Winds from Seattle: Database Research Directions

Peter Bailis
pbailis@stanford.edu

Juliana Freire
juliana.freire@nyu.edu

Magda Balazinska magda@cs.washington.edu Raghu Ramakrishnan

Joseph M. Hellerstein (Moderator)

raghu@microsoft.com

hellerstein@berkeley.edu

Xin Luna Dong lundadong@amazon.com Michael Stonebraker stonebraker@csail.mit.edu

OVERVIEW

The database research community has been notably successful in impacting the industry and academia since the invention of the relational model. Examples of innovation in the last decade include columnar storage for data analytic platforms, cloud data services, HTAP systems, and a new generation of data wrangling systems. Despite this success, critical self-assessment by the community and identifying key opportunities for the future is essential if we are to continue the tradition of impactful research. In the Fall of 2018, following a long tradition that dates back to 1988 [4], and five years after the last such meeting [1], a group of approximately thirty database researchers gathered at the University of Washington, Seattle for two days to discuss the opportunities we have as a community for impactful research. A report from that meeting is now available [2]. The discussions in the Seattle meeting focused not just on technical challenges and opportunities but also on topics related to how we organize ourselves as a community. This VLDB panel follows on from a previous discussion at SIG-MOD 2020 [3], to provide a forum for the broader database community to review and debate the findings from the Seattle Report on Database Research [2] as well as to identify other challenges, and opportunities that need to be taken into account.

PVLDB Reference Format:

Joseph M. Hellerstein, Peter Bailis, Magda Balazinska, Xin Luna Dong, Juliana Freire, Raghu Ramakrishnan, Michael Stonebraker. Winds from Seattle: Database Research Directions. PVLDB, 13(12): 3516-3516, 2020.

DOI: https://doi.org/10.14778/3415478.3415573

1. REFERENCES

D. Abadi, R. Agrawal, A. Ailamaki, M. Balazinska,
 P. A. Bernstein, M. J. Carey, S. Chaudhuri, J. Dean,
 A. Doan, M. J. Franklin, et al. The Beckman report on

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-nd/4.0/. For any use beyond those covered by this license, obtain permission by emailing info@vldb.org. Copyright is held by the owner/author(s). Publication rights licensed to the VLDB Endowment.

Proceedings of the VLDB Endowment, Vol. 13, No. 12 ISSN 2150-8097.

DOI: https://doi.org/10.14778/3415478.3415573

- database research. Communications of the ACM, 59(2):92–99, 2016.
- [2] D. Abadi, A. Ailamaki, D. Andersen, P. Bailis, M. Balazinska, P. Bernstein, P. Boncz, S. Chaudhuri, A. Cheung, A. Doan, et al. The Seattle report on database research. ACM SIGMOD Record, 48(4):44–53, 2020.
- [3] M. Balazinska, S. Chaudhuri, A. Ailamaki, J. Freire, S. Krishnamurthy, and M. Stonebraker. The next 5 years: What opportunities should the database community seize to maximize its impact? In Proceedings of the 2020 ACM SIGMOD International Conference on Management of Data, pages 411–414, 2020.
- [4] P. A. Bernstein, U. Dayal, D. J. DeWitt, D. Gawlick, J. Gray, M. Jarke, B. G. Lindsay, P. C. Lockemann, D. Maier, E. J. Neuhold, et al. Future directions in DBMS research—The Laguna Beach Participants. ACM SIGMOD record, 18(1):17-26, 1989.