Hadeel Albahar-2024

❶ **Name & Rank:** Hadeel Albahar, Assistant Professor

❷ **Education**

Degree	Discipline	Institution	Year
Ph.D.	Computer Engineering	Virginia Tech	2023
M.Sc.	Computer Engineering	Columbia University	2016
B.Sc.	Computer Engineering	Kuwait University	2012

❸ **Academic Experience**

Institution	Designation	Year/Period	FT/PT
Kuwait University	Assistant Professor	2023-present	FT
Virginia Tech	Graduate Teaching Assistant	Fall 2021	FT
Kuwait University	Teaching Assistant	Spring 2012	FT

❹ **Non-Academic Experience**

Institution	Designation	Year/Period	FT/PT
Kuwait e Award - Kuwait Foundation for the Advancement of Sciences (KFAS)	Technical Support Engineer	2012 & 2016	PT
EXP US services Inc. (Chicago, IL)	Intern	Spr 2012 – Mar 2013	FT

❺ **Certifications / professional registrations:**

1. Oak Ridge Leadership Computing Facility (OLCF) Hands-On HPC Certificate, by Oak Ridge National Laboratory. Issued Dec 2022.

❻ **Membership in Professional Organization:**

1. IEEE

❼ **Honors and Awards:**

a. 2024, Judge, Hour of Code, programming competition by the Computer Engineering Society (CPES) and Kuwait University AI and Robotics Society (KARS), Sabah Al-Salem University City, Kuwait

b. 2023 - Judge, Hour of Code, programming competition by the Computer Engineering Society (CPES) and the Information Science Club (CLICKIT), Sabah Al-Salem University City, Kuwait.

c. 2022 - Student Volunteer, SCinet @ SC, Dallas, TX, USA.

d. 2022 - Grace Hopper Celebration virtual Hopper (Volunteer).

e. 2022 - GHC Student Scholarship to attend the virtual component of the Grace Hopper Celebration.

f. 2021 – 2023 Member, I WILL (Inspiring Women in Lifelong Leadership) Institute, Virginia Tech.

g. 2015 - Hackathon Volunteer, the Data Science Institute at Columbia University, New York, NY.

h. 2014 - Kuwait University Scholarship recipient, Full scholarship to pursue M.S. and Ph.D. degrees.

i. 2013 - Graduate of Excellence - One of the top 10 students graduating from College of Engineering and Petroleum – Graduates of Excellence Ceremony Class of 2012/2013 under the patronage and presence of HH the Amir of Kuwait.

j. 2012 - Accepted into the Kuwait Fund for Arab Economic Development Training Program for Newly Graduated Engineers and Architects.

k. 2008 – 2011 - Dean's Honor list and Outstanding Students list – College of Engineering and Petroleum, Kuwait University

⑧ Service Activities:

a. Technical Program Committee (TPC) member:
   a. IPDPS'25 (39th IEEE International Parallel & Distributed Processing Symposium).
   b. REX-IO'24 (Workshop on Re-envisioning Extreme-Scale I/O for Emerging Hybrid HPC Workloads) in conjunction with IEEE Cluster 2024).
b. Reviewer. IEEE Transactions on Network Science and Engineering ('21, '22).
c. Mentor to MS and PhD students.
d. CpE Student Affairs Committee member.
e. Presented a training course on the fundamentals of Linux bash scripting and terminal commands as part of Kuwait University's AI and Robotics Society's winter break program.

⑨ Publications and Presentations (from past five years):

1. Nannan Zhao, Muhui Lin, **Hadeel Albahar**, Arnab K. Paul, Zhijie Huan, Subil Abraham, Keren Chen, Vasily Tarasov, Dimitrios Skourtis, Ali Anwar, and Ali Butt. 2024. An End-to-end High-performance Deduplication Scheme for Docker Registries and Docker Container Storage Systems. ACM Trans. Storage 20, 3, Article 18 (August 2024), 35 pages. https://doi.org/10.1145/3643819.

2. Peng Xu, Nannan Zhao, Jiguang Wan, Wei Liu, Shuning Chen, Yuanhui Zhou, **Hadeel Albahar**, Hanyang Liu, Liu Tang, and Zhihu Tan. 2022. Building a Fast and Efficient LSM-tree Store by Integrating Local Storage with Cloud Storage. ACM Trans. Archit. Code Optim. 19, 3, Article 37 (September 2022), 26 pages. https://doi.org/10.1145/3527452.

3. Nannan Zhao, Vasily Tarasov, **Hadeel Albahar**, Ali Anwar, Lukas Rupprecht, Dimitrios Skourtis, Arnab K. Paul, Keren Chen, and Ali R. Butt. Large-Scale Analysis of Docker Images and Performance Implications for Container Storage Systems in IEEE Transactions on Parallel and Distributed Systems, vol. 32, no. 4, pp. 918-930, 1 April 2021, https://doi.org/10.1109/TPDS.2020.3034517

4. **Hadeel Albahar**, Shruti Dongare, Yanlin Du, Nannan Zhao, Arnab K. Paul, and Ali R. Butt. SchedTune: A Heterogeneity-Aware GPU Scheduler for Deep Learning. 2022 22nd IEEE International Symposium on Cluster, Cloud and Internet Computing (CCGrid), Taormina, Italy, 2022, pp. 695-705, doi: 10.1109/CCGrid54584.2022.00079

5. Peng Xu, Nannan Zhao, Jiguang Wan, Wei Liu, Shuning Chen, Yuanhui Zhou, **Hadeel Albahar**, Hanyang Liu, Liu Tang, Changsheng Xie. Building A Fast and Efficient LSMtree Store by Integrating Local Storage with Cloud Storage. 2021 IEEE International Conference on Cluster Computing (CLUSTER), Portland, OR, USA, 2021, pp. 125-134, doi.org/10.1109/Cluster48925.2021.00032

6. Nannan Zhao, **Hadeel Albahar**, Subil Abraham, Keren Chen, Vasily Tarasov, Dimitrios Skourtis, Lukas Rupprecht, Ali Anwar, and Ali R. Butt. 2020. DupHunter: flexible highperformance deduplication for docker registries. In Proceedings of the 2020 USENIX Conference on Usenix Annual Technical Conference (USENIX ATC'20). USENIX Association, USA, Article 53, 769–783. dl.acm.org/doi/10.5555/3489146.3489199

7. Nannan Zhao, Vasily Tarasov, **Hadeel Albahar**, Ali Anwar, Lukas Rupprecht, Dimitrios Skourtis, Amit S. Warke, Mohamed Mohamed, and Ali R. Butt. Large-Scale Analysis of the

Docker Hub Dataset. 2019 IEEE International Conference on Cluster Computing (CLUSTER), Albuquerque, NM, USA, 2019, pp. 1-10, doi.org/10.1109/CLUSTER.2019.8891000.

⑩ Recent Professional Development Activities:

1. Attended NVIDIA's "Unlocking AI Model Performance" webinar by Dmitry Mironov on Dec 12, 2023.
2. Attended and participated in CIRTL's "Mentoring and Advising Relationships: What Skills am I Developing?" workshop on March 21, 2023.
3. Attended and participated in CIRTL's "Communicating to Learn: Incorporating Scientific Communication into STEM Courses" workshop presented by Dr. Rajan Kumar on March 14, 2023.
4. Attended Virginia Women in HPC (VA-WHPC) "Women in HPC & IT Leadership Roles, Part II" on January 31, 2023.