NIV DAYAN

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EDUCATION & ACADEMIC EMPLOYMENT

Harvard — *2015–current* — **Postdoc in Computer Science**

Goal: To Identify the Best Possible Space-Time Trade-Offs for Log-Structured Data Structures.
Advisor: Stratos Idreos

IT University of Copenhagen — *2012–2015* — **PhD in Computer Science**

Thesis: Modelling and Managing SSD Write-Amplification.
Advisor: Philippe Bonnet

IT University of Copenhagen — *2010–2012* — **MSc in Computer Science**

Thesis: Predictable I/Os and Efficient B-Tree Updates on Flash-Based Solid State Drives.
Advisor: Philippe Bonnet

University of Dundee — *2007–2010* — **BSc in Computer Science and Economics**

AWARDS

SIGMOD '17

Best of ACM SIGMOD. Our paper on *Monkey: Optimal Navigable Key-Value Store* was selected as one of the (4) best papers of the ACM SIGMOD International Conference on Management of Data.

PUBLICATIONS

CIDR '19

Design Continuums and the Path Toward Self-Designing Key-Value Stores that Know and Learn.
Stratos Idreos, **Niv Dayan**, Wilson Qin, Mali Akmanalp, Sophie Hilgard, Andrew Ross, James Lennon, Varun Jain, Harshita Gupta, David Li, Zichen Zhu.

SIGMOD '18

Dostoevsky: Better Space-Time Trade-Offs for LSM-Tree Based Key-Value Stores via Adaptive Removal of Superfluous Merging.
Niv Dayan, Stratos Idreos.

VLDB '18

Coconut: A Scalable Bottom-Up Approach for Building Data Series Indexes.
Haridimos Kondylakis, **Niv Dayan**, Kostas Zoumpatianos, Themis Palpanas.

TODS '18

Optimal Bloom Filters and Adaptive Merging for LSM-Trees.
Niv Dayan, Manos Athanassoulis, Stratos Idreos.

IEEE Data Engineering Bulletin '18

The Periodic Table of Data Structures.
Stratos Idreos, Kostas Zoumpatianos, Manos Athanassoulis, **Niv Dayan**, Brian Hentschel, Michael S. Kester, Demi Guo, Lukas Maas, Wilson Qin, Abdul Wasay, Yiyou Sun.

SIGMOD '17

Monkey: Optimal Navigable Key-Value Store.
Niv Dayan, Manos Athanassoulis, Stratos Idreos.

SIGMOD '17

Data Canopy: Accelerating Exploratory Statistical Analysis.
Abdul Wasay, Xinding Wei, **Niv Dayan**, Stratos Idreos.

SIGMOD '16

GeckoFTL: Scalable Flash Translation Techniques for Very Large Flash Devices.
Niv Dayan, Philippe Bonnet, Stratos Idreos.

Birte@VLDB '16	*Past and Future Steps for Adaptive Storage Data Systems: From Shallow to Deep Adaptivity.* Stratos Idreos, Manos Athanassoulis, **Niv Dayan**, Demi Guo, Mike S. Kester, Lukas Maas, Kostas Zoumpatianos.
Demo@VLDB '13	*EagleTree: Exploring the Design Space of SSD-Based Algorithms.* **Niv Dayan**, Martin Kjaer Svendsen, Matias Bjoerling, Philippe Bonnet, Luc Bouganim.
CIDR '14	*The Necessary Death of the Block Device Interface.* Matias Bjoerling, Philippe Bonnet, Luc Bouganim, **Niv Dayan**.

SOFTWARE

2012 - 2015	EagleTree - SSD Simulator

Simulation framework for analyzing the behavior of SSDs, available at
https://github.com/ClydeProjects/EagleTree.

RECENT TALKS AND LECTURES

2018	NetApp · Facebook · University of Chicago, · University of Wisconsin
2017	NetApp · Facebook · University of Dresden

TEACHING

Harvard '18	Teaching assistant in AC297, a MSc Course on data science.
Harvard '18	Teaching assistant in CS165, a BSc Course on data systems.
Harvard '17	Teaching assistant in AC297, a MSc Course on data science.
Harvard '17	Teaching assistant in CS165, a BSc Course on data systems.
Harvard '16	Teaching assistant in AC297, a MSc Course on data science.
IT Univ. of Copenhagen '14	Teaching assistant in a MSc course on database tuning.
Univ. of Dundee '09	Teaching assistant in a BSc course on data structures.

WORK EXPERIENCE

Podio '12	Data analyst.
Sunstone Capital '12	Data analyst.
Netmester '11-'12	Back-end web-developer.
Academia Sinica '10	Research Intern.
Calico Jack '09	Web development intern.

OTHER INFORMATION

Interests	guitar · science fiction · nonfiction · Brazilian Jiu Jitsu
Languages	English · Hebrew

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