

# Mohamed ATURBAN

## CONTACT INFORMATION

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[scholar.google.com/citations?user=XdGvjXEAAAAJ](https://scholar.google.com/citations?user=XdGvjXEAAAAJ) (old profile)

RESEARCHGATE: [researchgate.net/profile/Mohamed\\_Aturban](https://researchgate.net/profile/Mohamed_Aturban)

GITHUB: [github.com/maturban](https://github.com/maturban)

TWITTER: [twitter.com/maturban1](https://twitter.com/maturban1)

## EDUCATION

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AUGUST 2020	Ph.D. in COMPUTER SCIENCE <b>Old Dominion University</b> , Norfolk, Virginia, USA <i>Dissertation: A Framework for Verifying the Fixity of Archived Web Resources</i> Advisor: Dr. Michele WEIGLE   Co-Advisor: Dr. Michael NELSON GPA: 4.0
MAY 2011	M.S. in COMPUTER SCIENCE <b>New Mexico State University</b> , Las Cruces, New Mexico, USA <i>Masters Project: Implementing A Workflow System For Computation-Based Scientific Experiments Using The NetBeans IDE And GlassFish Application Server</i> Advisor: Dr. Jonathan COOK GPA: 3.83
DECEMBER 2007	GRADUATE DIPLOMA in COMPUTER SCIENCE <b>University of Tripoli</b> , Tripoli, Libya
MAY 2002	B.S. in COMPUTER SCIENCE <b>University of Tripoli</b> , Tripoli, Libya

## WORK EXPERIENCE

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(1) Aug 2020 - present	<b>Assistant Professor</b> <i>Computer and Mathematical Sciences Department, Columbia College, Missouri</i> <b>I have taught the following courses:</b> Introduction to Python Programming, Introduction to Programming, Compiler Construction, Java Programming, Advanced Programming C++, Operating Systems, Object-Oriented Analysis and Design
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(2)	<b>Research Assistant</b>
<i>Aug 2016 - Aug 2020</i>	<i>Department of Computer Science, Old Dominion University</i> Project: A Framework for Verifying the Fixity of Archived Web Resources Advisor: Dr. Michele WEIGLE and Dr. Michael NELSON
<i>Jan 2011 - May 2012</i>	<i>Department of Computer Science, New Mexico State University</i> Project: Coordinated Infrastructure for Fault Tolerant Systems Advisor: Dr. Jonathan Cook
(3)	<b>Teaching Assistant</b>
<i>Jan 2015 - Aug 2016</i>	<i>Department of Computer Science, Old Dominion University</i> Courses: Programming and Problem Solving in C++ (online course instructor), Cyber-Security Fundamentals (online), Information Visualization, Computer Architecture I, Introduction to Discrete Structures, Introduction to Networks and Communications
<i>Aug 2011 - May 2012</i>	<i>Department of Computer Science, New Mexico State University</i> Courses: Software Development, Operating Systems, Object Oriented Programming in C++
<i>Jan 2003 - Mar 2008</i>	<i>Department of Computer Science, University of Tripoli</i> Courses: FORTRAN, C, C++, Computer Fundamentals
(4)	<b>Software Engineer</b>
<i>Jun 2003 - Aug 2006</i>	<i>Tatweer (Acer Authorized Service Provider), Ben Ashour Street, Tripoli, Libya</i> APPLICATIONS: <ul style="list-style-type: none"> <li>• <b>University Registrar's System:</b> currently used in the CS Dept at University of Tripoli, and the Higher Institute of Engineering, Houn, Libya</li> <li>• <b>Banking/Loan System:</b> for National Banking Corporation, Libya</li> <li>• <b>Vehicle Record System, Auto Parts System, and Supply Warehouse System:</b> currently used at the Libyan Ministry of Justice and Public Security, and Civil Affairs Agency</li> <li>• <b>Automated System for Assigning High School Students to Higher Education Institutions:</b> Year 2005/2006 for Libyan Ministry of Higher education and Libyan Ministry of Labor</li> <li>• <b>Thesis/Dissertation Record System</b> for Libyan Ministry of Higher education</li> </ul>

## PUBLICATION

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1. M. Aturban, M. L. Nelson and M. C. Weigle, "Where Did the Web Archive Go?" In Proceedings of the Theory and Practice of Digital Libraries Conference (TPDL 2021). September 13-17 2021 (**Best Paper Award**)
2. M. Aturban, S. Alam, M. L. Nelson and M. C. Weigle, "Archive Assisted Archival Fixity Verification Framework" In Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL). Urbana-Champaign, Illinois, June 2019, pp. 162-171
3. M. Aturban, M. Kelly, S. Alam, J. A. Berlin, M. L. Nelson and M. C. Weigle, "ArchiveNow: Simplified, Extensible, Multi-Archive Preservation" In Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL). Fort Worth, TX, June 2018, pp. 321-322 (**Best Poster Award**)
4. M. Aturban, M. L. Nelson and M. C. Weigle, "Quantifying Orphaned Annotations in Hypothes.is," In Proceedings of the Theory and Practice of Digital Libraries Conference (TPDL). Poznan, Poland, September 2015, pp. 15-27

5. B. Terzic, K. Arumugam, M. Aturban, C. Cotnoir, A. Godunov, D. Ranjan, M. Stefani, F. Lin, V. Morozov, Y. Roblin and H. Zhang, "High-Fidelity Simulations of Long-Term Beam-Beam Dynamics on GPUs" 12th International Computational Accelerator Physics Conference (ICAP), Shanghai, 2015, pp. 40-43
6. B. Terzic, V. Morozov, Y. Roblin, F. Lin, H. Zhang, M. Aturban, D. Ranjan and M. Zubair, "GPU-Accelerated Long-Term Simulations of Beam-Beam Effects in Colliders", 5th International Particle Accelerator Conference (ICAP), Dresden, 2014, pp. 77-79
7. Y. Roblin, V. Morozov, B. Terzic, M. Aturban, D. Ranjan and M. Zubair, "GPU-optimized Code for Long-term Simulations of Beam-beam Effects in Colliders", 4th International Particle Accelerator Conference (ICAP), Shanghai, 2013, pp. 1064-1066

## REPORTS

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1. M. Aturban, "A Framework for Verifying the Fixity of Archived Web Resources," Doctor of Philosophy (PhD), Dissertation, Computer Science, Old Dominion University, DOI: 10.25777/pc8d-y213, 2020, [https://digitalcommons.odu.edu/computerscience\\_etds/125](https://digitalcommons.odu.edu/computerscience_etds/125)
2. M. Aturban, S. Alam, M. L. Nelson and M. C. Weigle, "Archive Assisted Archival Fixity Verification Framework," Technical Report arXiv:1905.12565, 2019, <https://arxiv.org/abs/1905.12565>
3. M. Aturban, M. L. Nelson, M. C. Weigle, M. Klein and H. Van de Sompel, "Collecting 16K archived web pages from 17 public web archives," Technical Report arXiv:1905.03836, 2019, <https://arxiv.org/abs/1905.03836>
4. M. Aturban, M. L. Nelson and M. C. Weigle, "Difficulties of Timestamping Archived Web Pages," . Tech. Rep. arXiv:1712.03140 (2017), <https://arxiv.org/abs/1712.03140>
5. M. Aturban, M. L. Nelson and M. C. Weigle, "Quantifying Orphaned Annotations in Hypothes.is," Technical Report arXiv:1512.06195, 2015, <https://arxiv.org/abs/1512.06195>

## WORKSHOPS, PARTICIPATION, AND CONFERENCE PRESENTATIONS

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1. M. Aturban, M. L. Nelson and M. C. Weigle, "Where Did the Web Archive Go?" In Proceedings of the Theory and Practice of Digital Libraries Conference (TPDL 2021). September 13-17 2021
2. Mohamed Aturban, "It is hard to compute fixity on archived web pages," Presented at the monthly PhD Gathering, Department of Computer Science, Old Dominion University, January 2019, <https://www.slideshare.net/maturban/it-is-hard-to-compute-fixity-on-archived-web-pages-128916126>
3. Mohamed Aturban, "Establishing and Verifying Fixity of Archived Web Pages," at the ACM/IEEE Joint Conference on Digital Libraries (JCDL), Doctoral Consortium, Fort Worth, Texas, USA, 2018, <https://www.slideshare.net/maturban/establishing-and-verifying-fixity-of-archived-web-pages-101662832>

4. Mohamed Aturban, Michael L. Nelson, and Michele C. Weigle, "It is hard to compute fixity on archived web pages," Presented at the Web Archiving and Digital Libraries Workshop (WADL), 2018, <https://www.slideshare.net/maturban/it-is-hard-to-compute-fixity-on-archived-web-pages-101663904>
5. Archives Unleashed 3.0: Web Archive Datathon, February 2017, Internet Archive, San Francisco, CA. Team project: End of Term Transition (Best project award) <https://ws-dl.blogspot.com/2017/03/2017-03-7-archives-unleashed-30-web.html>
6. Archives Unleashed 2.0: Web Archive Datathon, June 2016, Library of Congress, Washington DC. Team project: Which States and Topics did the Two Presidential Candidates Mention? <https://ws-dl.blogspot.com/2016/06/2016-06-27-archives-unleashed-20-web.html>

## BLOG POSTS

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1. M. Aturban, "A PhD is a very long tunnel with a light at the end," <https://ws-dl.blogspot.com/2020/09/2020-09-28-phd-is-very-long-tunnel-with.html>, 2020
2. M. Aturban, "Where did the archive go? Part 4: WebCite," <https://ws-dl.blogspot.com/2019/10/2019-10-21-where-did-archive-go-part-4.html>, 2019
3. M. Aturban, "Where did the archive go? Part 3: Public Record Office of Northern Ireland," <https://ws-dl.blogspot.com/2019/09/2019-09-25-where-did-archive-go-part-3.html>, 2019
4. M. Aturban, "Where did the archive go? Part 2: National Library of Ireland," <https://ws-dl.blogspot.com/2019/09/2019-09-10-where-did-archive-go-part-2.html>, 2019
5. M. Aturban, "Where did the archive go? Part 1: Library and Archives Canada," <https://ws-dl.blogspot.com/2019/08/2019-08-30-where-did-archive-go-part1.html>, 2019
6. M. Aturban, "Difficulties in timestamping archived web pages," <http://ws-dl.blogspot.com/2017/12/2017-12-11-difficulties-in-timestamping.html>, 2017
7. M. Aturban, "Archive Now (archivenow): A Python Library to Integrate On-Demand Archives," <http://ws-dl.blogspot.com/2017/02/2017-02-22-archive-now-archivenow.html>, 2017
8. M. Aturban, "Summary of Trusty URIs: Verifiable, Immutable, and Permanent Digital Artifacts for Linked Data," <http://ws-dl.blogspot.com/2017/01/2017-01-15-summary-of-trusty-uris.html>, 2017
9. M. Aturban, "Pro-Gaddafi Digital Newspapers Disappeared from the Live Web!," <http://ws-dl.blogspot.com/2016/11/2016-11-05-pro-gaddafi-digital.html>, 2016
10. M. Aturban, "Which States and Topics did the Two Presidential Candidates Mention?," <http://ws-dl.blogspot.com/2016/10/2016-10-03-which-states-and-topics-did.html>, 2016
11. M. Aturban, "Archives Unleashed 2.0 Web Archive Hackathon Trip Report," <http://ws-dl.blogspot.com/2016/06/2016-06-27-archives-unleashed-20-web.html>, 2016

12. M. Aturban, "60% of Web Annotations are Orphaned or in Danger of Being Orphaned," <http://ws-dl.blogspot.com/2015/10/2015-12-22-60-of-web-annotations-are.html>, 2015
13. M. Aturban, "WARCMerge: Merging Multiple WARC files into a single WARC file," <http://ws-dl.blogspot.com/2014/09/2014-09-02-warcmmerge-merging-multiple.html>, 2014

## SCHOLARSHIPS AND HONORS

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APR 2016 - PRESENT	The Honor Society of Phi Kappa Phi
SEPT 2021	Best Research Paper Award, TPDL 2021
JUN 2018	Best Poster Award, ACM/IEEE JCDL 2018
APR 2018	2018 Scholarship Recipient, College of Science, Old Dominion University
FEB 2018	Best Project Award, Archives Unleashed 3.0, Internet Archive, San Francisco, CA
FEB 2012 - JUL 2017	Graduate Scholarship Award: Libyan Ministry of Higher Education and Scientific Research (MOHESR) (PhD)
MAR 2008 - MAY 2011	Graduate Scholarship Award: Libyan Ministry of Higher Education and Scientific Research (MOHESR) (MSc)

## SOFTWARE

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1. M. Aturban, "**ArchiveNow**: A Tool To Push Web Resources Into Web Archives," <https://github.com/oduwsdl/archivenow>, 2017. (251 stars on GitHub)
2. M. Aturban, "**WARCMerge** : A Tool to merge multiple WARC files into a single WARC file," <https://github.com/maturban/WARCMerge>, 2014. (10 stars on GitHub)

## RESEARCH

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OPEN-SOURCE PROGRAMMING, WEB ANNOTATION, WEB ARCHIVING, DIGITAL LIBRARIES, DATA SCIENCE, AUDITING & FIXITY, HPC, CYBERSECURITY

## PROGRAMMING

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PYTHON, C/C++, JAVA, HTML, JAVASCRIPT, CSS, PHP, MYSQL, ORACLE/SQL\*PLUS, D3.JS, CUDA, SHELL SCRIPT, DOCKER, R, FORTRAN, DELPHI, BPEL, OCAML