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December, 2015 - present

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December 03, 1975; Münster, Germany

Research Interests Privacy-Enhancing Technologies, Security, System of Systems, and Internet of Things

EDUCATION

University of Siegen, Siegen, Germany

Department of Electrical Engineering and Computer Science

Dr. rer. nat. (rerum naturalium), Computer Science, August 2008

Dissertation Title: "An Ontology-Based Approach for Managing and Maintaining Privacy in

Information Systems"

Dortmund University, Dortmund, Germany

Diplom (German graduate degree), Computer Science, July, 2002

Yarmouk University, Irbid, Jordan

B.Sc., Mathematics (major) and Computer Science (minor), June, 1998

Academic EXPERIENCE German Jordanian University, Amman, Jordan

Associate Professor March, 2015 - present

Computer Science Department

EDU-SYRIA Project

School of Computer Engineering and Information Technology

EU Higher Education Programme Manager

Assistant Professor February, 2010 - March, 2015

Computer Science Department

School of Computer Engineering and Information Technology

University of Siegen, Siegen, Germany

Postdoctoral Researcher June, 2008 - February, 2010

Security and Privacy Group

Full time research assistant and lecturer October, 2002 - March, 2008

Database and Software Engineering Group

Fraunhofer Institute, Dortmund, Germany

Software Developer (part time)
Institute for Software and Systems Engineering

February, 2000 - June, 2002

GRANTS AND EXTERNAL FUNDING Introducing Data Literacy at the German Jordanian University (IDL@GJU), 2021, German Academic Exchange Service (DAAD) contract no. 57588019, (€EUR 194,070).

Deutsche IT-Woche, 2019, German Academic Exchange Service (DAAD) contract no. PKZ 57546853, $(\in 17,201)$.

Higher Education Support to Syrian Refugees and Underprivileged Jordanian Youths of Host Communities (EDU-Syria III), 2020, Direct Award, European Union contract no. TF-MADAD/2020/T04.215, (€15,000,000).

INTERNATION MASTER OF SCIENCE ON CYBER PHYSICAL SYSTEMS, 2019, European Union Erasmus Plus contract no. 598750-EPP-1-2018-1-DE-EPPKA2-CBHE-JP, (\leq 950.005,30, own funds \leq 111,201.03)

Building Innovation Infrastructure via Technology Transfer Offices COnducted IN JOrdanian Higher Education Institutions [BITTCOIN-JO], Union Erasmus Plus contract no. 598750-EPP-1-2018-1-DE-EPPKA2-CBHE-JP.

Vocational Education and Training & Higher Education Programme for vulnerable Syrian youth (EDU-SYRIA II - Additional Scholarships), 2019, Direct Award, European Union contract no. TF-MADAD/2019/T04.166, (€EUR 2,600,000).

Vocational Education and Training & Higher Education Programme for vulnerable Syrian youth (EDU-SYRIA II), 2017, Direct Award, European Union contract no. MADAD/2017/T04.29, (€11,000,000).

Higher Education for Young Syrians and Jordanians - A Scholarship Program (EDU-SYRIA), 2015, Direct Award, European Union contract no. ENI/2015/368-804, (€4,000,000).

Architecture for Safe, Adaptive and Robust IoT, 2014, Mobility Grant, European Union Jordan Net II, $(\le 2,500)$.

Examining an Adaptive Context-aware Security Framework for Enterprise Ubiquitous Environments, Faculty Research Grant, 2013, German Research Foundation (DFG) contract no. MA 328612-1, $(\le 12,000, \text{ own funds } \le 5,800)$.

Exporting Master Programme in Enterprise Systems Engineering to Jordan, Syria, Tunisia and Egypt, Higher Education Grant, 2012, European Union Tempus contract no. 530260-TEMPUS-1-2012-1-DE-TEMPUS-JPCR, (\in 1,001,639.48, own funds \in 83,000).

A Privacy Framework for Mobile Applications, Faculty Research Grant (Principal investigator), 2012, German Research Foundation (DFG) contract no. KE 1213/3-1, (€9,200, own funds €7,700).

Publications

Refereed Journal Papers Dhiah el Diehn I. Abou-Tair and A. Khalifeh

Distributed Self-Sovereign-Based Access Control System

IEEE Security & Privacy, (Early Access) May 2022, doi: 10.1109/MSEC.2022.3148906.

Dhiah el Diehn I. Abou-Tair, A. Khalifeh, S. Alouneh and R. Obermaisser

Incremental, Distributed, and Concurrent Service Coordination for Reliable and Deterministic Systems-of-Systems.

IEEE Systems Journal, vol. 15, no. 2, pp. 2470-2481, June 2021, doi: 10.1109/JSYST.2020.3020430.

Dhiah el Diehn Abou-Tair, S. Büchsenstein, A. Khalifeh

A Fog Computing-based Framework for Privacy Preserving IoT Environments International Arab Journal of Information Technology. Volume 17, No. 3, PP:306-315, 2020. DOI: 10.34028/IAJIT/17/3/4

S. Almajali, Dhiah el Diehn I. Abou-Tair, H. Bany Salameh, M. Ayyash, H. Elgala A Distributed Multi-Layer MEC-Cloud Architecture for Processing Large Scale IoT-based Multimedia Applications
Multimedia Tools and Applications. doi: 10.1007/S11042-018-7049-3

Dhiah el Diehn I. Abou-Tair, M. Bourimi, R. Tesoriero, D. Kesdgoan, M. Heupel. B. Ueberschaer An end-user tailorable generic framework for privacy-preserving location-based mobile applications Journal of Applied Mathematics & Information Sciences. Volume 7, No. 6 (Nov. 2013), PP:2137-2148, 2013.

M. Bourimi, D. Kesdogan, M. Heupel, Dhiah el Diehn I. Abou-Tair, N. Lambropoulos PETs at CSCL Service: Underutilised Potentials for Privacy-Enhancing Distance Education Journal of Universal Computer Science, vol. 19, no. 7 (2013), 912-931, 2013.

M. Bourimi M, Barth T, D. Kesdogan, Dhiah el Diehn I. Abou-Tair, F. Hermann, S. Thiel Using distributed user interfaces in collaborative, secure and privacy-preserving software environments

International Journal of Human-Computer Interaction 28(11), 748-753, 2012.

Dhiah el Diehn I. Abou-Tair, I. Köster and K. Höfke

Security and Privacy Requirements in Interactive TV

The ACM/Springer Multimedia Systems Journal, Volume 17, Number 5, 393-408, 2011. DOI: 10.1007/s00530-010-0221-x

Refereed Book Chapters

Ala' F. Khalifeh, Adham Saleh, Mahmoud AL-Nuimat, Dhiah el Diehn I. Abou-Tair, Nasim Alnuman

Design and Implementation of Internet of Things and Cloud Based Platform for Remote Health Monitoring and Fall Detection, Communications in Computer and Information Science, vol 1002. Springer, Cham, 2019.

M. I. Daoud, R. Alazrai, A. Alhusseini, D. Shihan, E. Alhwayan, Dhiah el Diehn I. Abou-Tair and T. Qadoummi

Interactive Kinect-Based Rehabilitation Framework for Assisting Children with Upper Limb Cerebral Palsy ICTs for Improving Patients Rehabilitation Research Techniques, Volume 665 of the series Communications in Computer and Information Science, pp 126-140, Springer Berlin Heidelberg, 2017.

R. Obermaisser, M. Abuteir A. Khalifeh and Dhiah el Diehn I. Abou-Tair

Systems-of-Systems Framework for Providing Real-Time Patient Monitoring and Care: Challenges and Solutions ICTs for Improving Patients Rehabilitation Research Techniques, Volume 515 of the series Communications in Computer and Information Science, pp 129-142, Springer Berlin Heidelberg, 2015.

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An Open Source LoRaWAN Simulator Framework for the Internet of Things Applications. In the proceeding of 2021 8th International Conference on Internet of Things: Systems, Management and Security (IOTSMS), 2021, pp. 1-5, doi: 10.1109/IOTSMS53705.2021.9704982.

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Work in Progress – Establishing a Master Program in Cyber Physical Systems: Basic Findings and Future Perspectives, 2019 International Conference on Promising Electronic Technologies (ICPET), Gaza City, Palestine, pp. 4-9, 2019. DOI: 10.1109/ICPET.2019.00009.

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A Privacy Preserving Framework for the Internet of Things. In the proceeding of the 018 19th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD), Busan, Korea, 2018.

A. Khalifeh, Dhiah el Diehn Abou-Tair, S. Alouneh, R. Obermaisser, M. Schmidt

Admission Control and Resource Allocation for Distributed Services in System-of-Systems: Challenges and Potential Solutions. In the proceeding of the 2018 IEEE 13th International Symposium on Industrial Embedded Systems (SIES), Graz, Austria, 2018.

S. Almajali and Dhiah el Diehn I. Abou-Tair

A Cloud based intelligent extensible shared context services In the proceeding of the Second International Conference on Fog and Mobile Edge Computing (FMEC), Valencia, Spain, 2017, pp. 133-138, 2017.

Dhiah el Diehn I. Abou-Tair, S. Alouneh, A. Khalifeh, R. Obermaisser

A Security Framework for Systems-of-Systems. In: Park J., Loia V., Yi G., Sung Y. (eds) Advances in Computer Science and Ubiquitous Computing. CUTE 2017, CSA 2017. Lecture Notes in Electrical Engineering, vol 474. Springer, Singapore, 2018.

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O. Hiari, Dhiah el Diehn I. Abou-Tair, I. Abushaikha

An IoT-Based Virtual Addressing Framework for Intelligent Delivery Logistics. In: Kim K., Joukov N. (eds) Information Science and Applications 2017. ICISA 2017. Lecture Notes in Electrical Engineering, vol 424. Springer, Singapore, 2017.

Y. A. Mowafi, Dhiah el Diehn I. Abou-Tair, A. Zmily, T. Aqarbeh, M. Abilov and V. Dmitriyev Exploring a Context-based Network Access Control for Mobile Devices In 2015 International Conference on Soft Computing and Software Engineering (SCSE'15), Berkeley, California, USA, 2015.

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Tracking Human Mobility at Mass Gathering Events Using WISP In the proceeding of the Second International Conference on Future Generation Communication Technology (FGCT), London, UK, 12-14 December, 2013.

D. Abu-Saymeh, Dhiah el Diehn I. Abou-Tair, A. Zmily

An Application Security Framework for Near Field Communication In the proceeding of the 12th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (IEEE TrustCom-13), Melbourne, Australia, 16-18 July, 2013.

A. Zmily, D. Abu-Saymeh, Dhiah el Diehn I. Abou-Tair

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Dhiah el Diehn I. Abou-Tair, M. Bourimi, R. Tesoriero, D. Kesdogan, M. Heupel

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M. Bourimi, J. Ossowski, Dhiah el Diehn I. Abou-Tair, S. Berlik, D. Abu-Saymeh

Towards usable client-centric privacy advisory for mobile collaborative applications based on BDDs In Proceeding of the 4th IFIP International Conference on New Technologies, Mobility and Security (NTMS), February 7-10, Paris, France, 2011.

Dhiah el Diehn I. Abou-Tair, L. Pimenidis, J. Schomburg, B. Westermann

Usability Inspection of Anonymity Networks Proceedings of the 2009 World Congress on Privacy, Security, Trust and the Management of e-Business, August 25-27, Saint John, New Brunswick, Canada, 2009.

Dhiah el Diehn I. Abou-Tair, S. Berlik and U. Kelter

Enforcing Privacy by Means of an Ontology Driven XACML Framework In The Third International Symposium on Information Assurance and Security, IAS 2007, Aug 29 – Aug 31, Manchester, United Kingdom, pages 279-284, IEEE CS Press, 2007.

Dhiah el Diehn I. Abou-Tair and J. Niere

An Architecture for Integrating Heterogeneous University Applications that Supports Monitoring In The 2nd International Conference on Trends in Enterprise Application Architecture, TEAA 2006, Nov 29 – Dec 1, Berlin, Germany, volume 4473 of Lecture Notes in Computer Science, pages 16-24, 2006. Springer-Verlag Berlin Heidelberg, 2006.

Dhiah el Diehn I. Abou-Tair and S. Berlik

An ontology-based approach for managing and maintaining privacy in information systems In The 5th Int. Conf. on Ontologies, DataBases, and Applications of Semantics, ODBASE 2006, Oct 31 – Nov 2, Montpellier, France, volume 4275 of Lecture Notes in Computer Science, pages 983-994, 2006. Springer-Verlag Berlin Heidelberg, 2006.

Dhiah el Diehn I. Abou-Tair

A Framework Ensuring Privacy in a Distributed Environment In The 4th Annual Conference on Privacy, Security and Trust, PST 2006, Oct 30 – Nov 1, Markham/Toronto, Ontario, Canada, 2006.

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An Interactive Rehabilitation Framework for Assisting People with Cerebral Palsy In 3rd Workshop on ICTs for improving Patient Rehabilitation Research Techniques (REHAB 2015), Lisbon, Portugal, 2015.

Y. A. Mowafi, Dhiah el Diehn I. Abou-Tair, T. Aqarbeh, M. Abilov, V. Dmitriyev and J. Marx Gomez

A Context-aware Adaptive Security Framework for Mobile Applications In 4th International Workshop on Pervasive and Context-Aware Middleware (PerCAM'14), Dubai, UAE, 2014.

A. Khalifeh, R. Obermaisser, M. Abuteir and Dhiah el Diehn I. Abou-Tair

Systems-of-Systems Framework for Providing Real-time Patient Monitoring and Care In 2nd Workshop on ICTs for improving Patient Rehabilitation Research Techniques (Perva-siveHealth 2014), Oldenburg, Germany, 2014.

M. Bourimi, Dhiah el Diehn I. Abou-Tair, D. Kesdogan, T. Barth and K. Höfke Evaluating potentials of Internet- and Web-based SocialTV in the light of privacy In SocialCom/PASSAT IEEE Computer Society, p. 1135-1140, 2010.

M. Bourimi, F. Kühnel, J. M. Haake, D. el Diehn I. Abou-Tair, D. Kesdogan Tailoring collaboration according privacy needs in real-identity collaborative systems In the 15th Collaboration Researchers' International Workshop on Groupware, CRIWG 2009, September 13-17, Peso da Régua, Douro, Portugal, volume 5784 of Lecture Notes in Computer Science, pages 110–125. Springer, 2009.

Theses Dhiah el Diehn I. Abou-Tair

An Ontology-Based Approach for Managing and Maintaining Privacy in Information Systems Dissertation, Aachen, Germany, Shaker Verlag, Informatik, ISBN 978-3-8322-7817-5, 2008.

Dhiah el Diehn I. Abou-Tair

ECS-Conceptualization and Realization of Profile based Cross-Medial Events Calendar System Master's thesis -Diplomarbeit-, Universitaet Dortmund, Fachbereich Informatik, July 2002.

Technical Report PG Sword

Dragon Slayer SWORD – Secure WAN Object Request Distribution Interne Berichte, Universitaet Dortmund, Fachbereich Informatik, March 2001.