

Personal Data

Name: Anas Hasan Showk

E-mail: anas.showk@gmail.com

Gender: Male

Education and Training

Dates: 2005 – 2007

Title of qualification awarded: M. Sc. in communications engineering (in the top 10%)

Principal subjects/occupational skills covered: communication systems (Mobile, MIMO, Optical), signal processing, communication networks:

Name and type of organization providing education and training: Munich University of Technology, Germany

Dates: 1998 – 2003

Title of qualification awarded: B. Sc. in electrical engineering (First class honour)

Principal subjects/occupational skills covered: Electronics and communication systems, electrical engineering basics, statistics and mathematics

Name and type of organisation providing education and training: University of Khartoum, Sudan.

Publications

2012

[An Extensible Partitioning Framework for Safety-Critical Systems](#)

Felix Bruns, Dirk Kuschnerus, **Anas Showk**, Attila Bilgic – The Conference on Embedded Real Time Software and Systems (ERTS²2012). February 1-3, 2012, Toulouse, France.

[An Energy Efficient Multi-Core Modem Architecture for LTE Mobile Terminals](#)

Anas Showk, Shadi Traboulsi, Attila Bilgic – The New Technologies, Mobility and Security Conference (NTMS 2012). May 7-10, 2012, Istanbul, Turkey.

An Energy Aware Mapping of LTE Protocol Stack on Multi-Core Mobile Phones

Anas Showk, Attila Bilgic, The 5th Workshop on Mapping of Applications to MPSoCs, May 15-16, 2012, St. Goar, Germany.

[A Parallel Software Architecture for the LTE Protocol on a Multi-Core Mobile Modem](#)

Anas Showk, Attila Bilgic – Submitted to the IEEE Transaction on Mobile Computing.

2011

[Balancing LTE Protocol Load on a Multi-Core Hardware Platform Using EFSM Migration](#)

Anas Showk, Shadi Traboulsi, David Szczesny, Attila Bilgic – The Sixth International Multi-Conference on Computing in the Global Information Technology (ICCGI 2011), pp 76-83, Luxembourg City, Luxembourg.

[High-Performance and Energy-Efficient Sliced AES Multi-Block Encryption for LTE Mobile Devices](#)

Shadi Traboulsi, Mohamad Sbeiti, David Szczesny, **Anas Showk**, Attila Bilgic – 2011 International Conference on Computer and Communication Devices (ICCCD 2011), pp. 34-39, Bali, Indonesia.

2010

[Joint Uplink and Downlink Performance Profiling of LTE Protocol Processing on a Mobile Platform](#) David Szczesny, Sebastian Hessel, **Anas Showk**, Attila Bilgic, Uwe Hildebrand, Valerio Frascolla – International Journal of Embedded and Real-Time Communication Systems (IJERTCS), Vol. 1, No. 4, pp. 21-39, November 2010.

[Optimal resource management for a model driven LTE protocol stack on a multi-core platform](#) **Anas Showk**, Felix Bruns, Sebastian Hessel, Attila Bilgic, Irv Badr – Proceedings of the 8th ACM International Symposium on Mobility Management and Wireless Access (MobiWac2010), pp. 91-98 Bodrum, Turkey, 17-18 Oct. 2010.

2009

[Performance Analysis of LTE Protocol Processing on an ARM based Mobile Platform](#)

David Szczesny, **Anas Showk**, Sebastian Hessel, Attila Bilgic, U. Hildebrand, V. Frascolla – 11th International Symposium on System-on-Chip (SoC 2009), pp. 56-63, Tampere, Finland, October 5-7, 2009.

[Modeling LTE Protocol for Mobile Terminals Using a Formal Description Technique](#)

Anas Showk, David Szczesny, Shadi Traboulsi, I. Badr, E. Gonzalez, Attila Bilgic – 14th International System Design Languages Forum (SDL), pp. 222-238, Bochum, Germany, September 22-24, 2009.

[SDL/Virtual Prototype Co-design for Rapid Architectural Exploration of a Mobile Phone Platform](#)

Shadi Traboulsi, Felix Bruns, **Anas Showk**, David Szczesny, Sebastian Hessel, E. Gonzalez, Attila Bilgic – 14th International System Design Languages Forum (SDL), pp. 239-255, Bochum, Germany, September 22-24, 2009.

2008

[Virtual System Prototyping Approach for LTE and Beyond Mobile Devices](#)

David Szczesny, **Anas Showk**, Sebastian Hessel, V. Frascolla, J. Brock, Attila Bilgic – Easy-C Public Workshop, Dresden, Germany, 5. Dez. 2008.

Work Experience

Dates: February 2008 onwards.

Occupation or position held: Research assistant

Main activities and responsibilities: Ph.D. student + teaching load

Name and address of employer: Institute for Integrated Systems, Ruhr-University Bochum, Germany

Type of business or sector: Research.

Dates: September 2004 onwards

Occupation or position held: Teaching assistant

Main activities and responsibilities: Conducting Tutorials and laboratories

Name and address of employer: Electrical and Electronics Engineering Department, University of Khartoum

Type of business or sector: Teaching

Dates: May 2007 – September 2007

Occupation or position held: Working student

Main activities and responsibilities: Organize patent papers in the field of fault tolerant computer systems

Name and address of employer: European Patent Office, Munich, Germany

Type of business or sector: Management

Dates: August 2006 – February 2007

Occupation or position held: Internship in the first 10 weeks and Working student after that.

Main activities and responsibilities:

- Implement a proprietary extension for RSTP using OMNET++ simulator
- Implement a ring protocol namely Media Redundancy Protocol (MRP) from the scratch
- Investigate some time synchronization techniques used in industrial automation systems

Name and address of employer: Siemens, Corporate Technology, IC2, Munich, Germany

Type of business or sector: Research

Dates: January 2006 – July 2006

Occupation or position held: Working student

Main activities and responsibilities: Simulating some DSP techniques to improve the Galileo satellite signal reception using Matlab

Name and address of employer: Institute of communications and navigation, German Aerospace Center (Zentrum fuer Luft- und Raumfahrt, DLR), Munich, Germany

Type of business or sector: Research

Languages

Mother tongue(s) Arabic

Other language(s) English and German

Additional Information

Research:

- Master Thesis, Topic: "100-Gbit/s Ethernet transmission using coherent detection and digital signal processing", (Programming: using Matlab Programming Language).
- B.Sc. Final Year Project, Topic: "Using Artificial Neural Networks for Arabic Speech Recognition", (Programming: using C++ Programming Language).

Prizes:

- 1st top of the Northern State, in both, primary school certificate 1991 and Sudanese secondary certificate 1997
- 2nd academic performance in faculty of Engineering and Architecture 2002
- STIBET scholarship depending on the academic performance in the first year