Panel: Startups Founded by Database Researchers

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ABSTRACT

This in-person panel, which I will be moderating, will focus on startups founded by worldwide database researchers. The panelists are a set of people with different backgrounds in terms of their geographic locations, research careers, startup experiences, maturity of their past and present startups, etc. This panel is modeled after such a panel that I organized and moderated at the ACM SIGMOD International Conference on Management of Data in June 2020. This VLDB 2022 panel will be the second time such a panel will be hosted in a research-oriented database conference.

PVLDB Reference Format:

C. Mohan. Panel: Startups Founded by Database Researchers. PVLDB, 15(12): 3823 - 3825, 2022. doi:10.14778/3554821.3554904

1 INTRODUCTION

Over the last few years, the number of startups founded by database researchers has gone up. These include startups founded by academics as well as by researchers who had just finished their studies or had chosen to leave industrial/other research laboratories. Based on the popularity of the first ever such a panel in a research-oriented database conference that I happened to have organized and moderated at the ACM SIGMOD Conference in June 2020, I was invited to organize and moderate a similar panel in the 48th International Conference on Very Large Databases (VLDB) in Sydney in September 2022. The description of the SIGMOD 2020 panel is at https://bit.ly/DBStPa and the video recording of it is at https://bit.ly/DBStPa

2 MODERATOR AND PANELISTS

Moderator:

C. Mohan (Tsinghua University)

Panelists:

- 1. <u>Anand Deshpande</u> (Persistent Systems, India)
- Vincent Gramoli (University of Sydney and Redbelly Network, Australia)
- 3. Chen Li (University of California at Irvine, USA)

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Proceedings of the VLDB Endowment, Vol. 15, No. 12 ISSN 2150-8097. doi:10.14778/3554821.3554904

- Beng Chin Ooi (National University of Singapore, Singapore)
- Mark Raasveldt (DuckDB Labs and Centrum Wiskunde & Informatica, The Netherlands)
- **6.** Cyrus Shahabi (University of Southern California, USA)

3 BACKGROUND OF MODERATOR AND PANELISTS

C. Mohan: Dr. C. Mohan is currently a Distinguished Visiting Professor at Tsinghua University in China, a Visiting Researcher at Google, a Member of the inaugural Board of Governors of Digital University Kerala, and an Advisor of the Kerala Blockchain Academy (KBA) and the Tamil Nadu e-Governance Agency (TNeGA) in India. He retired in June 2020 from being an IBM Fellow at the IBM Almaden Research Center in Silicon Valley. He was an IBM researcher for 38.5 years in the database, blockchain, AI and related areas, impacting numerous IBM and non-IBM products, the research and academic communities, and standards, especially with his invention of the well-known ARIES family of database locking and recovery algorithms, and the Presumed Abort distributed commit protocol. This IBM (1997-2020), ACM (2002-) and IEEE (2002-) Fellow has also served as the IBM India Chief Scientist (2006-2009). In addition to receiving the ACM SIGMOD Edgar F. Codd Innovations Award (1996), the VLDB 10 Year Best Paper Award (1999) and numerous IBM awards, Mohan was elected to the United States and Indian National Academies of Engineering (2009), and named an IBM Master Inventor (1997). This Distinguished Alumnus of IIT Madras (1977) received his PhD at the University of Texas at Austin (1981). He is an inventor of 50 patents. During the last many years, he focused on Blockchain, AI, Big Data and Cloud technologies (https://bit.ly/sigBcP, https://bit.ly/CMoTalks). Since 2017, he has been an evangelist of permissioned blockchains and the myth buster of permissionless blockchains. During 1H2021, Mohan was the Shaw Visiting Professor at the National University of Singapore (NUS). He has also been a Consultant to the Microsoft Data Team. Mohan is a frequent speaker in North America, Europe and Asia. He has given talks in 43 countries. More information can be found in the Wikipedia page at https://bit.ly/CMwIkP and his homepage at https://bit.ly/CMoDUK

Anand Deshpande: Dr. Anand Deshpande is the Founder, Chairman, and Managing Director of Persistent Systems since inception and is responsible for the overall leadership of the Company. Anand holds a Bachelor of Technology (B. Tech.) with Honours (Hons.) in Computer Science and Engineering from the Indian Institute of Technology (IIT), Kharagpur, and an M.S. and

a Ph.D. in Computer Science from Indiana University, Bloomington, Indiana, USA. He has been recognized by both his alma maters — as a Distinguished Alumnus in 2012 by IIT Kharagpur and by the School of Informatics of Indiana University with the Career Achievement Award in 2007. Anand is a true technology visionary and has been the driving force in growing Persistent Systems from its inception in 1990 to the publicly traded global Company of today. Prior to founding Persistent Systems, Anand began his professional career at Hewlett-Packard Laboratories in Palo Alto, California, where he worked as a Member of Technical Staff from May 1989 to October 1990. He is a founding trustee of Persistent Foundation and has served numerous positions at various professional and non-profit organizations - NASSCOM's Executive Council, founding President of Association for Computing Machinery (ACM) India, Software Exporters' Association of Pune (SEAP), Pune Chapter of Computer Society of India (CSI), CII's Pune Zonal Council, Trustee in the Computer History Museum, founding member of Indian Software Products Industry Round Table (iSPIRT), founding member of I4C, a member of the Dean's Advisory Council in the School of Informatics, Computing and Engineering of Indiana University. After transitioning from the role of CEO at Persistent, Anand is committed to making a broader impact and is focused on data, higher education, and entrepreneurship. He is a part-time member of the Unique Identification Authority of India (UIDAI), trustee of the VLDB Foundation, and is actively working on projects to create a data platform for Indian patients suffering from cancer and diabetes. He is an honorary Adjunct Professor of Practice at the Desai Sethi School of Entrepreneurship at IIT Bombay, Chairman of the Board of Governors of IIT Patna and the interim Chairman of the Board of Governors at IIIT Allahabad. In addition, he is on the governing board of the College of Engineering, Pune and on the board of Gokhale Institute of Politics and Economics, Pune. With his family members, Anand has established DeAsra Foundation. This non-profit entity focuses on creating self-employment at scale and through the Second Orbit program, in collaboration with Dr. Ashok Korwar, he has helped hundreds of entrepreneurs scale their businesses. Anand is married to Sonali and they have a daughter and a son.

Vincent Gramoli: Vincent Gramoli (https://bit.ly/3boPyAM) is and CTO of Redbelly Network founder (https://bit.ly/3Jp7yI7). He received a Future Fellowship from the Australian Research Council and leads the Concurrent Systems Research Group at the University of Sydney. His expertise is in distributed computing and security. In the past, Gramoli has been affiliated with INRIA, Cornell, CSIRO and EPFL. He received his PhD from Université de Rennes and his Habilitation from UPMC Sorbonne University. He served as Program Committee Chair of international scientific conferences (NETYS'13, FAB'21, Tokenomics'21, OPODIS'21) and co-wrote a book on Consistent Distributed Storage published by Morgan & Claypool. He received the best paper awards of ICDCS 2021, IPDPS 2022 and ICDCS 2022. With his lab, he found vulnerabilities in the major Ethereum code bases called geth and OpenEthereum and proposed the Redbelly Blockchain, a secure blockchain whose performance scales to world-wide deployments. His Blockchain Scalability MOOC (https://bit.ly/3vy1BTv) on Coursera is taken by thousands of students.

Chen Li: Chen Li is a professor in the Department of Computer Science at UC Irvine. He received his Ph.D. degree in Computer Science from Stanford University, and his M.S. and B.S. in Computer Science from Tsinghua University, China, respectively. He was a recipient of an NSF CAREER award and several test-of-time publication awards, a part-time visiting research scientist at Google, PC co-chair of VLDB 2015, and an ACM distinguished member. Since January 2020, he's the treasurer and a board member of the VLDB Endowment. Since July 2020, he is the Faculty Director of the ICS Master of Computer Science Program. He was a co-founder and CTO of a startup to commercialize his research results.

Beng Chin Ooi: Beng Chin is the Lee Kong Chian Centennial Professor and an NGS faculty member at the National University of Singapore (NUS). He is an adjunct Chang Jiang Professor at Zhejiang University, and a visiting Distinguished Professor at Tsinghua University. He is the director of NUS AI Innovation and Commercialization Centre at Suzhou, China, and the lead PI of Singapore Blockchain Innovation Programme (SBIP). He obtained his BSc (1st Class Honors) and PhD from Monash University, Australia, in 1985 and 1989 respectively. Beng Chin is a fellow of the ACM 2011, IEEE 2009, Singapore National Academy of Science (SNAS) 2016, and Academia Europaea 2022.

Mark Raasveldt: Mark Raasveldt is the co-founder of DuckDB Labs, where he currently works as CTO and lead developer on the DuckDB database system. He is also working as a postdoc in the Database Architectures group at the Centrum Wiskunde & Informatica (CWI). Mark did his PhD at the CWI, working on efficient integration of machine learning and analytics programs with relational database management systems.

Cyrus Shahabi: Cyrus Shahabi is a Professor of Computer Science, Electrical & Computer Engineering and Spatial Sciences; Helen N. and Emmett H. Jones Professor of Engineering; and the director of the Integrated Media Systems Center (IMSC) at USC's Viterbi School of Engineering. He was also the chair of the Computer Science Department at USC from 2017 to 2022. He was co-founder of two USC spin-offs, Geosemble Technologies and Tallygo, which both were acquired, in July 2012 and March 2019, respectively. He received his B.S. in Computer Engineering from Sharif University of Technology and his M.S. and Ph.D. Degrees in Computer Science from the University of Southern California. He authored two books and more than three hundred research papers in databases, GIS and multimedia with 14 US Patents. He was an Associate Editor of IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Knowledge and Data Engineering and VLDB Journal. He is currently on the editorial board of the ACM Transactions on Spatial Algorithms and Systems and ACM Computers in Entertainment. Dr. Shahabi is a recipient of the ACM Distinguished Scientist award, U.S. Presidential Early Career Awards for Scientists and Engineers (PECASE), and the NSF CAREER award. He is a fellow of National Academy of Inventors (NAI) and IEEE.

4 PANEL FORMAT AND QUESTIONS FOR PANELISTS

The format of the panel will be the following:

- The first part will be the initial remarks by each of us (5 minutes per person). These will introduce the panelists and their startups. The questions posed by me below will also be addressed to an extent in those introductory remarks.
- Then the 7 of us will discuss the already prepared questions and more questions that arise based on the contents of the introductory remarks and live discussions among the panelists.
- Next, we will take up questions posed by the audience.

Here are the initial set of questions that I am asking the panelists to address in their initial remarks and during the subsequent discussions:

- 1. Has your academic background helped or hurt you in your entrepreneurship?
- What role has your base of operation had on how successful you could hope to be with your startup – funding, staffing, acquiring customers?
- 3. If you were to restart your startup activity now, what would you do differently?

- 4. If you have had a successful exit, what were the significant factors that contributed to it? If you had an unsuccessful exit, what were the causes?
- 5. How did you balance your startup and concurrent academic activities, if any?
- 6. Does the experience of working earlier in an established company help in being more successful later at a startup – from your own direct experience or from the experience of your collaborators?
- 7. How cooperative were your universities, funding agencies, ... in your commercialization efforts if your startup was an off shoot of a university research project?
- 8. If your co-founder/collaborator was at a totally different experience level, how did your interactions go? Full of friction or smoother than anticipated?
- 9. What role, if any, open-source software has played in your efforts?
- 10. Can the VLDB community help you in anyway?
- 11. Did your company pivot significantly from the original goals you had when you started? If yes, why and how did you figure out what direction to pivot in? In retrospect, how did things turn out? Any regrets?