [kbranting@gmail.com](mailto:kbranting@gmail.com)

URL: <http://www.karlbranting.net>