

Reading List

Emerging Dynamic Distributed Systems and Challenges

- Michael Hornacek, Wolfgang Wagner, Daniel Sabel, Hong-Linh Truong, Paul Snoeij, Thomas Hahmann, Erhard Diedrich, Marcela Doubkova, Potential for High Resolution Systematic Global Surface Soil Moisture Retrieval Via Change Detection Using Sentinel-1, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, April, 2012
- Hong Linh Truong, Schahram Dustdar: Cloud computing for small research groups in computational science and engineering: current status and outlook. Computing 91(1): 75-91 (2011)
- : Katarzyna Keahey, Mauricio Tsugawa, Andrea Matsunaga, and Jose Fortes. 2009. Sky Computing. IEEE Internet Computing 13, 5 (September 2009), 43-51. DOI=10.1109/MIC.2009.94 <http://dx.doi.org/10.1109/MIC.2009.94>
- Salman Ahmad, Alexis Battle, Zahan Malkani, Sepandar D. Kamvar: The jabberwocky programming environment for structured social computing. UIST 2011: 53-64
- Daniel W. Barowy, Charlie Curtsinger, Emery D. Berger, Andrew McGregor: AutoMan: a platform for integrating human-based and digital computation. OOPSLA 2012: 639-654
- Muhammad Z.C. Candra, Rostyslav Zabolotnyi, Hong-Linh Truong, and Schahram Dustdar, Virtualizing Software and Human for Elastic Hybrid Services, Web Services Handbook, (c)Springer-Verlag, 2012.
- Stefan Tai, Philipp Leitner, Schahram Dustdar: Design by Units: Abstractions for Human and Compute Resources for Elastic Systems. IEEE Internet Computing 16(4): 84-88 (2012)
- Mark Turner, David Budgen, and Pearl Brereton. 2003. Turning Software into a Service. Computer 36, 10 (October 2003), 38-44. DOI=10.1109/MC.2003.1236470 <http://dx.doi.org/10.1109/MC.2003.1236470>
- Luigi Atzori, Antonio Iera, and Giacomo Morabito. 2010. The Internet of Things: A survey. Comput. Netw. 54, 15 (October 2010), 2787-2805. DOI=10.1016/j.comnet.2010.05.010 <http://dx.doi.org/10.1016/j.comnet.2010.05.010>
- Dominique Guinard, Vlad Trifa, Stamatios Karnouskos, Patrik Spiess, Domnic Savio: Interacting with the SOA-Based Internet of Things: Discovery, Query, Selection, and On-Demand Provisioning of Web Services. IEEE T. Services Computing 3(3): 223-235 (2010)
- Schahram Dustdar, Kamal Bhattacharya: The Social Compute Unit. IEEE Internet Computing 15(3): 64-69 (2011)
- Hong-Linh Truong, Schahram Dustdar, Kamal Bhattacharya "Programming Hybrid Services in the Cloud", Springer-Verlag, 10th International Conference on Service-oriented Computing (ICSOC 2012), November 12-16, 2012, Shanghai, China

Data as a Service, Data Concerns and Data Concerns Evaluation

- Marco Comerio, Hong Linh Truong, Carlo Batini, Schahram Dustdar: Service-oriented data quality engineering and data publishing in the cloud. SOCA 2010: 1-6
- Hong Linh Truong, Marco Comerio, Andrea Maurino, Schahram Dustdar, Flavio De Paoli, Luca Panziera: On Identifying and Reducing Irrelevant Information in Service Composition and Execution. WISE 2010: 52-66
- Atif Manzoor, Hong Linh Truong, Christoph Dorn, Schahram Dustdar: Service-centric Inference and Utilization of Confidence on Context. APSCC 2010: 11-18
- Hong Linh Truong, Schahram Dustdar: On analyzing and specifying concerns for data as a service. APSCC 2009: 87-94
- Muhammad Intizar Ali, Reinhard Pichler, Hong Linh Truong, Schahram Dustdar: Data Concern Aware Querying for the Integration of Data Services. ICEIS (1) 2011: 111-119
- Marco Comerio, Hong Linh Truong, Flavio De Paoli, Schahram Dustdar: Evaluating Contract Compatibility for Service Composition in the SeCO2 Framework. ICSOC/ServiceWave 2009: 221-236
- Hong Linh Truong, Schahram Dustdar: On Evaluating and Publishing Data Concerns for Data as a Service. APSCC 2010: 363-370
- Michael Mrissa, Salah-Eddine Tbahriti, Hong-Linh Truong, "Privacy model and annotation for DaaS", The 8th European Conference on Web Services (ECOWS 2010), (c)IEEE Computer Society, 1-3 December, 2010, Ayia Napa, Cyprus
- Hong Linh Truong, Schahram Dustdar, Andrea Maurino, Marco Comerio: Context, Quality and Relevance: Dependencies and Impacts on RESTful Web Services Design. ICWE Workshops 2010: 347-359

Data marketplaces: models and concepts

- Quang Hieu Vu, Tran Vu Pham, Hong Linh Truong, Schahram Dustdar, Rasool Asal: DEMODS: A Description Model for Data-as-a-Service. AINA 2012: 605-612
- Hong Linh Truong, Schahram Dustdar, Joachim Götze, Tino Fleuren, Paul Müller, Salah-Eddine Tbahriti, Michael Mrissa, Chirine Ghedira: Exchanging Data Agreements in the DaaS Model. APSCC 2011: 153-160
- Hong-Linh Truong, Marco Comerio, Flavio De Paoli, G.R. Gangadharan, Schahram Dustdar, "Data Contracts for Cloud-based Data Marketplaces", International Journal of Computational Science and Engineering, 2012 Vol.7, No.4, pp.280 - 295

Advanced service-based data analytics

- Andrew Pavlo, Erik Paulson, Alexander Rasin, Daniel J. Abadi, David J. DeWitt, Samuel Madden, and Michael Stonebraker. 2009. A comparison of approaches to large-scale data analysis. In Proceedings of the 2009 ACM SIGMOD International Conference on Management of data (SIGMOD '09), Carsten Binnig and Benoit Dageville (Eds.). ACM, New York, NY, USA, 165-178. DOI=10.1145/1559845.1559865 <http://doi.acm.org/10.1145/1559845.1559865>
- Leonardo Neumeyer, Bruce Robbins, Anish Nair, Anand Kesari: S4: Distributed Stream Computing Platform. ICDM Workshops 2010: 170-177
- Jerry Chou, Mark Howison, Brian Austin, Kesheng Wu, Ji Qiang, E. Wes Bethel, Arie Shoshani, Oliver Rübel, Prabhat, and Rob D. Ryne. 2011. Parallel index and query for large scale data analysis. In Proceedings of 2011 International Conference for High Performance Computing, Networking, Storage and Analysis (SC '11). ACM, New York, NY, USA, , Article 30 , 11 pages. DOI=10.1145/2063384.2063424 <http://doi.acm.org/10.1145/2063384.2063424>
- Boduo Li, Edward Mazur, Yanlei Diao, Andrew McGregor, Prashant J. Shenoy: A platform for scalable one-pass analytics using MapReduce. SIGMOD Conference 2011: 985-996
- Fabrizio Marozzo, Domenico Talia, Paolo Trunfio: A Cloud Framework for Parameter Sweeping Data Mining Applications. CloudCom 2011: 367-374
- Yingyi Bu, Bill Howe, Magdalena Balazinska, Michael D. Ernst: HaLoop: Efficient Iterative Data Processing on Large Clusters. PVLDB 3(1): 285-296 (2010)
- Chapter 6: Cloud Programming and Software Environments, Book: Distributed and Cloud Computing - from Parallel Processing to the Internet of Things, Kai Hwang, Geoffrey C. Fox and Jack J Dongarra, Morgan Kaufmann, 2012
- Bryce Allen, John Bresnahan, Lisa Childers, Ian Foster, Gopi Kandaswamy, Raj Kettimuthu, Jack Kordas, Mike Link, Stuart Martin, Karl Pickett, and Steven Tuecke. 2012. Software as a service for data scientists. Commun. ACM 55, 2 (February 2012), 81-88. DOI=10.1145/2076450.2076468 <http://doi.acm.org/10.1145/2076450.2076468>
- Spiros Koulouzis, Reginald Cushing, K. A. Karasavvas, Adam Belloum, Marian Bubak: Enabling Web Services to Consume and Produce Large Datasets. IEEE Internet Computing 16(1): 52-60 (2012)
- Hong-Linh Truong, Schahram Dustdar, "M2M Platform-as-a-Service for Sustainability Governance", Short paper, (c) IEEE Computer Society, The 2012 IEEE International Conference on Service Oriented Computing & Applications (SOCA 2012), December 17-19, 2012, Taipei, Taiwan.
- Hong Linh Truong, Phu H. Phung, Schahram Dustdar: Governing Bot-as-a-Service in Sustainability Platforms - Issues and Approaches. Procedia CS 10: 561-568 (2012)
- Hong Linh Truong, Schahram Dustdar: Composable cost estimation and monitoring for computational applications in cloud computing environments. Procedia CS 1(1): 2175-2184 (2010)

Quality of data-aware data analytics workflows

- Ian J. Taylor, Ewa Deelman, Dennis B. Gannon, and Matthew Shields. 2006. *Workflows for E-Science: Scientific Workflows for Grids*. Springer-Verlag New York, Inc., Secaucus, NJ, USA.
- Bertram Ludäscher, Mathias Weske, Timothy M. McPhillips, Shawn Bowers: *Scientific Workflows: Business as Usual?* *BPM 2009*: 31-47
- Mirko Sonntag, Dimka Karastoyanova, Frank Leymann: *The Missing Features of Workflow Systems for Scientific Computations*. *Software Engineering (Workshops) 2010*: 209-216
- Lavanya Ramakrishnan and Beth Plale. 2010. A multi-dimensional classification model for scientific workflow characteristics. In *Proceedings of the 1st International Workshop on Workflow Approaches to New Data-centric Science (Wands '10)*. ACM, New York, NY, USA, , Article 4 , 12 pages. DOI=10.1145/1833398.1833402 <http://doi.acm.org/10.1145/1833398.1833402>
- Jia Yu and Rajkumar Buyya. 2005. A taxonomy of scientific workflow systems for grid computing. *SIGMOD Rec.* 34, 3 (September 2005), 44-49. DOI=10.1145/1084805.1084814 <http://doi.acm.org/10.1145/1084805.1084814>
- Hong Linh Truong, Schahram Dustdar, Thomas Fahringer: *Performance metrics and ontologies for Grid workflows*. *Future Generation Comp. Syst.* 23(6): 760-772 (2007)
- Gideon Juve, Ewa Deelman, G. Bruce Berriman, Benjamin P. Berman, Philip Maechling: *An Evaluation of the Cost and Performance of Scientific Workflows on Amazon EC2*. *J. Grid Comput.* 10(1): 5-21 (2012)
- Cesare Pautasso, Thomas Heinis, Gustavo Alonso: *JOpera: Autonomic Service Orchestration*. *IEEE Data Eng. Bull.* 29(3): 32-39 (2006)
- Sudipto Das, Yannis Sismanis, Kevin S. Beyer, Rainer Gemulla, Peter J. Haas, and John McPherson. 2010. *Ricardo: integrating R and Hadoop*. In *Proceedings of the 2010 ACM SIGMOD International Conference on Management of data (SIGMOD '10)*. ACM, New York, NY, USA, 987-998. DOI=10.1145/1807167.1807275 <http://doi.acm.org/10.1145/1807167.1807275>
- Hong Linh Truong, Peter Brunner, Vlad Nae, Thomas Fahringer: *DIPAS: A distributed performance analysis service for grid service-based workflows*. *Future Generation Comp. Syst.* 25(4): 385-398 (2009)
- David Chiu, Sagar Deshpande, Gagan Agrawal, Rongxing Li: *Cost and accuracy sensitive dynamic workflow composition over grid environments*. *GRID 2008*: 9-16
- P Missier, S M Embury, M Greenwood, A D Preece, & B Jin, *Managing Information Quality in e-Science: the Qurator Workbench*, *Proc ACM International Conference on Management of Data (SIGMOD 2007)*, ACM Press, pages 1150-1152, 2007.
- Aisa Na-Fçim, Daniel Crawl, Maria Indrawan, Ilkay Altintas, and Shulei Sun. *Monitoring data quality in kepler*. In Salim Hariri and Kate Keahey, editors, *HPDC*, pages 560-564. ACM, 2010.- A
- Michael Reiter, Hong Linh Truong, Schahram Dustdar, Dimka Karastoyanova, Robert Krause, Frank Leymann, Dieter Pahr: *On Analyzing Quality of Data Influences on Performance of Finite Elements Driven Computational Simulations*. *Euro-Par 2012*: 793-804
- Michael Reiter, Uwe Breitenbücher, Schahram Dustdar, Dimka Karastoyanova, Frank Leymann, Hong Linh Truong: *A Novel Framework for Monitoring and Analyzing Quality of Data in Simulation Workflows*. *eScience 2011*: 105-112

Engineering human-based services in data analytics

- Adam Marcus, Eugene Wu, David Karger, Samuel Madden, and Robert Miller. 2011. Human-powered sorts and joins. *Proc. VLDB Endow.* 5, 1 (September 2011), 13-24
- Salman Ahmad, Alexis Battle, Zahan Malkani, Sepandar D. Kamvar: The jabberwocky programming environment for structured social computing. *UIST 2011*: 53-64
- Daniel W. Barowy, Charlie Curtsinger, Emery D. Berger, Andrew McGregor: AutoMan: a platform for integrating human-based and digital computation. *OOPSLA 2012*: 639-654
- Karastoyanova, Dimka; Dentsas, Dimitrios; Schumm, David; Sonntag, Mirko; Sun, Lina; Vukojevic, Karolina: Service-based Integration of Human Users in Workflow-driven Scientific Experiments. In: *Proceedings of the 8th IEEE International Conference on eScience (eScience 2012)*
- Muhammad Z.C. Candra, Rostyslav Zabolotnyi, Hong-Linh Truong, and Schahram Dustdar, *Virtualizing Software and Human for Elastic Hybrid Services*, *Web Services Handbook*, (c)Springer-Verlag, 2012.
- Hong Linh Truong, Schahram Dustdar, Kamal Bhattacharya: *Programming Hybrid Services in the Cloud*. *ICSOC 2012*: 96-110
- Paul Heymann and Hector Garcia-Molina. 2011. Turkalytics: analytics for human computation. In *Proceedings of the 20th international conference on World wide web (WWW '11)*. ACM, New York, NY, USA, 477-486. DOI=10.1145/1963405.1963473 <http://doi.acm.org/10.1145/1963405.1963473>