The Seventh Symposium on Cyber Security, Cryptology and Machine Learning (CSCML 2023)
June 29-30, 2023
Final Full Program Schedule

Thursday, June 29, 2023		
Time	**Main Room/ Academic Research Track**	**Other Tracks**
8:00-8:10 Israel Time UTC +3	**Opening Ceremony:** **Professor Shlomi Dolev**	
8:10-9:00 Israel Time UTC +3	**Keynote Speaker 1: Dr. Dorit Dor** Chief Technology Officer at Check Point Software Technologies **Talk Titled:** *Cyber security, AI and additional challenges on the way to defend against cyber crime* Hosted By: Shlomi Dolev	**CodeGuru Xtreme (CGX) Mini Hackathon** Moderators: Oded Margalit, Yehuda Or and Gera Weiss **8:15-8:45** Zoom Meeting to open the competition.
9:05-10:29 Israel Time UTC +3	**Academic Track: Morning Session** Moderator: Florian Bourse	**PhD/ Masters Track Session 1: 9:05-10:20** Moderator: Oded Margalit
	9:05-9:20 **Localhost Detour from Public to Private Networks** Yehuda Afek, Bremler Bremler-Barr, Dor Israeli and Alon Noy	**9:05-9:10** Welcome and Instructions
	9:20-9:35 **Pseudo-Random Walk on Ideals: Practical Speed-Up in Relation Collection for Class Group Computation** Madhurima Mukhopadhyay and Palash Sarkar	**9:10-9:20** **Detecting Security Patches via Behavioral Data in Code Repositories** Nitzan Farhi, Noam Koenigstein and Yuval Shavitt
	9:35-9:50 **Efficient Extended GCD and Class Groups from Secure Integer Arithmetic** Toon Segers and Berry Schoenmakers	**9:20-9:30** **Multifactor Sequential Disentanglement via Structured Koopman Autoencoders** Nimrod Berman, Omri Azencot and Ilan Naiman
	9:50-10:05 **On Distributed Randomness Generation in Blockchains** Ilan Komargodski and Yoav Tamir	**9:30-9:40** **Adaptive Encrypted Traffic Classification by Retrieval** Amir Lukach, Ran Dubin, Chen Hajaj, Nitzan Namer and Amit Dvir
	Short: 10:05-10:13 **Efficient Skip Connections Realization for Secure Inference on Encrypted Data** Nir Drucker and Itamar Zimmerman	**9:40-9:50** **Mediated protocols for oblivious transfer and polynomial evaluation** Tamir Tassa and Aviad Ben Arie
	Short: 10:13-10:21 **Single Instance Self-Masking via Permutations** Asaf Cohen, Pawel Cyprys and Shlomi Dolev	**9:50-10:00** **Graphical Learning Algorithm to Interference-Aware Routing in Communication Networks** Raz Paul, Kobi Cohen and Gil Kedar

	Short: 10:21-10:29	**A Fusion-Based Framework for Unsupervised Single Image Super-Resolution** Divya Mishra, Itai Dror, Ofer Hadar, Daniel Choukroun, Shimrit Maman and Dan G. Blumberg		**10:00-10:10**	**Blockchain-Enabled Car Sharing Platform: Enhancing Reliability and Vehicle History Management** Yarden Hovav, Chen Ben Tolila and Hadassa Daltrophe
				10:10-10:20	**Secrecy with Intent: Malware Propagation through Deep Learning-driven Steganography** Mikhail Diyachkov, Arkadi Yakubov, Hadassa Daltrophe and Kiril Danilchenko
10:29-10:45 Israel Time UTC +3	**Break**			**Break**	
10:45-12:16 Israel Time UTC +3	**Academic Track: Mid Morning Session** Moderator: Mark Last			**PhD/ Masters Track Session 2: 10:45-12:00** Moderator: Oded Margalit	
	10:45-11:00	**Generating One-Hot Maps under Encryption** Ehud Aharoni, Nir Drucker, Eyal Kushnir, Ramy Masalha and Hayim Shaul		**10:45-10:50**	Welcome and Instructions
	11:00-11:15	**Building Blocks for LSTM Homomorphic Evaluation with TFHE** Daphné Trama, Aymen Boudguiga, Renaud Sirdey and Pierre-Emmanuel Clet		**10:50-11:00**	**Real-time video tracking on small single-board computers (SBCs); Technical Report** David Denisov, Dan Feldman, Shlomi Dolev and Michael Segal
	11:15-11:30	**CANdito: Improving Payload-based Detection of Attacks on Controller Area Networks** Stefano Longari, Carlo Alberto Pozzoli, Alessandro Nichelini, Michele Carminati and Stefano Zanero		**11:00-11:10**	**Efficient Home Therapy Scoring: Rapid MediaPipe Integration with Precise OpenPose and CNN** Yoram Segal and Ofer Hadar
	11:30-11:45	**Using Machine Learning Models for Earthquake Magnitude Prediction in California, Japan and Israel** Deborah Novick and Mark Last		**11:10-11:20**	**Deep Learning based Cryptanalysis on SLIM Cipher** Vignesh Rajakumar, Lakshmy Kv, Chungath Srinivasan and Sethumadhavan M
	Short: 11:45-11:53	**A Bag of Tokens Neural Network to Predict Webpage Age** Klaas Meinke, Tamis van der Laan, Tiberiu Iancu and Ceyhun Cakir		**11:20-11:30**	**Beyond the Average: Unpacking the Distributions of Time to Weaponization and Exploitation** Miguel Angelo Santos Bicudo, Daniel Sadoc Menasché and Anton Kocheturov
	Short: 11:53-12:01	**Correlations Between (Nonlinear) Combiners of Input and Output of Random Functions and Permutations** Subhabrata Samajder and Palash Sarkar		**11:30-11:40**	**Avatar PLC/SCADA: Cloud Half-Twin for Industrial Control Systems** Alon Dankner, Shlomi Dolev and Ehud Gudes
				11:40-11:50	**Waves Interference for Perfect Output VES** Shlomi Dolev, Alexander Fok and Michael Segal
	Short:	**PPAuth: A Privacy-Preserving Framework for Authentication of Digital Image**		**11:50-12:00**	**Scalable Video Coding for Satellite Video Multicast** Alexander Binun, Yefim Dinitz, Shlomi Dolev, Ofer Hadar, Adnan Jaber and Shevach Riabtsev

	12:01-12:09	Riyanka Jena, Priyanka Singh and Manoranjan Mohanty			
12:09-12:25 Israel Time UTC +3		**Break**		**Break**	
12:25-13:49 Israel Time UTC +3	\multicolumn{2}{c}{**Academic Track: Noon Session** **Moderator: Rami Puzis**}		\multicolumn{2}{c}{**Entrepreneurship Session 1: 13:05-13:55** **Moderator: Yonah Alexandre Bronstein**}	
	12:25-12:40	**Robust Group Testing-Based Multiple-Access Protocol for Massive MIMO** George Vershinin, Asaf Cohen and Omer Gurewitz	**13:05-13:10**	Welcome and Instructions	
	12:40-12:55	**The Use of Performance-Counters to Perform Side-Channel Attacks** Ron Segev and Avi Mandelson	**13:10-13:25**	**Protecting Critical Infrastructure** Alon Danker	
	12:55-13:10	**HAMLET: A Transformer Based Approach for Money Laundering Detection** Maria Paola Tatulli, Tommaso Paladini, Mario D'Onghia, Michele Carminati and Stefano Zanero	**13:25-13:40**	**Xplorisk** – Automated Web3 Risk Management Shiran Kleiderman	
	13:10-13:25	**Hollow-Pass: A Dual-View Pattern Password Against Shoulder-Surfing Attacks** Jiayi Tan and Dipti K. Sarmah	**13:40-13:55**	**Detext.io** – Security Layer for Privacy and Confidentiality Yuri Shterenberg, Nadav Voloch, Idan Proshtisky	
	Short: 13:25-13:33	**Practical Improvements on BKZ Algorithm** Ziyu Zhao and Jintai Ding			
	Short: 13:33-13:41	**Enhancing Ransomware Classification with Multi-Stage Feature Selection and Data Imbalance Correction** Faithful Chiagoziem Onwuegbuche, Anca Delia Jurcut and Liliana Pasquale			
	Short: 13:41-13:49	**A Desynchronization-Based Countermeasure Against Side-Channel Analysis of Neural Networks** Jakub Breier, Dirmanto Jap, Xiaolu Hou and Shivam Bhasin			
13:49-14:00		**Break**		**Break**	

Israel Time UTC +3				
14:00-14:50 Israel Time UTC +3	**Keynote Speaker 2: Aharon Aharon** Former CEO Israel Innovation Authority, Apple VP of Hardware Technologies VP and GM of Apple Israel. **Talk Titled:** *2023 Israeli High-Tech: My Personal View* Hosted by: Shlomi Dolev			
14:50-15:00 Israel Time UTC +3	**Break**		**Break**	
15:00-16:39 Israel Time UTC +3	**Academic Track: Afternoon Session** **Moderator: Ehud Gudes**		**Entrepreneurship Session 2: 15:00-16:15** **Moderator: Yonah Alexandre Bronstein**	
	15:00-15:15	**New Approach for Sine and Cosine in Secure Fixed-Point Arithmetic** Stan Korzilius and Berry Schoenmakers	**15:00-15:05**	Welcome and Instructions
	15:15-15:30	**How Hardened is Your Hardware? Guiding ChatGPT to Generate Secure Hardware Resistant to CWEs** Madhav Nair, Rajat Sadhukhan and Debdeep Mukhopadhyay	**15:05-15:20**	**Cyber-Biological Threats** – Developing secure coding practices in biohacking and synthetic biology Rami Puzis
	15:30-15:45	**Evaluating the Robustness of Automotive Intrusion Detection Systems against Evasion Attacks** Stefano Longari, Francesco Noseda, Michele Carminati and Stefano Zanero	**15:20-15:35**	**Super Polymer- Fully Crystalline Polymers Reinventing Polymers** Hagai Ortner
	15:45-16:00	**On Adaptively Secure Prefix Encryption Under LWE** Giorgos Zirdelis	**15:35-15:50**	**AntisepTech** – Denied Camera Area Sensing – HealthCare Settings Barak Katz (PhD) and Boaz Tadmor (MD)
	16:00-16:15	**SigML: Supervised Log Anomaly with Fully Homomorphic Encryption** Devharsh Trivedi, Aymen Boudguiga and Nikos Triandopoulos	**15:50-16:05**	**Non-stopping Junctions via Traffic Scheduling and Platoon Management** Hannah Yair Joint work with: Shlomi Dolev, Ehud Gudes
	Short: **16:15-16:23**	**HBSS: (Simple) Hash-Based Stateless Signatures - - Hash all the Way to the Rescue!** Shlomi Dolev, Avraam Yagudaev and Moti Yung (9:08)	**16:05-16:20**	**Voting for Three Best Pitches and wrapping up the session.** The three best pitches will present their pitches again for 5 minutes each in front of the whole audience (main room) from 16:50-17:20, for a finalist to be chosen.

	Short: 16:23-16:31	**Improving Performance in Space-Hard Algorithms** Hatice Guner, Ceyda Mangır and Oğuz Yayla	
	Short: 16:31-16:39	**A Survey of Security Challenges in Automatic Identification System (AIS) Protocol** Silvie Levy, Ehud Gudes and Danny Hendler	
16:39-16:50 Israel Time UTC +3	**Break**		**Break**
16:50-17:20 Israel Time UTC +3	**Pitch Finalist Ceremony** *Hosted By: Shlomi Dolev and Yonah Alexandre Bronstein* **The three finalists from the Entrepreneurship (Pitch) Track will have 5 minutes to present their pitch again before the entire audience of CSCML. Then the entire audience will get to vote for the best pitch.**		
17:20-18:10 Israel Time UTC +3	**Keynote Speaker 3: David Simchi-Levi** Professor of Engineering Systems at MIT and serves as the head of the MIT Data Science Lab. **Talk Titled:** *Improving Data-Driven Decision-Making by Integrating Online and Offline Learning* Hosted by: Shlomi Dolev		
18:10-18:20 Israel Time UTC +3	**Break**		
18:20-19:44 Israel Time UTC +3	**Academic Track: Evening Session** Moderator:		
	18:20-18:35	**A New Interpretation for the GHASH Authenticator of AES-GCM** Shay Gueron	
	18:35-18:50	**Fast ORAM with Server-aided Preprocessing and Pragmatic Privacy-Efficiency Trade-off** Vladimir Kolesnikov, Stanislav Peceny, Ni Trieu and Xiao Wang	

	18:50-19:05	**Improving Physical Layer Security of Ground Stations Against GEO Satellite Spoofing Attacks** Rajnish Kumar and Shlomi Arnon	
	19:05-19:20	**Midgame Attacks and Defense Against Them** Donghoon Chang and Moti Yung (11:55)	
	Short: 19:20-19:28	**Deep Neural Networks for Encrypted Inference with TFHE** Andrei Stoian, Jordan Frery, Roman Bredehoft, Luis Montero, Celia Kherfallah and Benoit Chevallier-Mames	
	Short: 19:28-19:36	**On the Existence of Highly Organized Communities in Networks of Locally Interacting Agents** Yannis Stamatiou, Panagiotis Nastou, Paul Spirakis and Vasiliki Liagkou	
	Short: 19:36-19:44	**Patch or Exploit? NVD Assisted Classification of Vulnerability-Related Github Pages** Lucas Miranda, Caina Pereira, Daniel Sadoc Menasché and Anton Kocheturov	
19:44-20:00 Israel Time UTC +3		**Closing Ceremony/ Blessing** **Hosted by: Professor Shlomi Dolev**	

Friday, June 30, 2023	
Time	**Event**
11:00-13:00 **UTC +3**	**CodeGuru Xtreme (CGX) Mini Hackathon** **Final Stage: Zoom** Hosted by: Gera Weiss and Oded Margalit
13:30-13:40 **UTC +3**	**Welcome** Hosted by: Professor Shlomi Dolev
13:40-14:10 **Israel Time** **UTC +3**	**Professor Eli Ben-Sasson** A co-founder and president of StarkWare, and Chairman of its Board of Directors. **Talk Titled:** *From Galactic PCPs to Scalable Blockchains with STARKs*
14:15-14:45	**Dr. Shlomit Wagman**

UTC +3	Harvard University and Former Director-General of the Israel Anti-Money Laundering and Terror Financing Authority (IMPA). **Talk Titled:** *Crypto and Financial crime challenges and responses*
14:55-15:00 **UTC+3**	**Watch video** https://www.facebook.com/watch/?extid=WA-UNK-UNK-UNK-IOS_GK0T-GK1C&mibextid=2Rb1fB&v=239447722003157
15:00-16:00 **UTC +3**	Virtual Tour of Israel **Presented by: Josh Hartuv** "From Jerusalem's Destruction and Exile to Transformation in Babylon"

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