

Ata Chizari
résumé

April 8, 2018

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0.1 Contact Information

ZH256, Biomedical Photonic Imaging Group (BMPI).
MIRA Institute for biomedical Technology and Technical Medicine,
University of Twente, Faculty of Science and Technology (TNW),
Drienerlolaan 5, 7522 NB Enschede, The Netherlands.

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Website atachizari.com

0.2 Education

- **University of Twente, Enschede, The Netherlands** Feb. 2017 - Exp. 2021
Ph.D. with focus on Biomedical Photonics,
Thesis: Designing A Handheld Device for Optical Microcirculatory Perfusion Imaging,
Supervisor: Prof. dr. Wiendelt Steenbergen.
- **Shahid Beheshti University (SBU), Tehran, Iran** Sep. 2013 - Sep. 2015
M.Sc. with focus on Communication Systems,
GPA: 17.79/20.00 (3.81/4),
Thesis: Designing A Dimmable OPPM-Based VLC System Under Channel Constraints,
Supervisor: Dr. Akbar Dargahi.
- **Tafresh University, Tafresh, Iran** Sep. 2009 - Sep. 2013
B.Sc. with focus on Electronics,
GPA: 18.72/20.00(3.96/4),
Thesis: Design and Implementation of a Remote Control Switching Device for Electricity Keys with
Capability of Easy Installation,
Supervisor: Dr. Ali M. Fotouhi.

0.2.1 Certifications

Conferences Proceedings Participation

- 10th IEEE/IET International Symposium on Communication Systems, Networks, and Digital Signal Processing (CSNDSP), Czech Technical University, Prague 2016
- 4rd Iran Workshop on Comm. and Inf. Theory (IWCIT), Sharif University of Technology, Tehran 2016
- 3rd Iran Workshop on Comm. and Inf. Theory (IWCIT), Sharif University of Technology, Tehran 2015
- 21st Iranian Conference on Optics and Photonics (ICOP), Shahid Beheshti University, Tehran .. 2015
- 22nd Iranian Conference on Electrical Engineering (ICEE), Shahid Beheshti University, Tehran . 2014
- International Symposium on Telecommunications (IST), Iran Telecommunications Research Center (ITRC), Tehran 2014
- Workshop on Optical Wireless Communication Systems: Indoor and Outdoor, Iran Telecommunications Research Center (ITRC), Tehran..... 2014

Generic Courses and Educational Workshops Provided by University of Twente, Center for Training and Development (CTD)

- Cambridge Advanced English (C1) Exp. Apr. - Nov. 2018
- Dutch Follow-up III ... Mar. - Exp. Jun. 2018
- Cambridge First Certificate (B2) . Oct. 2017 - Apr. 2018
- Scientific Information Boot-camp .. Jan. 2018
- Dutch Follow-up II (B1) Nov. 2017 - Mar. 2018
- Laser Safety for Users Jan. 2018
- Designing a Lesson and a Course ... Jan. 2018

- Write to Publicize Nov.- Dec. 2017
- English for Lectures Nov.- Dec. 2017
- Creative Thinking Nov. 2017
- Storytelling and How to make your Lessons Stick Nov. 2017
- Dutch Follow-up I (A2) Sep.- Nov. 2017
- Basics on How to Create an Industrial Video Oct. 2017
- Practical Teaching Skills Oct. 2017
- Project Management for PhD Students .. Oct. 2017
- PhD Introductory Workshop Sep. 2017
- Supervising Students Sep. 2017
- Research Data Management Sep. 2017
- Orientation on the University of Twente Bachelor Educational Program Jul. 2017
- Getting Started with the CE Stamp on your Medical Devices Jun. 2017
- Dutch for Beginners (A1) ... Apr. - Jun. 2017
- From Idea to Patent and to Business May 2017
- Transferable Skills Apr. 2017

0.2.2 Accomplished Disciplinary Courses

Graduate Courses

- Spring 2017 University of Twente
Biomedical Optics Audited
- Spring 2015 Sharif University of Tech.
Data Communication Networks Audited
Advanced Data Comm. Networks Audited
Optical Comm. Networks Audited
- Spring 2015 Shahid Beheshti University
Thesis 19.75
Optoelectronics II Audited
- Fall 2014 Sharif University of Tech.
Statistical Optical Comm. Audited
- Fall 2014 Shahid Beheshti University
Thesis Proj. Cont.
- Information theory and Coding I 17.3
Optoelectronics I 17.8
- Spring 2014 Shahid Beheshti University
Spread Spectrum 17.5
Optical Communication Systems 17
Wireless Communications 19.75
Seminar 19
- Fall 2013 Shahid Beheshti University
Stochastic Processes 15.5
Advanced Communication Theory 17.6
Digital Signal Processing 15.15
- Spring 2013 Tafresh University
Image Processing 20

Undergraduate Courses

0.3 Honors and Awards

- Awarded Scholarship for Ph.D. Studies from University at Twente 2017 - 2021
- IEEE/IET Student Travel Grant Award for 10th IEEE/IET CSNDSP 2016, Prague 2016
- Financial Support for U.S. Patent Application by Iran National Science Foundation (INSF) 2016
- Ranked 3rd Among Communication Systems Students of Shahid Beheshti University 2015
- Member of Swimming Team of Shahid Beheshti University at 12nd Nationwide Student Sport Olympiad 2014
- Accepted as Talented Student for Graduate Studies at Shahid Beheshti University 2013
- Ranked 1st Among 120 Students in Class of 2009 Electrical Engineering Entrants 2013
- Ranked Top 3% in the National Entrance Exam Among Electrical Engineering students of Iran for M.Sc. studies 2013
- Ranked Top 4% in the Nationwide University Entrance Exam (KONKOOR) for B.Sc. Studies .. 2009

- Ranked 1st Among 150 Students in Class of 2004 Mathematics and Physics of Bahonar High School 2007

0.4 Presentations

0.4.1 Talks

- “Laser Speckles and Microcirculatory Perfusion Imaging”, Monthly Meetings on Advances in Nanophotonics (ANP), University of Twente, Enschede, The Netherlands.....Oct. 2017
- “Designing a dimmable OPPM-based VLC system under channel constraints”, IEEE 10th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Czech Technical University, Prague, Czech Republic Jul. 2016
- “Nano-plasmonic thin-film solar cell receiver in visible light communication”, IEEE 10th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Czech Technical University, Prague, Czech Republic Jul. 2016
- “Two quasi orthogonal space-time block codes with better performance and low complexity decoder”, IEEE 10th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Czech Technical University, Prague, Czech Republic.....Jul. 2016
- “Square-hexagonal nanostructured photonic crystal fiber at 1550 nm wavelength”, IEEE 10th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Czech Technical University, Prague, Czech Republic Jul. 2016
- “Mining DNA sequences based on spatially coded technique using spatial light modulator”, IEEE Iran Workshop on Communications and Information Theory (IWCIT), Sharif University of Technology, Tehran, Iran May 2016

0.4.2 Lab Demonstrations

- “A Standard Setup for Laser Speckle Contrast Imaging (LSCI)”, User Committee Meeting for STW-NWO Funded Project Designing a Handheld Device for Optical Microcirculatory Perfusion Imaging, Biomedical Photonic Imaging Group (BMPI), University of Twente, Enschede, The Netherlands.Sep. 2017
- “Smartphone-based Geometrical Optics Indoor Positioning using Spatial Color Coded LED Arrays”, IEEE Iran Workshop on Communications and Information Theory (IWCIT), Optical Networks Research Lab (ONRL), Sharif University of Technology, Tehran, Iran.....May 2015

0.5 Research

- Researcher ID R-5148-2017

0.5.1 Research Interests

- | | |
|------------------------------------|---|
| • Laser based perfusion imaging | • Metamaterials |
| • Laser speckle contrast imaging | • Visible light communications and indoor positioning |
| • Laser Doppler perfusion imaging | |
| • Analog optical signal processing | • Underwater wireless optical communications |

0.5.2 Publications

Patents

- J.A. Salehi, H. Hosseinianfar, and A. Chizari, “Methods and Systems for Geometrical Optics Positioning using Spatial Color Coded LEDs”, US Patent, No. 9,939,275..... 2018
- A. M. Fotouhi and A. Chizari, “Remote Control Switching Device of Electricity Keys with Capability of Easy Installation”, Iran Patent, registration number: 73930 2012

Journal Papers and Preprints

- Jamali, M.V., Mirani, A., Parsay, A., Abolhassani, B., Nabavi, P., Chizari, A., Khorramshahi, P., Abdollahramezani, S. and Salehi, J.A., 2018. Statistical Studies of Fading in Underwater Wireless Optical Channels in the Presence of Air Bubble, Temperature, and Salinity Random Variations (Long Version). arXiv preprint arXiv:1801.07402.
- Chizari, A., Jamali, M.V., Abdollahramezani, S., Salehi, J.A. and Dargahi, A., 2017. Visible light for communication, indoor positioning, and dimmable illumination: A system design based on overlapping pulse position modulation. *Optik-International Journal for Light and Electron Optics*, 151, pp.110-122.
- Abdollahramezani, S., Chizari, A., Dorche, A.E., Jamali, M.V. and Salehi, J.A., 2017. Dielectric metasurfaces solve differential and integro-differential equations. *Optics letters*, 42(7), pp.1197-1200.
- Jamali, M.V., Chizari, A. and Salehi, J.A., 2017. Performance analysis of multi-hop underwater wireless optical communication systems. *IEEE Photon. Technol. Lett.*, 29(5), pp.462-465.
- Dorche, A.E., Abdollahramezani, S., Chizari, A. and Khavasi, A., 2016. Broadband, polarization-insensitive, and wide-angle optical absorber based on fractal plasmonics. *IEEE Photonics Technology Letters*, 28(22), pp.2545-2548.
- Jamali, M.V., Chizari, A. and Salehi, J.A., 2016. Performance analysis of multi-hop underwater wireless optical communication systems (extended version). arXiv preprint:1603.02895.
- Chizari, A., Abdollahramezani, S., Jamali, M.V. and Salehi, J.A., 2016. Analog optical computing based on a dielectric meta-reflect array. *Optics letters*, 41(15), pp.3451-3454.

Conference Proceedings

- Chizari, A., Jamali, M.V., AbdollahRamezani, S., Salehi, J.A. and Dargahi, A., 2016, July. Designing a dimmable OPPM-based VLC system under channel constraints. In *Communication Systems, Networks and Digital Signal Processing (CSNDSP), 2016 10th International Symposium on* (pp. 1-6). IEEE.
- Olyaei, S., Nikoosohbat, A., Mohebzadeh-Bahabady, A. and Chizari, A., 2016, July. Square-hexagonal nanostructured photonic crystal fiber at 1550 nm wavelength. In *Communication Systems, Networks and Digital Signal Processing (CSNDSP), 2016 10th International Symposium on* (pp. 1-4). IEEE.
- Ghahremanirad, E., Olyaei, S. and Chizari, A., 2016, July. Nano-plasmonic thin-film solar cell receiver in visible light communication. In *Communication Systems, Networks and Digital Signal Processing (CSNDSP), 2016 10th International Symposium on* (pp. 1-5). IEEE.
- Lotfi-Rezaabad, A., Talebi, S. and Chizari, A., 2016, July. Two quasi orthogonal space-time block codes with better performance and low complexity decoder. In *Communication Systems, Networks and Digital Signal Processing (CSNDSP), 2016 10th International Symposium on* (pp. 1-5). IEEE.
- Fazelian, M., AbdollahRamezani, S., Bahrani, S., Chizari, A., Jamali, M.V., Khorramshahi, P., Tashakori, A., Shahsavari, S. and Salehi, J.A., 2016, May. Mining DNA sequences based on spatially coded technique using spatial light modulator. In *Communication and Information Theory (IWCIT), 2016 Iran Workshop on* (pp. 1-6). IEEE.
- Jamali, M.V., Khorramshahi, P., Tashakori, A., Chizari, A., Shahsavari, S., AbdollahRamezani, S., Fazelian, M., Bahrani, S. and Salehi, J.A., 2016, May. Statistical distribution of intensity fluctuations for underwater wireless optical channels in the presence of air bubbles. In *Communication and Information Theory (IWCIT), 2016 Iran Workshop on* (pp. 1-6). IEEE.

0.5.3 Awarded Research Grants

- PhD Scholarship, University of Twente, 100k euros.....2017 - 2021,
- IEEE/IET Student Travel Grant Award for 10th IEEE/IET CSNDSP 2016, Prague, Czech Republic, 300 euros.....2016
- US Patent Application, Iran National Science Foundation (INSF), 17k USD.....2016

0.5.4 Technical Review Activities

- IEEE Transaction on Vehicular Technology
- IEEE Photonics Journal
- IEEE Vehicular Technology Magazine
- IEEE Communications Letters
- Journal of Optical Communications and Networking

0.5.5 Membership

IEEE Communications Society (93943136) 2016

0.6 Teaching

0.6.1 Advisees

Master Student

Mona Zarrinsaz Sorkhabi Sep. 2015
Thesis Title: Analysis of the Poynting vector error effect on the multi-input multi-output receivers in wireless communication systems, Shahid Beheshti University (SBU).
Main Supervisor: Dr. Akbar Dargahi

Undergraduate Students

- Klaas Vlasma Exp. Jul. 2018
Thesis Title: Investigating the effect of motion artifact in laser speckle contrast imaging, University of Twente.
Main Supervisor: Prof. Dr. Wiendelt Steenbergen
- Mirjam J. Marseille Sep. 2017
Thesis Title: Analysis of human skin perfusion based on laser Doppler perfusion imaging and Monte Carlo simulation, University of Twente.
Main Supervisor: Prof. Dr. Wiendelt Steenbergen
- Pouya Shiri Sep. 2014
Thesis Title: Design and implementation of a donut shaped three dimensional display based on a single light emitting diode, Shahid Beheshti University (SBU).
Main Supervisor: Prof. Mohammad Eshghi

0.6.2 Teaching Assistantships

- “Fiber Optic Communications”, Dr. A. Dargahi, Shahid Beheshti University Fall 2015
- “Fiber Optic Communications”, Dr. A. Dargahi, Shahid Beheshti University Spring 2015
- “Fiber Optic Communications”, Dr. A. Dargahi, Shahid Beheshti University Fall 2014
- “Electronics II”, Dr. F. Hajati, Tafresh University Spring 2013
- “Digital Circuits”, Dr. A.M. Fotouhi, Tafresh University Fall 2012

- “Microprocessors”, Dr. A.M. Fotouhi, Tafresh University Fall 2012
- “Electrical Circuits”, Dr. H. Meshgin, Tafresh University Spring 2012
- “Computer Architecture”, Prof A. Raie, Tafresh University Fall 2011

0.6.3 Laboratory Assistantships

- “Ultrasound”, Prof. Dr. W. Steenbergen, University of Twente Spring 2018
- “Biomedical Optics”, Prof. Dr. W. Steenbergen, Prof. Dr. S. Manohar, Dr. I. Vellekoop, and Dr. N. Bosschart, University of Twente Fall 2017
- “Field-programmable Gate Array (FPGA)”, Dr. A. Dargahi, Shahid Beheshti University .. Fall 2014
- “Microprocessors”, Prof. M. Eshghi, Shahid Beheshti University Spring 2014
- “Logical Circuits”, Prof. M. Eshghi, Shahid Beheshti University Fall 2013

0.7 References

- **Prof. Wiendelt Steenbergen** (E-mail: w [dot] steenbergen [at] utwente [dot] nl)
Faculty of Science and Technology (TNW),
University of Twente (PhD: Delft Uni. of Tech.)
- **Prof. Jawad A. Salehi** (E-mail: jasalehi [at] sharif [dot] edu)
Department of Electrical Engineering,
Sharif University of Technology (PhD: USC)
- **Dr. Akbar Dargahi** (E-mail: a-dargahi [at] sbu [dot] ac [dot] ir)
Department of Electrical Engineering,
Shahid Beheshti University (PhD: Uni. of Wales)
- **Dr. S. Ali Ghorashi** (E-mail: a_ghorashi [at] sbu [dot] ac [dot] ir)
Department of Electrical Engineering,
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- **Dr. Farah Torkamani-Azar** (E-mail: f-torkamani [at] sbu [dot] ac [dot] ir)
Department of Electrical Engineering,
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- **Dr. Ali M. Fotouhi** (E-mail: fotouhi [at] tafreshu [dot] ac [dot] ir)
Department of Electrical Engineering,
Tafresh University (PhD: Amirkabir Uni. of Tech.)

0.8 Links

- Google Scholar (Ata Chizari)
- Twitter (atachizari)
- Linkedin (Ata Chizari)
- Facebook (ata.chizari)

0.9 Languages

- English, Professional Working Proficiency (B2)
- Persian, Native
- Dutch, Limited Working Proficiency (B1)

0.10 Citizenship

- Permanent Citizen of Iran
- Temporal Resident of The Netherlands

0.11 Leisure Activities

- Swimming
- Running
- Cycling
- Mountaineering