GIL BARAM, PH.D.

gil.baram@biu.ac.il https://gilbaram.com

EDUCATION

Post-Do	c Cyber Escalation Lab	
	Center for Peace and Security Studies	2022-2023
	University of California, San Diego	
	PI: Prof. Erik Gartzke	
Post-Do	c Center for International Security and Cooperation,	2021-2022
	Freeman Spogli Institute for International Studies,	
	Stanford University	
	Fulbright Cybersecurity Postdoctoral Fellow	
	Mentors: Dr. Herb Lin, Dr. Amy Zegart	
PhD	Political Science, Government and International Affairs	2014-2021
	Tel Aviv University	
	Dissertation: "National Strategies during Cyber Conflicts"	
	Committee: Prof. Isaac Ben-Israel and Prof. Udi Sommer (chairs)	
	Prof. Yotam Margalit, Prof. Yuval Elovici	
MA	Security Studies, Tel Aviv University	2011-2013
	Thesis: "The Effect of Cyber War Technologies on Force Buildup	
	of the United States and Israel" (Graduated Magna Cum Laude)	
	Advisor: Prof. Isaac Ben-Israel	
BA	Political Science, History (double major), Tel Aviv University	2007-2010
GRANTS,	HONORS AND AWARDS	
Inter	national Studies Association	2024
	rch Workshop Grant Award	
	ging Diverse Perspectives in Cybersecurity" (Lead PI)	
Fulbr	ight Post-Doctoral Scholar Award	2021-2022
Women in Cyber Security Awards – finalist		2019
	tnik Interdisciplinary Cyber Research Center (ICRC) research grant onal strategies during cyber conflict." PI: Prof. Udi Sommer	2018

Blavatnik Interdisciplinary Cyber Research Center (ICRC) research gr "The deniability mechanism in the cyber age – Its effect on states' behavior the international system." PI: Prof. Isaac Ben Israel	
PhD excellence scholarship Department of Political Science, Tel Aviv University	2014-2018
Raffa and Paula Atlas Endowment Fund Award Award for women in national security, Tel Aviv University	2013
Richard and Rhoda Goldman Fund for Better Government Junior Fellow scholarship, Tel Aviv University	2013
Award for academic achievements (for MA students) The Gershon H. Gordon Faculty of Social Science, Tel Aviv University	2012
ACADEMIC APPOINTMENTS	
Department of Political Studies Bar-Ilan University Senior Lecturer	Oct 2024
Center for Long-Term Cybersecurity & Berkeley Risk and Security Lab University of California Berkeley Non-resident research Scholar	2023-Present
Center for International Security and Cooperation Stanford University Research affiliate	2022-Present
Nanyang Technological University, Singapore Centre of Excellence for National Security S. Rajaratnam School of International Studies (RSIS) Senior adjunct fellow	2017-Present
Tel Aviv University, Israel Blavatnik Interdisciplinary Cyber Research Center (ICRC) Senior research fellow	2016-Present
 Tel Aviv University, Israel Head of research cyber and space, Yuval Ne'eman Workshop for Science, Technology and Security Leading the Center of Excellence for Cybersecurity and Space Polic Responsible for overseeing research seminars and academic events. 	2017-2021 y.

Tel Aviv University, Israel

Senior Researcher, Yuval Ne'eman Workshop for Science, Technology and Security Areas of Expertise: Cyber Conflict, Space Policy, Security Studies, Emerging Technologies.

RESEARCH AND PUBLICATIONS

Journal Articles (Peer-Reviewed)

Baram, G., "Cyber Diplomacy through Official Public Attribution: Paving the Way for Global Norms," forthcoming International Studies Perspectives.

Baram, G. "Out of the Shadows: The Role of Intelligence Agencies in Revealing Offensive Cyber Operations – illustrative examples from the U.S. case," forthcoming International Journal of Intelligence and Counter Intelligence.

Baram, G. "Book review: Deter, Disrupt, or Deceive: Assessing Cyber Conflict as an Intelligence Contest." International Studies Review, vol. 25: 4, 2023. https://doi.org/10.1093/isr/viad047

Abramson, Y. and Baram, G., "Saving Face in the Cyberspace: Responses to Public Cyber Intrusions in the Gulf." Contemporary Security Policy, vol. 45:2, 2023, pp. 210-238.

https://doi.org/10.1080/13523260.2023.2271794

Baram, G. "Public Secrets: The Dynamics of Publicity in Cyber Operations" Journal of Global Security Studies, June 2023. https://doi.org/10.1093/jogss/ogad013

Baram, G. "A Sliding Scale of Secrecy: Toward a Better Understanding of the Role of Publicity in Cyber Operations," Journal of Cyber Policy, vol. 7:3, 2023. pp. 275-293. https://doi.org/10.1080/23738871.2023.2184708

Baram, G. and Sommer, U., "Covert or not Covert: National Strategies during Cyber Conflict," In 2019 11th International Conference on Cyber Conflict (CyCon), Proceedings of the IEEE, pp. 197-212. 10.23919/CYCON.2019.8756682

Baram, G. and Ben Israel, I., "The Academic Reserve - Israel's Fast Track to High-Tech Success," Israel Studies Review, vol. 34: 2, 2019, pp. 75-91. https://doi.org/10.3167/isr.2019.340205

Baram, G. and Menashri, H., "Why Can't We Be Friends? Challenges to International Cyberwarfare Cooperation Efforts and the Way Ahead," Comparative Strategy, vol. 38: 2, 2019, pp. 89-97. https://doi.org/10.1080/01495933.2019.1573069

Baram, G., Cohen, D., Shapira, Z., Wechsler O., Hight, N. and Ben Israel, I., "Strategic Trends in the Global Cyber Conflict," *Cyber Security: A Peer Review Journal*, vol. 2:3, 2019, pp. 238-250. https://www.ingentaconnect.com/content/hsp/jcs/2018/00000002/0000003/art00006

Baram, G., "Israeli Defense in the Age of Cyber War," *Middle East Quarterly*, winter 2017, pp. 1-10. <u>https://www.meforum.org/6399/israeli-defense-in-the-age-of-cyber-war</u>

Paikowsky, D., Baram, G. and Ben Israel, I., "Trends in Space Activities in 2014: The Significance of the Space Activities of Governments," *Acta Astronautica*, vol. 118, no. 3, 2016, pp. 187–198. <u>https://doi.org/10.1016/j.actaastro.2015.10.007</u>

Paikowsky, D., Baram, G. and Ben Israel, I., "Trends in Government Space Activity and Policy in 2013," *Astropolitics*, vol. 12: 3-4, 2014, pp. 107-126. https://doi.org/10.1080/14777622.2014.961889

Book Chapters

Baram, G. and Peer N., "Cyberwarfare norms and the attribution imperative: shaping responsible state behaviour in cyberspace," *Handbook of Cyberwarfare*, Edward Elgar Publishing, July 2024. Editors: Tim Stevens and Joe Devanny, Department of War Studies, King's College London.

Peer-reviewed Conference Papers

Baram, G. and Weschler, O., "Cyber Threats to Space Systems: Current Risks and the Role of NATO." *Leveraging Emerging Technologies in Support of NATO Air & Space Power, Joint Air & Space Power Conference 2020 - Conference Read Ahead.* June 2020. https://www.japcc.org/essays/cyber-threats-to-space-systems/

Selected Workshops and Conferences Papers

Baram, G., Vićić, J., Gartzke, E., "Unraveling the Veiled: The Complexities of Cyber Attribution and Challenges in Cyber Conflict Event Data Collection." *International Studies Association Annual Conference*, San Francisco, April 2024.

Baram, G. "High-Tech Espionage: The Shifting Landscape of Intelligence Operations – the case of the Israeli Defense Intelligence." *International Studies Association Annual Conference*, San Francisco, April 2024.

Baram, G., Vićić, J., Gartzke, E. "What Lurks Beneath the Tip of the Iceberg? Exploring the "Missingness" Problem in Cyber Events Data," *American Political Science Association Annual Convention*, Los Angeles, August 2023. Baram, G., "The Role of Intelligence Agencies in Public Attribution of Offensive Cyber Operations," *American Political Science Association Annual Convention*, Los Angeles, August 2023.

Baram, G., Vićić, J., Gartzke, E. "Patterns of Cyber Competition: The Missingness Problem in Cyber Events Data," *Cyber Escalation in Conflict – Bridging Policy, Data, and Theory.*

Organized by the Cyber Escalation Lab, Center for Peace and Security Studies (cPASS). University of California, San Diego (Sponsored by the Hewlett Foundation). February 2023 and September 2023 (Los Angeles).

Baram, G. "Out of the Shadows: The Role of Intelligence Agencies in Revealing Offensive Cyber Operations," *International Studies Association Annual Meeting*, Tennessee, March 2022 (virtual).

Baram, G. "Public Secrets: The Dynamics of Publicity in Cyber Operations," *American Political Science Association Annual Meeting*, Seattle, September 2021 (virtual).

Baram, G., Sommer, U. and Ben Israel, I., "Emerging from the Shadows: When Cyber Attackers Go Public." *International Studies Association Annual Meeting*, Las Vegas, April 2021 (virtual).

Abramson, Y. and Baram, G., "Image Management during Cyber Conflict," International Studies Association North East, Baltimore, November 2020 (virtual).

Baram, G. "Decision Making during Cyber Conflict", presented at the International Forum on Cyber Politics, *the 9th International Cyber Week Conference*, Tel Aviv University, June 2019.

TEACHING EXPERIENCE AND CERTIFICATION

University of California Berkeley Co-instructor: Future of cybersecurity working group	2023-2024
Stanford University, California Course Design Institute for Graduate Students and Postdoctoral Scholars certificate	Aug 2022
Stanford University, California Entering Mentoring: A Needs-Based Approach to Inclusive and Contextually Aware Mentorship	May 2022

SELECTED INVITED TALKS AND LECTURES

"Israel's Cyber Power: National Security, Technology and Intelligence," Columbia University, New York. March 2024.

"A Sliding Scale of Secrecy: Toward a Better Understanding of the Role of Publicity in Cyber Operations." School of International and Public Affairs (SIPA), Columbia University. November 2022.

"The Role of Intelligence Agencies in Public Attribution of Offensive Cyber Operations," CISAC weekly seminar. Stanford University. January 2022.

"Solar Winds and Cyber Warfare between Nation-states in 2020," Globes Cyber Security Summit. Tel Aviv, January 2021.

"Cybersecurity and AI – New Risks to National Security," An Israeli Eye on AI Conference, Israeli Ministry of Foreign Affairs – Warsaw embassy. November 24, 2020. "Cyber and National Security," Maa'riv First National Security Conference. Tel Aviv, March 2019.

PROFESSIONAL SERVICE

Guest editor and co-organizer: Special issue on "Measuring and Meaning: Bridging Theory and Data in Cyber Conflict Studies," *International Interactions*.

Reviewer: Journal of Cyber Policy; Journal of Global Security Studies; International Studies Perspectives; Texas National Security Review.

Member: International Studies Association (ISA); American Political Science Association (APSA); From Stuxnet to ISIS – Research Group on cyber conflicts in the Middle East, The Hebrew University, Jerusalem.

RUSI's Global Partnership for Responsible Cyber Behaviour, London.

PROFESSIONAL EXPERIENCE

Israel Security Agency, Israel – senior cyber intelligence analyst 2008-2014

- Led the development of a comprehensive perspective for senior management.
- Head of training program for new employees.

DIVERSITY AND INCLUSION

Co-founder and mentor: Center for International Security and Cooperation (CISAC) mentoring program for women and under-represented minorities in national security fields (2022). Stanford University.

Mentor:

Forum Devora, Non-partisan, non-profit NGO promoting the equal representation of women in key decision-making positions in the fields of national security and foreign policy. *Girl Security*, non-profit NGO, advancing the participation of girls and women in national security.

POLICY ENGAGEMENT AND TRAINING

Bridging the Gap International Policy Summer Institute (IPSI) American University, Washington DC Led by Prof. James Goldgeier and Prof. Bruce Jentleson.

June 2022

SELECTED PUBLIC-FACING SCHOLARSHIP

Baram, G. "The Pall Mall Process could be a catalyst for international collaboration on commercial cyber intrusion capabilities," *The Binding Hook*, March 25, 2024. <u>https://bindinghook.com/articles-hooked-on-trends/the-pall-mall-process-could-be-a-catalyst-for-international-collaboration-on-commercial-cyber-intrusion-capabilities/</u>

Baram, G. "Securing Taiwan's Satellite Infrastructure Against China's Reach," *Lawfare*, November 14, 2023. <u>https://www.lawfaremedia.org/article/securing-taiwan-s-satellite-infrastructure-against-china-s-reach</u>

Franco, R. and Baram, G. "The financial effect of a cyber crisis: The neglected costs senior executives should take into account," *C-Tech*, November 13, 2022. https://www.calcalistech.com/ctechnews/article/h1zyk00phj

Baram, G. "How the cyberwar between Iran and Israel has intensified," *The Monkey Cage blog*, The Washington Post. July 25, 2022. https://www.washingtonpost.com/politics/2022/07/25/iran-israel-cyber-war

Baram, G. "Russo-Ukrainian War Highlights Cyber Threats to Satellite Communications," *The National Interest*, April 12, 2022. <u>https://nationalinterest.org/blog/techland-when-great-power-competition-meets-digital-world/russo-ukrainian-war-highlights-cyber</u>

Baram, G. "Israel and Iran's Cyberwar Is Increasingly Targeting Civilians," *The National Interest*, March 16, 2022. <u>https://nationalinterest.org/blog/techland-when-great-power-competition-meets-digital-world/israel-and-iran%E2%80%99s-cyberwar</u>

Baram, G. "Germany's Cyber Politics: Why do Governments Reveal Cyber Intrusions," *Lawfare*, November 24, 2021. <u>https://www.lawfareblog.com/why-do-governments-reveal-cyber-intrusions</u>

Baram, G. "US Global Ransomware Summit: More Needs to be Done," *RSIS Commentary*, November 15, 2021. <u>https://www.rsis.edu.sg/rsis-publication/cens/us-global-ransomware-summit-more-needs-to-be-done/</u>

Baram, G. "Black Shadow & the Future of Cyberwarfare," Interview for the *Jerusalem Press Club*, October 31, 2021. <u>https://cisac.fsi.stanford.edu/news/black-shadow-future-</u>cyberwarfare

Baram, G. "Storm Winds – on the meaning of deterrence in cyber incidents," *Israeli Defense Forces Blog.* January 10, 2021 [Hebrew].

Baram, G. "Indicting Russia's Most Destructive Cyberwar Unit: The Implications of Public Attribution," *Council on Foreign Relations*. November 2020. <u>https://on.cfr.org/3qqdoyW</u>

Baram, G. and Lim, K, "Israel and Iran Just Showed Us the Future of Cyberwar with Their Unusual Attacks." *Foreign Policy*, June 5, 2020. <u>https://foreignpolicy.com/2020/06/05/israel-and-iran-just-showed-us-the-future-of-cyberwar-with-their-unusual-attacks/</u>

Lim, K. and Baram, G., "Iran Is Mastering the Final Frontier." *Foreign Policy*, March 14, 2019. <u>https://foreignpolicy.com/2019/03/14/iran-is-mastering-the-final-frontier/</u>

Baram, G., "The Theft and Reuse of Advanced Offensive Cyber Weapons." *Council on Foreign Relations*, June 19, 2018. <u>https://www.cfr.org/blog/theft-and-reuse-advanced-offensive-cyber-weapons-pose-growing-threat</u>

Paikowsky, D. and Baram, G., "Space Wars - Why Our Space Systems Need an Upgrade," *Foreign Affairs*, January 7, 2015. <u>https://www.foreignaffairs.com/articles/americas/2015-01-07/space-wars</u>

POLICY PUBLICATIONS

Barel, O., Wechesler, O and Baram, G., "Facial recognition in the public sphere - a comparative review of selected countries. Yuval Ne'eman Workshop for Science, Technology and Security, Tel Aviv University/Israeli National Cyber Directorate, July 2021. https://bit.ly/3U0RwJ4 [Hebrew].

Menashri, H. and Baram, G., "North Korea's Cyber Capabilities – Current status and the way ahead." Yuval Ne'eman Workshop for Science, Technology and Security, Tel Aviv University. September 2020.

Antebi, L. and Baram, G., "Cyber and Artificial Intelligence – Technological Trends and National Challenges." *Cyber, Intelligence and Security*. Vol. 4, no. 1, 2020. https://www.inss.org.il/wp-content/uploads/2020/04/Cyber4.1ENG_7-133-149.pdf Shapira, Z. and Baram, G., "The Space Arms Race: Global Trends and National Interests," *Cyber, Intelligence and Security*, Vol. 3, no. 2, October 2019. <u>https://www.inss.org.il/wp-content/uploads/2019/11/Shapira-and-Baram.pdf</u> Google scholar citations – 5.

Baram, G. and Barel, O., "Information Warfare between the Superpowers in the 21th Century," *The IDF Journal on Operational Art, Dado Center for Interdisciplinary Military Studies*. September 2019 [Hebrew].

Cohen, D. and Baram, G., "The Use of Cyberwarfare in Military Influence Operations," *Maa'rachot* (IDF journal), 480-481, 2018, pp. 64-69 [Hebrew].

Menashri, H. and Baram, G., "Critical Infrastructures and Their Interdependence in a Cyber Attack –The Case of the U.S.," *Military and Strategic Affairs*, vol. 7, no. 1, 2015, pp. 79-100. <u>https://www.inss.org.il/wp-content/uploads/systemfiles/5_Menashri_Baram.pdf</u> Google scholar citations – 19.

Baram, G., "The Effect of Cyberwar Technologies on Force Buildup: The Israeli Case," *Military and Strategic Affairs*, vol. 5, no. 1, 2013, pp. 23-43. <u>https://www.inss.org.il/wp-content/uploads/systemfiles/MASA5-1Eng4_Baram.pdf</u> Google scholar citations – 10.

Baram, G., "Preparing for Cyberwar," *Maa'rachot* (IDF journal), vol. 456, August 2014, pp.22-27 [Hebrew].