WAZEN SHBAIR

Senior Blockchain Architect

▥ 16th August 1983   @ wazen.shbair@uni.lu   ☎ +352761014798   ○ github.com/wshbair

EDUCATION

University of Lorraine
PhD in Computer Science

▦ Sep 2013 – May 2017   ♀ Nancy, France

University of Cairo
Master in Computer Science

▦ Sep 2006 – May 2009   ♀ Cairo, Egypt

Islamic University of Gaza
Bachelor in Computer Engineering

▦ Sep 2001 – Sep 2006   ♀ Gaza, Palestine

EXPERIENCE

Research Associate
University of Luxembourg, SnT

▦ May 2017 – May 2022   ♀ Luxembourg, Luxembourg

- Conduct R&D research in applying DLT technology in the financial sector.
- Leads the technical development of POC projects.
- Support PhD students in research and prototypes development.

Research Engineer
French National Centre for Scientific Research (CNRS)

▦ July 2016 – May 2017   ♀ Nancy, France

- Study real-time identification of HTTPS services.
- Study the quality of experiences of advertisements.

Instructor
Islamic University of Gaza

▦ Sep 2009 – Sep 2013   ♀ Gaza, Palestine

- Courses: Programming with C, Data communication, Engineering management, Embedded system, UML, Data structures, Information management, Parallel programming.

TECHNICAL SKILLS

Ethereum · Solidity · XRPL · NodeJS · JQuery
REST API · MongoDB · Python · Flask · Go · Java
C# · Laravel · AWS · Unit Testing · Android · IOS
Docker · HSM · MQTT · Git · VueJS · React
FeathersJS · UI

FEATURED PROJECTS

PayStringSecure (www.payid.lu)

The winner of the Grand Prize of the PayString Hackathon 2020 of Ripple, USA

Blockly2Hooks

A platform for developing visually XRPL Hooks smart contract. Developed by NodeJS, WASM, and Google Blockly.

ECO-Receipt

A digitalization solution of paper-receipts used in retail shops. Developed using Python, Flask, Raspberry Pi4, REST API.

DLT Application for KYC Process

KYC results sharing via secure and trusted environment. Implemented using Ethereum, NodeJS, Docker, Go and AWS.

Sukuk - Mortgage Tokenization

A platform for tokenizing mortgage Sukuk via Ethereum blockchain.

FUNDING GRANTS

FNR, Luxembourg (12M)
Digitial Cardio Rehab Platform (WavyMeet)

▦ Jan 2022 – Dec 2022

XRPL Grant, Ripple, USA (6M)
Sratch2Hooks

▦ Sep. 2021 – Jan 2022

SnT Acceleration Program, LU (6M)
Remote Physical Therapy (OWL)

▦ Mach 2021 – Sep 2021

FNR, Luxembourg (24M)
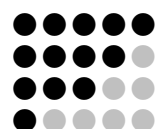**Large-Scale Blockchain Testbed**

▦ Sep 2017 – Aug 2019

Erasmus EPIC Program, FR (36M)
Full PhD Scholarship

▦ Sep 2013 – May 2017

LANGUAGES

Arabic   ●●●●●
English   ●●●●○
French   ●●●○○
Luxembourgish   ●○○○○

PUBLICATIONS

📓 PhD Thesis

- Shbair, Wazen M. (May 2017). *Service-Level Monitoring of HTTPS Traffic))*. URL: `https://tel.archives-ouvertes.fr/tel-01649735`.

📄 Journal Articles

- Yakubov, Alexander et al. (2020). "BlockPGP: A Blockchain-based Framework for PGP Key Servers". In: *International Journal of Networking and Computing* 10.1, pp. 1–24.

👥 Conference Proceedings

- Scheidt, Flaviene et al. (2021). "Privacy-Preserving PayString Service". In: *2021 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*, pp. 1–3.
- Shbair, Wazen, Eugene Gavrilov, and Radu State (2021). "HSM-based Key Management Solution for Ethereum Blockchain". In: *IEEE International Conference on Blockchain and Cryptocurrency, 3-6 May 2021*.
- Norvill, Robert et al. (2020). "A security and privacy focused kyc data sharing platform". In: *Proceedings of the 2nd ACM International Symposium on Blockchain and Secure Critical Infrastructure*, pp. 151–160.
- Norvill, R. et al. (2019). "Demo: Blockchain for the Simplification and Automation of KYC Result Sharing". In: *2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*, pp. 9–10.
- Shbair, W. M., M. Steichen, et al. (2019). "BlockZoom: Large-Scale Blockchain Testbed". In: *2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*, pp. 5–6.
- Shbair, Wazen M et al. (2018). "Blockchain orchestration and experimentation framework: A case study of KYC". in: *NOMS 2018-2018 IEEE/IFIP Network Operations and Management Symposium*. IEEE, pp. 1–6.
- Steichen, Mathis et al. (2018). "Blockchain-based, decentralized access control for IPFS". in: *2018 IEEE International Conference on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (SmartData)*. IEEE, pp. 1499–1506.
- Yakubov, A., W. M. Shbair, et al. (2018). "A blockchain-based PKI management framework". In: *NOMS 2018 - 2018 IEEE/IFIP Network Operations and Management Symposium*, pp. 1–6.
- Yakubov, A., W. Shbair, and R. State (2018). "BlockPGP: A Blockchain-Based Framework for PGP Key Servers". In: *2018 Sixth International Symposium on Computing and Networking Workshops (CANDARW)*, pp. 316–322.
- Shbair, W. M., T. Cholez, et al. (2016). "A multi-level framework to identify HTTPS services". In: *NOMS 2016 - 2016 IEEE/IFIP Network Operations and Management Symposium*, pp. 240–248.

TPC & REVIEWER

- International Journal of Information Technology & Decision Making
- International Journal of Network Management
- IEEE Transactions on Network and Service Management
- IEEE Communications Magazine
- Blockchain Research & Applications for Innovative Networks and Services (BRAINS'20, 21, 22)
- IEEE International Conference on Omni-layer Intelligent systems (COINS'20, 21, 22)
- IEEE International Conference on Blockchain and Cryptocurrency (ICBC 2019, 2020, 2021,2022)
- International workshop (Man2block) co-located with IFIP/IEEE NOMS 2018, Taipei, Taiwan

OPEN SOURCE

- **Blockly2Hook**
  A platform for developing visually XRPL hooks smart contract using Blockly from Google.
  Link:
  https://github.com/wshbair/blockly2hooks

- **HSM2Ethereum**
  A prototype of using Hardware security Module(HSM) to manage the life cycle of Ethereum blockchain key
  Link:
  https://github.com/wshbair/HSM2ETH

- **BlockZoom**
  A reproducible environment for experimenting distributed ledgers technologies and smart contract applications. The tested is built to run on HPC Platform.
  Link:
  https://github.com/wshbair/BlockZoom

- **Tokenized Mortgage Sukuk**
  This project is intended to tokenize mortgage sukuk via blockchain technology. The main users of the process are solo investor, notary and SPV. The SPV setup as the originator of the mortgage, it buys and sells the CRE with the funding from the Sole Investor.
  Link:
  https://github.com/wshbair/sukukx