הקריה למחקר גרעיני – נגב

אגף משאבי אנוש

מרכז גרעיני, מדעי וטכנולוגי, מצטיין ומוביל

משאבי אנוש ת.ד. 9001 באר-שבע 84190 פקס: 6568808 טלפון: 6568404

י״ח אב תשע״ט
19 אוגוסט 2019
פניה לממליצים

לכבוד
<u>דר׳ לאוניד ברנבוים</u>
שלום רב,

הנדון: <u>מר גל אורן – העלאה בדרגה</u>

ועדת דירוג המחקר והפיתוח של הקריה למחקר גרעיני - נגב, שוקלת את קידומו של **מר גל אורן** לדרגה ב׳. דירוג המחקר והפיתוח כולל דרגות מ-ג׳ עד א+ (בהקבלה לדרגות מרצה עד פרופסור מן המניין בדירוג הסגל האקדמי הבכיר). דרגה ב׳ מקבילה לדרגת מרצה בכיר. מעובד המקודם לדרגה זו נדרשת היכולת לבצע ולהוביל מחקר ופיתוח מדעי טכנולוגי ברמה המתאימה. בכלל זה יילקחו בחשבון הישגיו העצמאיים במחקר ופיתוח של המועמד, כושרו להגדיר משימות ולהוביל צוותים מקצועיים, ויכולתו לקיים ולפתח קשרים מקצועיים עם מוסדות מחקר ופיתוח בארץ ובחו״ל.

נכיר לך תודה אם תואיל להעריך את התאמתו של **מר גל אורן** לקריטריונים אלו. הקריה למחקר גרעיני היא מוסד מחקר ופיתוח שחלק מעבודות המו״פ המבוצעות בו הן פנימיות. על כן נבקשך לבסס את הערכתך בעיקר על איכות פרסומיו של המועמד ולא על כמותם, ועל היכרותך (אם קיימת) עם עבודתו ויכולותיו.

אנו מודעים לכך שכתיבת חוות הדעת כרוכה בהשקעת זמן ומאמץ מצדך ומודים לך מראש על שיתוף הפעולה.

חוות דעתך תשמר בסודיות ותשמש לצרכי הועדה בלבד.

בברכה

ד״ר אוהד לוי
יו״ר ועדת הדירוג

Gal Oren

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Lehavim

Work experience

Israel Atomic Energy Commission (IAEC) / Nuclear Research Center - Negev (NRCN)

2011 — Present

Computer Scientist

Job Positions:

- Computer Science Researcher (2011 - Present)
  - Partially during military service as a Professional Academic Officer (2011 - 2014)
- Head, Algorithms field (2015 - Present)
  - Partially during military service as a Senior Academic Officer (2014 - 2016)
- Head, Scientific Computing Laboratory (2017 - Present)

Topics of Interest:

- High-Performance Computing
- Distributed & Parallel Computing
- Research Software Engineering
- Distributed File Systems & Storage
- Cybersecurity R&D
- Artificial Intelligence
- Immersive & Scientific Visualization

Education

Department of Computer Science, B.Sc.

2006 — 2010

Jerusalem College of Technology

- Scholarship for Excellence, Jerusalem College of Technology (2007)
- Gifted and Excellent Students Scholarship, Ministry of Education (2008)
- Technological Bagrut (53 units), high school graduation (2010)
- Degree final score: 88.

Department of Computer Science, M.Sc.

2011 — 2015

Open University of Israel

- Thesis: Optimizations of Management Algorithms for Multi-Level Memory Hierarchy.
- Supervisors: Dr. Leonid Barenboim, Dr. Lior Amar
- Thesis final score: 94. Degree final score: 92. Magna cum laude.
- Foundation for the Advancement of Education in Israel Scholarship (2013)
- The Hillel Scholarship, the Open University of Israel (2014)
- Thesis Scholarship, Computer Science Master's Degree Program, the Open University of Israel (2015)

Department of Computer Science, Ph.D — 2016 — Present

Ben-Gurion University of the Negev

- Thesis: Distributed Management Algorithms for Heterogeneous Computing Systems and Networks
- Supervisors: Dr. Leonid Barenboim, Prof. Michael Elkin
- The Lynn and William Frankel Center for Computer Science Scholarship (2016, 2017, 2018, 2019)
- The Open University of Israel Research Fund Scholarship
- Support by the Israel Science Foundation grant 724/15

Swedish Summer School in Computer Science (S3CS) — June 2016

KTH Royal Institute of Technology

S3CS consists of two mini-courses by Michael Mitzenmacher and Sergei Vassilvitskii.

Radboud Summer School — August 2017

Radboud University

Cyberpsychology research course by Dr Jens Binder.

Publications & Conferences

- Leonid Barenboim, Gal Oren, *Fast Distributed Backup Placement in Sparse and Dense Graphs* , *arXiv preprint arXiv:1902.08819* (2019).
- Gal Oren, Leonid Barenboim, *Distributed Backup Placement in WSNs and Planar Graphs (Poster)* , The 7th Global Young Scientists Summit (GYSS'19)
- Idan Mosseri, Matan Rusanovsky, Gal Oren, *TradeMarker - Under the Hood*, Google AI for Social Good Workshop, Bangkok 2018
- Gal Oren, Shimon Shmooely, *How Governments can use AI for Public Service Delivery?* , United-Nations & Google AI for Social Good Summit, Bangkok 2018
- Gal Oren, *TradeMarker - Artificial Intelligence based Trademarks Similarity Search Engine*, Policy Implementation in the Age of Big Data Conference, the Knesset 2018
- Gal Oren, Idan Mosseri, Matan Rusanovsky, *TradeMarker - One of Seven leading AI for Social Good Projects of 2018*, AI for Social Good conference, Google Headquarters, California 2018
- Eyal Shalev, Vladimir Lyakhovsky, Gal Oren, Harel Levin, Stephen J. Bauer, *Damage Accumulation and Wellbore Stability*, Proceedings of the American Geophysical Union Conference (AGU'18)
- Technical Program Committee, *the 3nd IEEE PERCOM Workshop on Security, Privacy and Trust in the Internet of Thing (SPT-IoT'19),* In conjunction with IEEE PERCOM 2019 (PERCOM'19)
- Idan Mosseri, Re'Em Harel, Harel Levin, Matan Rusanovsky, Gal Oren, *Automatic Parallelization for Shared Memory Scientific Multiprocessing (Presentation* & Poster), In OpenMPCon Developers Conference (OpenMPCon'18), The 14th International Workshop on OpenMP 2018 (IWOMP'18), & The 30th International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD'18)
- Gal Oren, Leonid Barenboim, Harel Levin, *Distributed Fault-Tolerant Backup-Placement in Overloaded Wireless Sensor Networks*, the 9th International Conference on Broadband Communications, Networks, and Systems (BROADNETS'18 - Rank B1).
- Gal Oren, Leonid Barenboim, Harel Levin, *Distributed Fault-Tolerant Backup-Placement in Overloaded Wireless Sensor Networks*, (Poster & Short Abstract), Proceedings of the 11th ACM International on Systems and Storage Conference (SYSTOR'18).
- Gal Oren, Leonid Barenboim, Harel Levin, *Distributed Fault-Tolerant Backup-Placement in Overloaded Wireless*

Sensor Networks, (Poster in Ph.D forum), the 32nd IEEE International Parallel & Distributed Processing Symposium (IPDPS'18 - Rank A1).

- Gal Oren, Guy Malamud, *CalCul: A Python-based Workspace for High-Performance Parameters-Survey in Scientific Legacy Codes*, The international Parallel Computing conference (ParCo'17 - Rank B)
- Gal Oren, Leonid Barenboim, Harel Levin, *Adaptive Distributed Hierarchical Sensing Algorithm for Reduction of Wireless Sensor Network Cluster-Heads Energy Consumption*, The 13th International Wireless Communications and Mobile Computing Conference (IWCMC'17 - Rank B1)
- Gal Oren, Leonid Barenboim, Harel Levin, *Load-Balancing Adaptive Clustering Refinement Algorithm for Maximization of Wireless Sensor Network Clusters Lifetime*, The 15th International Conference on Wired/Wireless Internet Communications (WWIC'17 - Rank B)
- Gal Oren, Yehuda Ganan, Guy Malamud, *AutOMP - An Automatic OpenMP Parallelization Generator for Variable-Oriented High-Performance Scientific Codes*, The 7th International Supercomputing Conference 2017 (ISUM'17) - Best paper - International Journal of Combinatorial Optimization Problems and Informatics, vol. 9, no. 1, pp. 46-53, Feb. 2018.
- *Technical Program Committee*, the 2nd IEEE PERCOM Workshop on Security, Privacy and Trust in the Internet of Thing, In conjunction with IEEE PERCOM 2017 (PERCOM'17 - Rank A).
- Gal Oren, Lior Amar, David Levi-Hevroni, Guy Malamud, *The Looking-Glass System: A Unidirectional System for Secure Data Transfer using an Optic Medium*, The 2nd International Conference on Future Network Systems and Security 2016 (FNSS'16 - Previously IoT-CT at WiMob - Rank B).
- Gal Oren, Leonid Barenboim, Lior Amar, *Memory-Aware Management for Heterogeneous Main Memory Complex using an Optimization of the Aging Paging Algorithm*, 2016 Workshop on High-Performance Computing for Big Data (HPC4BD) in conjunction with the 45th International Conference on Parallel Processing (ICPP'16 - Rank A)
- Gal Oren, Leonid Barenboim, and Lior Amar. *Memory-Aware Management for Multi-Level Main Memory Complex using an Optimization of the Aging Paging Algorithm* (Poster & Short Abstract), Proceedings of the 9th ACM International on Systems and Storage Conference (SYSTOR'16).
- Gal Oren, *Optimizations of Management Algorithms for Multi-Level Memory Hierarchy*, Master's Dissertation, The Open University, 2005.
- *VIP Exhibitor* at the WATEC 2013 Innovation Pavilion, The 7th International Exhibition & The 4th International Conference on Water Technologies & Environmental Control, Tel Aviv Convention Center, October 22-24, 2013
- Gal Oren; Nerya Stroh, *Mathematical Model for Detection of Leakage in Domestic Water Supply Systems by Reading Consumption from an Analogue Water Meter*, International Journal of Environmental Science and Development (IJESD), Vol. 4, No. 4, International Association of Computer Science and Information Technology Press, ISSN: 2010-0264, August 2013; Presented in the 3rd International Conference on Environment and Industrial Innovation - ICEII'13)
- Gal Oren; Nerya Stroh, *Antileaks: A device for detection and discontinuation of leakages in domestic water supply systems*, European Journal for Young Scientists and Engineers (EJYSE), Faculty of Science, University of Helsinki, ISSN 1799-9634 (print) & 1799-9642 (online), November 2012.

Scholar: http://goo.gl/mkrpr7

Awards

- Selected for GYSS-2019 - Global Young Scientist Summit for outstanding PhDs (2019).
- Nuclear Research Center - Negev CEO Award - Innovation category (2018)
- Nuclear Research Center - Negev CEO Award - Exemplary Mission category (2018)
- Maccabim Foundation Scholarship for PhD Students (2017, 2018)
- Students Leading Innovation in the Public Sector - Finalist, Google & Ben-Gurion University (2018)

- Nuclear Research Center - Negev CEO Fund - 1st prize (2017), 2nd prize (2018)
- Department of Physics Award for Best Researches, Nuclear Research Center - Negev (2016)
- The Katzir Fellowship, Israel Ministry of Defense (2016)
- Ministry of Culture Prize for Literature (2015)
- Excellent Paper Award, the 3rd International Conference on Environment and Industrial Innovation – ICEII, Copenhagen, Denmark (2013)
- The Encouraging Creativity Among Scientists Prize, Weizmann Institute of Science (2013)
- Third Grand Award in Environmental Management category, the Intel International Science and Engineering Fair, Pittsburgh, Pennsylvania, the United States (2012)
- Third Special Award in Sustainable Water Management category , the Intel International Science and Engineering Fair, Pittsburgh, Pennsylvania, the United States (2012)
- Intel Prize, the European Union Contest for Young Scientists, Helsinki, Finland (2011)
- 1st Prize in Technology field, the National Young Scientist and Engineers Competition in Israel, Hebrew University of Jerusalem (2011)
- Honor Diploma from Her Royal Highness Crown Princess Victoria of Sweden, Stockholm Junior Water Prize, World Water Week, Stockholm, Sweden (2010)
- Stockholm Junior Water Prize in Israel, Tel Aviv University (2010)
- President of Israel Commendation for an original scientific study, the National Young Scientist and Engineers Competition in Israel, Hebrew University of Jerusalem (2010)
- Chief Judge at the Hebrew Wikipedia Writing Competition (2010)
- Grand Award at the Hebrew Wikipedia Writing Competition (2009)
- President Zalman Shazar Prize for an original scientific study, the Zalman Shazar Center, Jerusalem (2009)

Personal Info

- Sex : Male
- Nationality : Israeli
- ID No.: 203127261
- Date of Birth : 7th July 1991
- Languages: Hebrew (Mother tongue), English (Fluent), French (Basic)