Pedro Szekely

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Personal

- Birthdate: May 16, 1957
- Birthplace: Bogota, Colombia
- Citizenship: United States

Education

- **Ph.D.** in Computer Science, Carnegie-Mellon University, Pittsburgh, 1987
  Dissertation: *Separating the User Interface from the Functionality of Application Programs*
  Advisor: *Philip J. Hayes*
- **M.S.** in Computer Science, Carnegie-Mellon University, Pittsburgh, 1982
- **B.S.** in Mathematics, Universidad de los Andes, Bogota, Colombia, 1980
- **B.S.** in Computer Science, Universidad de los Andes, Bogota, Colombia, 1979

Professional

- **Program Chair:** Intelligent User Interfaces Conference (IUI 2013)
- **Conference Chair:** Intelligent User Interfaces Conference (IUI 2000)
- **Conference Chair:** User Interface Software and Technology (UIST 1994)
- **Workshop Organizer:** Help Me Help You: Bridging the Gaps in Human-Agent Collaboration (AAAI Spring Symposium 2011)
- **Workshop Organizer:** Transforming the UI for Anyone (CHI 2001)
- **Plenary Speaker:** Retrospective and Challenges for Model-Based Interface Development (CADUI 1995)

- **Program Committee and/or Paper Reviewer:** AAAI, AAMAS, CADUI, CHI, ESWC, HCI, IJCAI, ISWC, IUI, UIST (multiple years)
- **Review Panel:** (NSF 1998)

Awards

- **Best IPaper:** Linhong Zhu, Majid Ghasemi-Gol, Pedro Szekely, Aram Galstyan and Craig A. Knoblock. Unsupervised Entity Resolution on Multi-type Graphs. In ISWC 2016 - 15th International Semantic Web Conference, 2016.
- **Best In-Use Paper:** Pedro Szekely, Craig A Knoblock, Jason Slepicka, Andrew Philpot, Amandeep Singh, Chengye Yin, Dipsy Kapoor, Prem Natarajan, Daniel Marcu, Kevin Knight, et al. Building and using a knowledge graph to combat human trafficking. In The Semantic Web-ISWC 2015, pages 205221. Springer International Publishing, 2015.
- **Best In-Use Paper:** Pedro Szekely, Craig A Knoblock, Yang Fengyu, Xuming Zhu, Eleanor Fink, Rachel Allen, and Georgina Goodlander. Connecting the Smithsonian American Art Museum to the Linked Data Cloud (ESWC 2013).
- **Best Demonstration:** Rajiv T Maheswaran, Craig M Rogers, Romeo Sanchez, and Pedro Szekely. Decision-Support for Real-Time Multi-Agent Coordination (AAMAS 2010).
- **ISI Meritorious Service Award:** Winners of DARPA COORDINATORS program evaluation (2007)
- **ISI Meritorious Service Award:** Winners of DARPA COORDINATORS program evaluation (2006)
- **ISI Meritorious Service Award:** Delivering working system to Defense Logistics Agency, DEALMAKER project (1999)

Teaching

- **Information Integration on the Web** (CS 548), University of Southern California. Spring 2012 *(student evaluation 3.89)*, Spring 2013 *(student evaluation 4.37)*, Fall 2013 *(student evaluation 4.31)*, Spring 2014, Fall 2014 (two sections, student evaluation 4.22) and Fall 2015 (two sections, student evaluation 4.53 and 4.74) *The student evaluation score rates Szekely's teaching ("Overall, how would you rate this instructor?") on a scale of 1.00 (poor) to 5.00 (excellent).*
- **Introduction to Semantic Web**, Universidad Javeriana, Colombia. Summer 2013.
- **Introduction to Semantic Web**, Universidad de Los Andes, Colombia. Summer 2012.
- **Human Computer Interaction** (CS 588), University of Southern California. 1996.
- **Model-Based User Interface Development** (Tutorial), CHI Conference. 1994.
- **Linear Algebra, Calculus, Set Theory**, Universidad de Los Andes, Colombia. 1979-1980.

Ph.D. Students

Ph.D. Advisor/Co-Advisor

- 1992: Ping Luo (USC), PhD primary advisor, graduated.
- 1994: Ewald Salcher (University of Graz, Austria), PhD co-advisor, graduated.
- 2004: Juan Francisco Lopez (USC), PhD primary advisor, graduated.
- 2008: Rattapoom Tuchinda (USC), Ph.D. co-advisor, graduated.
- 2009: Jing Jin (USC), Ph.D. primary advisor, graduated. Winner of the Most Creative Ph.D. Dissertation award in the USC Viterbi School of Engineering.
- 2015: Majid Ghasemi Gol (USC CS), Ph.D. primary advisor, current.
- 2016: Jason Slepicka (USC CS), Ph.D. primary advisor, current.

Ph.D. Dissertation Committee Member

- 1996: Ali Erdem (USC), Dissertation committee, graduated.
- 1996: Ken Anderson (UCI), Dissertation committee, graduated.
- 2003: In-Young Ko (USC), Dissertation committee, graduated.
- 2006: Ranbo Yu (USC): Dissertation committee, graduated.
- 2009: Sang Yun Lee (USC), Dissertation committee, graduated.
- 2009: Harris Chiu (USC), Dissertation committee, in progress.

Contracts

Principal Investigator and Co-Principal Investigator

- DSBOX: Data Scientist in a Box. Agency: DARPA. Period of Support: 1 April 2017 to 31 March 2021 **(PI)**. *$6,700,000.*
- Text-enabled Humanitarian Operations Run-time Framework. Agency: DARPA. Period of Support: 1 May 2015 to 30 April 2019 **(PI)**. *$2,209,000.*
- Domain-Specific Insight Graphs. Agency: DARPA. Period of Support: 1 October 2014 to 30 September 2017 **(PI)**. *$8,000,000.*
- NS CTA Option Yrs 6 and 7 (Co-PI). Agency: ARL. Period of Support: Sep-28-2014 to Sep-27-2016 **(Co-PI)**. *$451,760.*
- SocialViz, DARPA/STTR, 2012 - present **(PI)**. *Phase 1: $58,200, Phase 2 awarded: $750,000.*

- GAMBIT: Geospatial Analysis of Motion-Based Intelligence and Tracking, ONR 2012 - 2013 **(Co-PI)**. *$2,520,000.*
- COMPASS: Criticality, Options and Metrics for Plan Analysis by Stochastic Simulation, DARPA. 2010 - 2011 **(Co-PI)**. *$1,200,000.*
- LANdroids: Distributed Control Algorithms, DARPA. 2008 **(Co-PI)** *$549,999.*
- MARBLES: negotiation technology, AFOSR. 2002 - 2005 **(Co-PI)** *$496,707.*
- WEBSCRIPTER: semantic web, DARPA. 2000 - 2004 **(Co-PI)** *$1,359,824.*
- Product News Network: user interfaces, Thomas Register. 1997 - 1998 **(PI)**
- MASTERMIND: user interfaces, DARPA, 1995 - 2000 **(PI)**

Research Team Leader

- Smithsonian American Art, Smithsonian Institution, 2012 - 2013. *$200,000.*
- CSC: multi-agent coordination, DARPA. 2005 - 2010. *$11,177,741.*
- CAMERA: negotiation technology. DARPA. 1998 - 2004.
- DEALMAKER: user interfaces, expert systems, DARPA and DLA (Defense Logistics Agency). 1996 - 1999.

Key Personnel

- Effectively Forecasting Evolving Cyber Threats, IARPA, 2016 2020 *$15,257,720*
- DOVETAIL: Domain Vocabulary Extraction and Transduction + Auto-Induction of Layout, IARPA, 2010 - 2013. *$1,577,164.*
- Heracles: Information integration and human computer interaction, SOCOM. 2005 - 2007.
- CARTE: negotiation technology, ONR. 2003 - 2005. *$4,490,887.*
- SHELTER: user interfaces, knowledge acquisition, DARPA, 1992 - 1995.
- DRAMA: user interfaces, expert systems, DARPA, 1989 - 1992.
- BEAMER: user interfaces, DARPA, research scientist, 1988- 1989.

Publications

Journal Publications

[1] Philip J. Hayes and Pedro Szekely. Graceful Interaction Through the COUSIN Command Interface. *International Journal of Man-Machine Studies*, 19(3):285–306, 1983.

[2] Brad Vander Zanden, Brad A Myers, Dario A Giuse, and Pedro Szekely. Integrating pointer variables into one-way constraint models. *Transactions on Computer-Human Interaction (TOCHI)*, 1(2):161–213, June 1994.

[3] Bradley T Vander Zanden, Richard Halterman, Brad A Myers, Rich McDaniel, Rob Miller, Pedro Szekely, Dario A Giuse, and David Kosbie. Lessons learned about one-way, dataflow constraints in the Garnet and Amulet graphical toolkits. *Transactions on Programming Languages and Systems (TOPLAS)*, 23(6):776–796, November 2001.

[4] Min Cai, Martin Frank, Jinbo Chen, and Pedro Szekely. MAAN: A Multi-Attribute Addressable Network for Grid Information Services. *Journal of Grid Computing*, 2(1):184–191, 2004.

[5] Bradley T Vander Zanden, Richard L Halterman, Brad A Myers, Robert C Miller, Pedro Szekely, Dario A Giuse, David S Kosbie, and Richard G McDaniel. Lessons learned from programmers' experiences with one-way constraints. *Softw, Pract. Exper*, 35(13):1275–1298, 2005.

[6] Rattapoom Tuchinda, Craig A Knoblock, and Pedro Szekely. Building Mashups by Demonstration. *ACM Transactions on the Web (TWEB)*, 5(3):1–45, July 2011.

[7] Reza Nourjou, Stephen F Smith, Michinori Hatayama, Norio Okada, and Pedro Szekely. Dynamic assignment of geospatial-temporal macro tasks to agents under human strategic decisions for centralized scheduling in multi-agent systems. *International Journal of Machine Learning and Computing (IJMLC)*, 4(1):39–46, 2014.

[8] Reza Nourjou, Stephen F Smith, Michinori Hatayama, and Pedro Szekely. Intelligent algorithm for assignment of agents to human strategy in centralized multi-agent coordination. *Journal of Software*, 9(10):2586–2597, 2014.

[9] Reza Nourjou, Pedro Szekely, Michinori Hatayama, Mohsen Ghafory-Ashtiany, and Stephen F Smith. Data model of the strategic action planning and scheduling problem in a disaster response team. *Journal of Disaster Research*, 9(3):381–399, 2014.

[10] Pedro Szekely, Craig A Knoblock, Fengyu Yang, Eleanor E Fink, Shubham Gupta, Rachel Allen, and Georgina Goodlander. Publishing the data of the smithsonian american art museum to the linked data cloud. *International Journal of Humanities and Arts Computing*, 8(supplement):152–166, 2014.

[11] Craig A Knoblock and Pedro Szekely. Exploiting semantics for big data integration. *AI Magazine*, 36(1):25–38, 2015.

[12] Mohsen Taheriyan, Craig A Knoblock, Pedro Szekely, and José Luis Ambite. Learning the semantics of structured data sources. *Web Semantics: Science, Services and Agents on the World Wide Web*, 2016.

Conference Publications

[1] Philip J Hayes, Pedro Szekely, and Richard A Lerner. Design alternatives for user interface management sytems based on experience with COUSIN. In *CHI'85: Proceedings of the SIGCHI conference on Human factors in computing systems*. ACM Request Permissions, April 1985.

[2] Pedro Szekely. Standardizing the Interface Between Applications and UIMSs. In *Proceedings of the 2nd annual ACM Symposium on User Interface Software and Technology (UIST 1989)*, pages 34–42. ACM, 1989.

[3] Pedro Szekely. Template-based mapping of application data interactive displays. In Scott E Hudson, editor, *Proceedings of the 3rd Annual ACM Symposium on User Interface Software and Technology (UIST 1990), Snowbird, Utah, USA, October 3-5, 1990*, pages 1–9. ACM, 1990.

[4] Zanden, Brad Vander, Myers, Brad A, Dario Giuse, and Pedro Szekely. The Importance of Pointer Variables in Constraint Models. In James R Rhyne, editor, *Proceedings of the 4th Annual ACM Symposium on User Interface Software and Technology (UIST 1991), Hilton Head, South Carolina, USA, November 11-13, 1991*, pages 155–164. ACM, 1991.

[5] Pedro Szekely, Ping Luo, and Robert Neches. Facilitating the Exploration of Interface Design Alternatives: The HUMANOID Model of Interface Design. In *Proceedings of ACM CHI'92 Conference on Human Factors in Computing Systems*, pages 507–515, 1992.

[6] Ping Luo, Pedro Szekely, and Robert Neches. Management of Interface Design in HUMANOID. In *CHI '93: Proceedings of the INTERACT '93 and CHI '93 conference on Human factors in computing systems*, pages 107–114, New York, NY, USA, 1993. ACM.

[7] Robert Neches, Peter Aberg, David Benjamin, Brian Harp, Liyi Hu, Ping Luo, Roberto Moriy o n, and Pedro Szekely. The Integrated User-Support Environment (IN-USE) Group at USC/ISI. In *CHI '93: Proceedings of the INTERACT '93 and CHI '93 conference on Human factors in computing systems*, pages 53–54, New York, NY, USA, 1993. ACM.

[8] Pedro Szekely, Ping Luo, and Robert Neches. Beyond Interface Builders: Model-Based Interface Tools. In *CHI '93: Proceedings of the INTERACT '93 and CHI '93 conference on Human factors in computing systems*, pages 383–390, 1993.

[9] Roberto Moriyon, Pedro Szekely, and Robert Neches. Automatic Generation of Help from Interface Design Models. In *Proceedings of ACM CHI'94 Conference on Human Factors in Computing Systems*, pages 225–231, 1994.

[10] Pedro Szekely, Piyawadee Noi Sukaviriya, Pablo Castells, Jeyakumar Muthukumarasamy, and Ewald Salcher. Declarative Interface Models for User Interface Construction Tools: the MASTERMIND Approach. In Leonard J Bass and Claus Unger, editors, *Engineering for Human Computer Interaction (EHCI)*, pages 120–150. Chapman and Hall, 1995.

[11] Pablo Castells, Pedro Szekely, and Ewald Salcher. Declarative Models of Presentation. In *Proceedings of the 2nd international conference on Intelligent user interfaces (IUI 1997)*, pages 137–144, Orlando, Florida, United States, 1997. ACM.

[12] Martin R Frank and Pedro Szekely. Adaptive Forms: An Interaction Paradigm for Entering Structured Data. In *Proceedings of the 3rd international conference on Intelligent user interfaces (IUI 1998)*, pages 153–160, San Francisco, California, United States, January 1998. ACM.

[13] Francisco Saiz, Pedro Szekely, and Patel Devang. Customized Web-Based Data Presentation. In Hermann A Maurer and Richard G Olson, editors, *Proceedings of WebNet 98 - World Conference on the WWW and Internet Intranet, Orlando, Florida, USA, November 7-12, 1998*. AACE, 1998.

[14] Pablo Castells and Pedro A Szekely. HandsOn: Dynamic Interface Presentations by Example. In Hans-Jorg Bullinger and Jurgen Ziegler, editors, *Human-Computer Interaction: Ergonomics and User Interfaces, Proceedings of HCI International '99 (the 8th International Conference on Human-Computer Interaction), Munich, Germany, August 22-26, 1999, Volume 1*, pages 1288–1292. Lawrence Erlbaum, 1999.

[15] Martin Frank and Pedro Szekely. Collapsible User Interfaces for Information Retrieval Agents. In *Proceedings of the 4th international conference on Intelligent user interfaces (IUI 1999)*, pages 15–22, Los Angeles, CA, USA, 1999. ACM.

[16] Pedro Szekely, Rogers, Craig Milo, and Martin Frank. Interfaces for Understanding Multi-Agent Behavior. In *Proceedings of the 2001 International Conference on Intelligent User Interfaces (IUI 2001)*, pages 161–166, 2001.

[17] Min Cai, Martin Frank, Jinbo Chen, and Pedro Szekely. Maan: a multi-attribute addressable network for grid information services. pages 184 – 191, nov. 2003.

[18] Baoshi Yan, Martin R Frank, Pedro Szekely, Robert Neches, and Juan Lopez. WebScripter: Grass-Roots Ontology Alignment via End-User Report Creation. In Dieter Fensel, Katia P Sycara, and John Mylopoulos, editors, *The Semantic Web, Second International Semantic Web Conference (ISWC 2003), Sanibel Island, FL, USA, October 20-23, 2003, Proceedings*, pages 676–689. Springer, 2003.

[19] Pedro Szekely, Marcel Becker, Stephen Fitzpatrick, Gergely Gati, David Hanak, Jing Jin, Gabor Karsai, Rajiv T Maheswaran, Bob Neches, Craig M Rogers, Romeo Sanchez, and Chris van Buskirk. CSC: Criticality-Sensitive Coordination. In *Proceedings of the fifth international joint conference on Autonomous agents and multiagent systems (AAMAS 2006)*. ACM, May 2006.

[20] Pedro Szekely, Marcel Becker, Stephen Fitzpatrick, Gergely Gati, David Hanak, Jing Jin, Gabor Karsai, Rajiv T Maheswaran, Robert Neches, Craig Milo Rogers, Romeo Sanchez, and Christopher P van Buskirk. CSC: Criticality-Sensitive Coordination. In Hideyuki Nakashima, Michael P

Wellman, Gerhard Weiss, and Peter Stone, editors, *5th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2006), Hakodate, Japan, May 8-12, 2006*, pages 1441–1442. ACM, 2006.

[21] Tim Harbers, Rajiv T Maheswaran, and Pedro Szekely. Centralized, Distributed or Something Else? Making Timely Decisions in Multi-Agent Systems. In *AAAI 2007*, pages 738–743. AAAI Press, 2007.

[22] Jing Jin, Rajiv T Maheswaran, Romeo Sanchez, and Pedro Szekely. VizScript: visualizing complex interactions in multi-agent systems. In Jing Jin, Rajiv T Maheswaran, Romeo Sanchez, and Pedro A Szekely, editors, *Proceedings of the 12th international conference on Intelligent user interfaces (IUI 2007)*, pages 369–372. ACM Request Permissions, January 2007.

[23] Rattapoom Tuchinda, Pedro Szekely, and Craig A Knoblock. Building Data Integration Queries by Demonstration. In *Proceedings of the 12th international conference on Intelligent user interfaces (IUI 2007)*, pages 170–179, 2007.

[24] Jing Jin, Romeo Sanchez, Rajiv T Maheswaran, and Pedro Szekely. VizScript: on the creation of efficient visualizations for understanding complex multi-agent systems. In Jeffrey M Bradshaw, Henry Lieberman, and Steffen Staab, editors, *Proceedings of the 2008 International Conference on Intelligent User Interfaces (IUI 2008), January 13-16, 2008, Gran Canaria, Canary Islands, Spain*, pages 40–49. ACM, 2008.

[25] Rajiv T Maheswaran and Pedro Szekely. Criticality Metrics for Distributed Plan and Schedule Management. In Jussi Rintanen, Bernhard Nebel, J Christopher Beck, and Eric A Hansen, editors, *Proceedings of the Eighteenth International Conference on Automated Planning and Scheduling (ICAPS 2008), Sydney, Australia, September 14-18, 2008*, pages 214–221. AAAI, 2008.

[26] Rajiv T Maheswaran, Pedro Szekely, Marcel Becker, Stephen Fitzpatrick, Gergely Gati, Jing Jin, Robert Neches, N Noori, C Rogers, Romeo Sanchez, Kevin Smyth, and Chris VanBuskirk. Predictability & criticality metrics for coordination in complex environments. In Rajiv T Maheswaran, Pedro A Szekely, Marcel Becker, Stephen Fitzpatrick, Gergely Gati, Jing Jin, Robert Neches, N Noori, C Rogers, Romeo Sanchez, Kevin Smyth, and Chris VanBuskirk, editors, *Proceedings of the 7th international joint conference on Autonomous agents and multiagent systems (AAMAS 2008)*, pages 647–654. International Foundation for Autonomous Agents and Multiagent Systems, May 2008.

[27] Romeo Sanchez, Jing Jin, Rajiv T Maheswaran, and Pedro Szekely. Interfaces for team coordination. In Jeffrey M Bradshaw, Henry Lieberman, and Steffen Staab, editors, *Proceedings of the 2008 International Conference on Intelligent User Interfaces (IUI 2008), January 13-16, 2008, Gran Canaria, Canary Islands, Spain*, pages 427–428. ACM, 2008.

[28] Rattapoom Tuchinda, Pedro Szekely, and Craig A Knoblock. Building Mashups by Example. In Jeffrey M Bradshaw, Henry Lieberman, and Steffen Staab, editors, *Proceedings of the 2008 International Conference on Intelligent User Interfaces (IUI 2008), January 13-16, 2008, Gran Canaria, Canary Islands, Spain*, pages 139–148, New York, NY, USA, 2008. ACM.

[29] Hi Cchi H Chiu, Bo Ryu, Hua Zhu, Pedro Szekely, Rajiv T Maheswaran, Craig Milo Rogers, Aram Galstyan, Behnam Salemi, Michael Rubenstein, and Wei-Min Shen. TENTACLES: Self-configuring robotic radio networks in unknown environments. In *IROS*, pages 1383–1388. IEEE, 2009.

[30] Jing Jin and Pedro Szekely. QueryMarvel: A visual query language for temporal patterns using comic strips. In *VL/HCC*, pages 207–214, Washington, DC, USA, 2009. IEEE.

[31] Rajiv Maheswaran, Craig Milo Rogers, Romeo Sanchez, Pedro Szekely, Gergely Gati, Kevin Smyth, and Chris VanBuskirk. Multi-agent systems for the real world. In *Proceedings of The 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009)*. International Foundation for Autonomous Agents and Multiagent Systems, May 2009.

[32] Rajiv T Maheswaran, Craig Milo Rogers, Romeo Sanchez, Pedro Szekely, Gergely Gati, Kevin Smyth, and Chris VanBuskirk. Multi-agent systems for the real world. In Carles Sierra, Cristiano Castelfranchi, Keith S Decker, and Jaime Simão Sichman, editors, *8th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009), Budapest, Hungary, May 10-15, 2009, Volume 2*, pages 1281–1282. IFAAMAS, 2009.

[33] Jing Jin and Pedro Szekely. Interactive Querying of Temporal Data Using A Comic Strip Metaphor. In *Proceedings IEEE Conference on Visual Analytics Science and Technology*, Salt Lake City, Utah, October 2010.

[34] Yolanda Gil, Pedro Szekely, Sandra Villamizar, Thomas C Harmon, Varun Ratnakar, Shubham Gupta, Maria Muslea, Fabio Silva, and Craig A Knoblock. Mind Your Metadata: Exploiting Semantics for Configuration, Adaptation, and Provenance in Scientific Workflows. In *Proceedings of the Tenth International Semantic Web Conference (ISWC 2011)*, Bonn, Germany, 2011.

[35] Rajiv T Maheswaran, Pedro Szekely, and Romeo Sanchez. Automated Adaptation of Strategic Guidance in Multiagent Coordination. In *Proceedings of the 14th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2011)*, Wollongong, Australia, November 2011.

[36] Craig A Knoblock, Pedro Szekely, Jose Luis Ambite, Aman Goel, Shubham Gupta, Kristina Lerman, Maria Muslea, Mohsen Taheriyan, and Parag Mallick. Semi-automatically mapping structured sources into the semantic web. In *Proceedings of the 9th international conference on The Semantic Web: research and applications (ESWC 2012)*, pages 375–390, Berlin, Heidelberg, 2012. Springer-Verlag.

[37] Pedro Szekely, Rajiv T Maheswaran, Yu-Han Chang, Yan Wang, Huihui Cheng, and Karan Singh. Interactive Uncertainty Analysis. In *Proceedings of the 2012 International Conference on Intelligent User Interfaces (IUI 2012), February 14-17, 2012, Lisbon, Portugal*. ACM, 2012.

[38] Mohsen Taheriyan, Craig A. Knoblock, Pedro Szekely, and Jose Luis Ambite. Rapidly integrating services into the linked data cloud. In *Proceedings of the 11th International Semantic Web Conference (ISWC 2012)*, 2012.

[39] Pedro Szekely, Craig A Knoblock, Yang Fengyu, Xuming Zhu, Eleanor Fink, Rachel Allen, and Georgina Goodlander. Connecting the Smithsonian American Art Museum to the Linked Data Cloud (best in-use paper). In *Proceedings of the 10th Extended Semantic Web Conference (ESWC 2013)*, Montpellier, May 2013.

[40] Mohsen Taheriyan, Craig A. Knoblock, Pedro Szekely, and Jose Luis Ambite. A graph-based approach to learn semantic descriptions of data sources. In *Proceedings of the 12th International Semantic Web Conference (ISWC 2013)*, 2013.

[41] Anastasia Dimou, Miel Vander Sande, Jason Slepicka, Pedro Szekely, Erik Mannens, Craig Knoblock, and Rik Van de Walle. Mapping hierarchical sources into rdf using the rml mapping language. In *Semantic Computing (ICSC), 2014 IEEE International Conference on*, pages 151–158. IEEE, 2014.

[42] Eleanor E Fink, Pedro Szekely, and Craig A Knoblock. How linked open data can help in locating stolen or looted cultural property. In *Digital Heritage. Progress in Cultural Heritage: Documentation, Preservation, and Protection*, pages 228–237. Springer International Publishing, 2014.

[43] Mohsen Taheriyan, Craig A Knoblock, Pedro Szekely, and Jose Luis Ambite. A scalable approach to learn semantic models of structured sources. In *Semantic Computing (ICSC), 2014 IEEE International Conference on*, pages 183–190. IEEE, 2014.

[44] Bo Wu, Pedro Szekely, and Craig A Knoblock. Minimizing user effort in transforming data by example. In *Proceedings of the 19th international conference on Intelligent User Interfaces*, pages 317–322. ACM, 2014.

[45] Craig A Knoblock and Pedro Szekely. A scalable architecture for extracting, aligning, linking, and visualizing multi-int data. In *SPIE Sensing Technology+ Applications*, pages 949907–949907. International Society for Optics and Photonics, 2015.

[46] Om P Patri, Ketan Singh, Pedro Szekely, Anand V Panangadan, and Viktor K Prasanna. Personalized trip planning by integrating multimodal user-generated content. In *Semantic Computing (ICSC), 2015 IEEE International Conference on*, pages 381–388. IEEE, 2015.

[47] S K Ramnandan, Amol Mittal, Craig A Knoblock, and Pedro Szekely. Assigning semantic labels to data sources. In *Proceedings of the 12th ESWC*, pages 403–417. Springer International Publishing, 2015.

[48] Pedro Szekely, Craig A Knoblock, Jason Slepicka, Andrew Philpot, Amandeep Singh, Chengye Yin, Dipsy Kapoor, Prem Natarajan, Daniel Marcu, Kevin Knight, et al. Building and using a knowledge graph to combat human trafficking. In *The Semantic Web-ISWC 2015*, pages 205–221. Springer International Publishing, 2015.

[49] Gleb Gawriljuk, Andreas Harth, Craig A Knoblock, and Pedro Szekely. A Scalable Approach to Incrementally Building Knowledge Graphs. In *TPDL 2016 - 20th International Conference on Theory and Practice of Digital Libraries*, 2016.

[50] Christian Paul, Achim Rettinger, Aditya Mogadala, Craig A Knoblock, and Pedro Szekely. Efficient Graph-based Document Similarity. In *The Semantic Web. Latest Advances and New Domains. 13th Extended Semantic Web Conference (ESWC), Crete, Greece.*, 2016.

[51] Minh Pham, Suresh Alse, Craig A. Knoblock, and Pedro Szekely. Semantic Labeling: A Domain-Independent Approach. pages 446–462. Springer, Cham, 2016.

[52] Johann Schaible, Pedro Szekely, and Ansgar Scherp. Comparing Vocabulary Term Recommendations Using Association Rules and Learning to Rank: A User Study. In *International Semantic Web Conference*, pages 214–230. Springer International Publishing, 2016.

[53] Mohsen Taheriyan, Craig A Knoblock, Pedro Szekely, and José Luis Ambite. Learning the semantics of structured data sources. *Web Semantics: Science, Services and Agents on the World Wide Web*, 2016.

[54] Mohsen Taheriyan, Craig A. Knoblock, Pedro Szekely, and José Luis Ambite. Leveraging Linked Data to Discover Semantic Relations Within Data Sources. pages 549–565. Springer, Cham, 2016.

[55] Linhong Zhu, Majid Ghasemi-Gol, Pedro Szekely, Aram Galstyan, and Craig A. Knoblock. Unsupervised Entity Resolution on Multi-type Graphs. pages 649–667. Springer, Cham, 2016.

Workshop, Demo and Poster Publications

[1] Robert Neches, Jim Foley, Pedro Szekely, Piyawadee Sukaviriya, Ping Luo, Srdjan Kovacevic, and Scott Hudson. Knowledgeable Development Environments Using Shared Design Models. In *Proceedings of the 1993 International Workshop on Intelligent User Interfaces*, pages 63–70, 1993.

[2] Angel R Puerta, Robert Neches, Henrik Eriksson, Pedro Szekely, Ping Luo, and Mark A Musen. Toward Ontology-Based Frameworks for Knowledge-Acquisition Tools. In *In Proceedings of the Eigth KnowledgeAcquisition Workshop for Knowledge-Based Systems*, 1994.

[3] Pedro A Szekely. User Interface Prototyping: Tools and Techniques. In Richard N Taylor and Joelle Coutaz, editors, *ICSE Workshop on SE-CHI*, pages 76–92. Springer, 1994.

[4] Pedro A Szekely. Retrospective and Challenges for Model-Based Interface Development. In Francois Bodart and Jean Vanderdonckt, editors, *Design, Specification and Verification of Interactive Systems'96, Proceedings of the Third International Eurographics Workshop, June 5-7, 1996, Namur, Belgium*, pages 1–27. Springer, 1996.

[5] Pablo Castells and Pedro A Szekely. Presentation Models by Example. In David J Duke and Angel R Puerta, editors, *Design, Specification and Verification of Interactive Systems'99, Proceedings of the Eurographics Workshop in Braga, Portugal, June 2-4, 1999*, pages 100–116. Springer, 1999.

[6] Pedro Szekely, Bob Neches, David Benjamin, Jinbo Chen, and Craig Milo Rogers. Controlling Supplier Selection in an Automated Purchasing System. In *In Proceedings of the AAAI'99 Workshop on AI in Electronic Commerce (AIEC'99)*, Menlo Park, California, June 1999. AAAI Press.

[7] Pedro Szekely, Bob Neches, David Benjamin, Jinbo Chen, and Craig Milo Rogers. DEALMAKER: An Agent for Selecting Sources of Supply To Fill Orders. In *In Proceedings of the Agents'99 workshop on Agent-based Decision-Support for Managing the Internet-Enabled Supply Chain*, Seattle, Washington, May 1999.

[8] Martin Frank, Alejandro Bugacov, Jinbo Chen, Gordon Dakin, Pedro Szekely, and Bob Neches. The Marbles Manifesto: A Definition and Comparison of Cooperative Negotiation Schemes for Distributed Resource Allocation. In *In Proceedings of the 2001 AAAI Fall Symposium on Negotiation Methods for Autonomous Cooperative Systems*, pages 36–45, 2001.

[9] Juan Lopez and Pedro Szekely. Automatic Web Page Adaptation. In *Proceedings of the CHI-2001 Workshop Transforming the UI for anyone, anywhere*, Seattle, Washington, April 2001.

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