Narasimha Karpoor Shashidhar

CONTACT INFORMATION

Professor, Dept. of Computer Science
Sam Houston State University

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EDUCATION

Ph.D. Computer Science and Engineering   August 2010
University of Connecticut, Storrs, CT
Thesis: Efficient Steganography with Provable Security Guarantees
Advisor: Dr. Alexander Russell, University of Connecticut.

M.S. Computer Science and Engineering   December 2004
University of Connecticut, Storrs, CT
Advisor: Dr. Alexander Russell, University of Connecticut.

B.E. Electronics and Communication   May 2001
University of Madras, Madras, India
Graduated First Class with Distinction

TEACHING EXPERIENCE

Selected Graduate Courses: *(Fall 2007-Present)*
(Master's and Ph.D. courses)
- Modern Cryptography and Steganography
- Introduction to Malware and Computer Security
- Risk Assessment and Financial System Security
- Disaster Recovery
- Special Topics: Virtualization
- Operating Systems
- Data Structures and Algorithms in Java
- File System Forensics
- Malware Analysis
- Organization System Security
- Digital Forensics Tools and Investigation
- Digital System Security
- Risk Assessment and Financial System Security
- Principles and Policies of Information Assurance
- Principles of E-Discovery
- Research Methods in Digital Forensics
- Scientific Communications

Selected Undergraduate: Courses
(Fall 2004-Present)
- Introduction to Algorithms
- Introduction to Digital Forensics and Information Assurance
- Modern Cryptography
- Introduction to Computing
- Object Oriented Prog. in Java
- Digital Logic Design
- Probabilistic Analysis of Computer Systems
- Operating Systems
- Information Security
- C programming in Linux
- Introduction to Python
- Data Structures
- Reverse Engineering
- Introductory prog. Using MATLAB
- Introduction to Machine Learning

RESEARCH INTERESTS

Cryptography, Information Hiding, Steganography, Cyber Security, Digital Forensics, Distributed Computing, Peer-to-Peer Networks, Sensor Networks and Computing Education.

JOURNAL PUBLICATIONS

- *[J27] Digital Forensics In NVMe SSDs with NVMe WriteBlocker.* Ashar Neyaz, *Narasimha Shashidhar*, Cihan Varol, and Amar Rasheed. International Journal of Security (IJS), Volume (13) : Issue (2) : 2022 : 09/22.
- *[J26] Analytics in Digital Forensics and eDiscovery Software - DevOps, Opportunities and Challenges.* Sundar Krishnan, *Narasimha Shashidhar*, Cihan Varol, ABM Islam. International Journal of Security (IJS), Volume (13) : Issue (1) : 2022. 08/2022.

- *[J25] Sentiment Analysis of Case Suspects In Digital Forensics and Legal Analytics.* Sundar Krishnan, *Narasimha Shashidhar*, Cihan Varol, ABM Islam. International Journal of Security (IJS), Volume (13) : Issue (1) : 2022. 08/2022.
- *[J24] A Novel Text Mining Approach to Sexual Harassment Detection of Case Suspects.* Sundar Krishnan, *Narasimha Shashidhar*, Cihan Varol, ABM Islam. International Journal of Artificial Intelligence and Expert Systems (IJAE), Volume (11) : Issue (1) : 2022. 07/2022.
- *[J23] A Novel Text Mining Approach to Securities and Financial Fraud Detection of Case Suspects.* Sundar Krishnan, *Narasimha Shashidhar*, Cihan Varol, ABM Islam. International Journal of Artificial Intelligence and Expert Systems (IJAE), Volume (11) : Issue (1) : 2022. 07/2022.
- *[J22] Exploiting Zero Knowledge Proof and Blockchain Towards the Enforcement of Anonymity, Data Integrity and Privacy (ADIP) on IoT*. A. Rasheed, R. Mahapatra, C. Varol, *N. Shashidhar*. IEEE Transactions on Emerging Topics in Computing. 29 July, 2021. ISSN Information: Electronic ISSN: 2168-6750. DOI: 10.1109/TETC.2021.3099701
- *[J21] Interplay of Digital Forensics in eDiscovery.* S. Krishnan, *N. Shashidhar*. Intl. Jrnl. of Computer Science & Security (IJCSS). IJCSS-1602, Volume 15, Issue 2, April, 2021.
- *[J20] Evidence Data Preprocessing for Forensic and Legal Analytics.* S. Krishnan, *N. Shashidhar*, C. Varol, ABM Islam. International Journal of Computational Linguistics (IJCL), Volume-12, Issue-2, June 2021.
- *[J19] A Survey On Solid-State Drive Forensic Analysis Techniques*. A. Kumar, A. Neyaz, *N. Shashidhar*. Intl. Journal of Computer Science and Security (IJCSS) 14(2),13.July 2020.
- *[J18] iBaTs: Interactive Bash Shell Adaptive Tutoring System*. *N. Shashidhar*, C. Varol, K. Koneru. International Journal of Security (IJS) 11(1), July 2020. [*Best Paper Award*]
- *[J17] USB Artifact Analysis Using Windows Event Viewer, Registry and File System Logs*. A. Neyaz, *N. Shashidhar*. Electronics 8 (11), 1322. Nov 2019.
- *[J16] A Survey of Security and Forensic Features In Popular eDiscovery Software Suites.* Krishnan, S., Neyaz, A., & *Shashidhar, N*. (2019). Intl. Journal of Security (IJS), 10(2), 16.
- *[J15] eDiscovery Challenges in Healthcare.* Krishnan, S., & *Shashidhar, N*. (2019). International Journal of Information Security Science, 8(2), 30-43.
- *[J14] Using PowerShell to Capture and Compare Windows Registry and Live Memory Artifacts with Online Databases to Identify Suspect Files*. Cook. K. D, and *Shashidhar. N*. International Journal of Information Security Science, 7(2), 78-89. 2018.
- *[J13]DoS Forensic Exemplar Comparison to a Known Sample*. Knight. P, and *Shashidhar. N*. International Journal of Computer Science and Security (IJCSS), 12(1), 11, 2018.
- *[J12] Ransomware Analysis and Defense-WannaCry and the Win32 environment*. *J. Jones and N. Shashidhar*. International Journal of Information Security Science, Volume 6, Issue 4 (October 2017): 57-69. ISSN: 2147-0030.
- *[J11] Low Budget Forensic Drive Imaging Using Arm-Based Single Board Computers.* E. Olson, Eric, and *N. Shashidhar*. *The Journal of Digital Forensics, Security and Law: JDFSL* 11.1 (2016): 53.
- *[J10] An Indistinguishability Model for Evaluating Diverse Classes of Phishing Attacks and Quantifying Attack Efficacy*. *N. Shashidhar* and L. Chen. International Journal of Security (IJS) Volume 9, Issue no. 2 (2015): 15-23. ISSN: 1985-2320.

- *[J9] StegoRogue: Steganography in Two-Dimensional Video Game Maps.* C. Gibbs and *N. Shashidhar*. Advances in Computer Science: an International Journal (ACSIJ), Volume 4, Issue 3, 141-146, May 2015. ISSN: 2322-5157.
- *[J8]Digital Forensic Analysis on Prefetch Files*. *N. Shashidhar* and D. Novak. Intl. Journal of Information Security Science, Volume 4, Issue 2 (June 2015): 39-49. ISSN: 2147-0030.
- *[J7] The Efficacy of Epidemic Algorithms on Detecting Node Replicas in Wireless Sensor Networks*. *N. Shashidhar*, Chadi Kari and Rakesh Verma. Journal of Sensor and Actuator Networks. Volume 4, Issue 4 (2015): 378-409. DOI:10.3390/jsan4040378.
- *[J6]Secure P2P Patch Dissemination in a Race against Topological Worms*. *N. Shashidhar* and L. Chen. Journal of Information System Security, Volume 11, Issue 1 (October 13, 2015), p59-86. 28p.
- *[J5] Cloud Storage Client Application Analysis.* R. Malik, *N. Shashidhar*, and L. Chen. International Journal of Security (IJS) Volume 9, Issue no. 1 (June 2015): 1-14.
- *[J4] Do Private and Portable Web Browsers Leave Incriminating Evidence? A Forensic Analysis of Residual Artifacts from Private and Portable Web Browsing Sessions*. D. Ohana and *N. Shashidhar*. EURASIP Journal on Information Security, European Association for Signal Processing, SpringerOpen Journal. Published: 21st November 2013, Volume 2013. DOI:10.1186/1687-417X-2013-6. Impact Factor: 1.055. ISSN: 1687-417X.
- *[J3] A One-Time Stegosystem and Applications to Efficient Covert Communication.* A. Kiayias, Y. Raekow, A. Russell and *N. Shashidhar*. Journal of Cryptology, January 2014, Volume 27, Issue 1, pp 23-44 (2012) 1-22. 25th October 2012. DOI: 10.1007/s00145-012-9135-4. Print ISSN: 0933-2790. Online ISSN: 1432-1378. Impact Factor: 1.25.
- *[J2] Managing Software Development Risk with the OODA Loop*. N. Amsden and *N. Shashidhar*. International Journal of Soft Computing and Software Engineering (JSCSE), March 2012. Vol. 2, No. 7, pp. 1-8, 2012, DOI: 10.7321/jscse.v2.n7.1.
- *[J1] Work-Competitive Scheduling on Task Dependency Graphs*. C. Kari, A. Russell and *N. Shashidhar*. C. Kari, A. Russell, and *N. Shashidhar*. Journal of Parallel Processing Letters 25, no. 02 (30 June 2015): 1550001. DOI: 10.1142/S0129626415500012.

PEER REVIEWED CONFERENCE PROCEEDINGS

- *[C48] Digital Forensics Analysis of Windows 11 Shellbag with Comparative Tools.* Published in ISDFS 2022. Ashar Neyaz, *Narasimha Shashidhar*, Cihan Varol, and Amar Rasheed. 10th IEEE International Symposium on Digital Forensics and Security (ISDFS, 6th to 7th June, 2022), Istanbul, Turkey.
- *[C47] Digital Forensics Lab Design: A Framework.* Published in ISDFS 2022. Khushi Gupta, Ashar Neyaz, *Narasimha Shashidhar*, and Cihan Varol. 10th IEEE International Symposium on Digital Forensics and Security (ISDFS, 6th to 7th June, 2022), Istanbul, Turkey.
- *[C46] Development of a Forensic Toolkit For Small-Medium Size Business (SMB).* Eduardo Martinez, Cihan Varol, *Narasimha Shashidhar*, and Van Vung Pham. ISDFS 2022. 10th IEEE International Symposium on Digital Forensics and Security (ISDFS, 6th to 7th June, 2022), Istanbul, Turkey.
- *[C45] Penetration Testing: Smart Home IoT Devices.* Proceedings of SCF 2022. Lecture Notes in Computer Science (LNCS) by Springer International Publishing. Ashok Angadi, Cihan Varol, and *Narasimha Shashidhar*. 2022 International Conference on Internet of Things, ICIOT-2022, Ashok Angadi, Cihan Varol, Narasimha Shashidhar.

- *[C44] Topic Modeling in the ENRON Dataset.* Naciye Celebi, *Narasimha Shashidhar*. Big Data 2022 December 10 - 14, 2022, Honolulu, Hawaii, USA.
- *[C43] Automated Proctoring Solutions: Modern Techniques to Evade & Lure Computerized Proctoring Systems – A Case on Respondus LockDown Browser.* Roberto Solis, *Narasimha Shashidhar*, and Cihan Varol. IAFOR International Conference on Education in Hawaii (IICE 2023). Oct 2022.
- *[C42] A Testbed for a Controller Area Network Communication Protocol in Automobiles.* Damilola Oladimeji, Amar A Rasheed, *Narasimha Karpoor Shashidhar* and Cihan Varol. CCNC 2023 IEEE 20th Consumer Communications & Networking Conference (CCNC). 8–11 January 2023. Las Vegas, NV, USA. Accepted October 2022.
- *[C41] Disaster Recovery Management with PowerShell PSDRM.* Steven Zavala, *Narasimha Shashidhar*, Cihan Varol, Bing Zhou. SAIS 2022 - Virtual Presentation During Session 5A of The Southern Association for Information Systems, 24th annual Meeting of the Southern Association for Information Systems Mar 18-19, 2022.
- *[C40] Deception Detection Using Machine Learning.* A. Ceballos , W. Glisson, *N. Shashidhar*, J. McDonald, G. Grispos, R. Benton. 54th Hawaii International Conference on System Sciences (p. 7122), (2021, January).
- *[C39] A Novel Risk Mitigation & Cloud-Based Disaster Recovery Framework for Small to Medium Size Businesses*. R. Solis, *N. Shashidhar*, C. Varol. 9th International Symposium on Digital Forensics and Security (ISDFS), 2021.
- *[C38] Threat Landscape Expansion During Covid-19: Remote Incident Response Handling*. F. Williams, C. Varol, A. Rasheed, *N. Shashidhar*. 9th International Symposium on Digital Forensics and Security (ISDFS), 2021.
- *[C37] Prevention Pre-Violence in E-Labs with Machine Learning: PVE.* A. Aydogan, *N. Shashidhar*. 9th Intl. Symposium on Digital Forensics and Security (ISDFS), 2021.
- *[C36] Centrality and Scalability Analysis on Distributed Graph of Large-Scale E-mail Dataset for Digital Forensics*. S. Ozcan, M. Astekin, *N. Shashidhar*, and B. Zhou. The 4th International Workshop on Big Data Analytic for Cyber Crime Investigation and Prevention. IEEE International Conference on Big Data 2020.
- *[C35] On-Premises Versus SECaaS Security Models*. LF. Plá, *N. Shashidhar*, C. Varol. 8th International Symposium on Digital Forensics and Security (ISDFS), 1-6, June 2020.
- *[C34] Graphically Display Database Transactions to Enhance Database Forensics*. C. Orosco, C. Varol, *N. Shashidhar*. 8th International Symposium on Digital Forensics and Security (ISDFS), 1-6, June 2020.
- *[C33] Using ITIL 4 in Security Management*. D. Berger, *N. Shashidhar*, C. Varol. 8th International Symposium on Digital Forensics and Security (ISDFS), 1-6, June 2020.
- *[C32] MiNo: The Chrome Web Browser Add-on Application to Block the Hidden Cryptocurrency Mining Activities*. S. Aktepe, C. Varol, *N. Shashidhar*. 8th International Symposium on Digital Forensics and Security (ISDFS), 1-5, June 2020.
- *[C31] Cybersecurity Evaluation with PowerShell*. S. Zavala, *N. Shashidhar*, C. Varol. 8th International Symposium on Digital Forensics and Security (ISDFS), 1-6, June 2020.
- *Improving CS teaching through Misconception Identification*. P. Ko, N. Shashidhar. American Society for Engineering Education 2020 Annual Conference & Exposition
- *[C30] Comparative Study of Wear-leveling in Solid-State Drive with NTFS File System*. A Neyaz, B Zhou, *N Shashidhar*. 2019 IEEE Big Data: The 3rd

International Workshop on Big Data Analytic for Cyber Crime Investigation and Prevention

- *[C29] Forensic Analysis of Wear Leveling on Solid-State Media*. Neyaz, A., *Shashidhar*. N., and Karabiyik, U. (2018, August). In 2018 17th IEEE International Conference On Trust, Security And Privacy In Computing And Communications/12th IEEE Intl. Conf. On Big Data Science & Engineering (TrustCom/BigDataSE) (pp. 1706-1710). IEEE.

- *[C28] Equipping a Digital Forensic Lab on a Budget. T. Lawrence, U. Karabiyik and N. Shashidhar*. The sixth International Symposium on Digital Forensics and Security (ISDFS 2018). Mar 22-25, 2018. Antalya, Turkey.

- *[C27] Teaching Malware Analysis: The design philosophy of a model curriculum. N. Shashidhar* and P. Cooper. Digital Forensics and Security (ISDFS), 2016 4th International Symposium on. IEEE, 2016.

- *[C26] Investigating The Security and Digital Forensics of Video Games and Gaming Systems: A study of PC games and PS4 console. L. Chen, N. Shashidhar,* D. Rawat, M. Yang, and C. Kadlec. In Computing, Networking and Communications (ICNC), 2016 International Conference on IEEE, 2016. Acceptance Rate: < 30%.

- *[C25] Cloud Storage Client Application Evidence Analysis on UNIX/Linux.* R. Malik, *N. Shashidhar*, and L. Chen. In Proceedings of the International Conference on Security and Management (SAM), p. 111. The Steering Committee of The World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp), 2015. AR<20%

- *[C24] Analysis of Evidence in Cloud Storage Client Applications on the Windows Platform.* R. Malik, *N. Shashidhar*, and L. Chen. In Proceedings of the International Conference on Security and Management (SAM), p. 3. The Steering Committee of The World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp), 2015. Acceptance Rate: < 20%.

- *[C23] Curbing the Spread of Topological Worms: A Defense Topology for the P2P Cyberspace. N. Shashidhar* and L. Chen. The third IEEE/ASE International Conference on Cyber Security. IEEE/Academy of Science and Engineering (ASE) International Conference on Cyber Security. Stanford, CA. May 27th to May 31st 2014.   Acceptance Rate: < 26%.

- *[C22] Epidemic Node Replica Detection in Sensor Networks: Securing the Sensor Network Cyberspace against Replica Attacks. N. Shashidhar*, C. Kari and R. Verma. The third IEEE/ASE International Conference on Cyber Security. IEEE/Academy of Science and Engineering (ASE) International Conference on Cyber Security. Stanford, CA. May 27th - May 31st 2014. Acceptance Rate: < 26%.

- *[C21] IT Security Policies and Employee Compliance: The Effects of Organizational Environment*. K. Stephens and *N. Shashidhar*. The 2014 International Conference on Security and Management (SAM 2014) Las Vegas, NV, USA, July 21 – 24, 2014.

- *[C20] Advanced Dynamic Analysis of Cryptolocker. J. Lang and N. Shashidhar.* The Second International Symposium on Digital Forensics and Security (ISDFS 2014). May 12-13, 2014. Sam Houston State University, Huntsville, TX.

- *[C19] Digital Forensics in Social Networks and the Cloud: Process, Approaches, Methods, Tools, and Challenges.* L. Chen, L. Xu, X. Yuan and *N. Shashidhar*. The 2015 International Conference on Computing, Networking and Communications (ICNC 2015), Anaheim, CA, USA, February 16-19, 2015, pp. 1132-1136. IEEE, 2015. AR: < 32%

- *[C18] Do Private and Portable Web Browsers Leave Incriminating Evidence?* D. Ohana and *N. Shashidhar*. International Workshop on Cyber Crime (IWCC

2013), an event of The IEEE Computer Society's Security and Privacy Workshops (SPW 2013), in conjunction with The 34th IEEE Symposium on Security and Privacy (IEEE S&P 2013). San Francisco, CA, USA. May 24, 2013. *(Acceptance Rate: 33%).* ***Best Paper Award.***

- *[C17] Using Client-Side JavaScript to Mitigate Drive-by-Downloads.* A. Mendoza and *N. Shashidhar.* The 2013 International Conference on Security and Management (SAM'13) Las Vegas, NV, USA, July 22 – 25, 2013.

- *[C16] QR Code Steganography.* D. Ohana and *N. Shashidhar.* The 2013 International Conference on Security & Management (SAM'13) Las Vegas, NV, USA, July 22–25, '13.

- *[C15] Distributed Dynamic Channel Assignment in Wireless Networks.* C. Kari, *N. Shashidhar* and S. Kentros. International Conference on Computing, Networking and Communication (ICNC 2014). Honolulu, Hawaii, USA. Feb. 3-6, 2014. *(AR: < 30%)*

- *[C14] Detecting Phishing Emails the Natural Language Way.* R. Verma, *N. Shashidhar*, and N. Hossain. 17th European Symposium on Research in Computer Security (ESORICS 2012), Institute of Informatics and Telematics of National Research Council (CNR), Pisa, Italy, September 10th -12th 2012. *(Acceptance Rate: 19%)*

- *[C13] Two-pronged phish snagging.* R. Verma, *N. Shashidhar*, and N Hossain. 7th International Conference on Availability, Reliability and Security (ARES 2012), University of Economics in Prague, Czech Republic, August 20th - 24th, 2012. *(Acceptance Rate: 26%)*

- *[C12] Economical and Robust VoIP Infrastructure for Disaster Recovery Communication.* L. Carvajal and *N. Shashidhar*. International Conference on Disaster Management (ICDM 2012), Peshawar, Pakistan, June 30, 2012.

- *[C11] Implementing a Standardized Method of Storing Asset Information.* A. Mendoza and *N. Shashidhar.* International Conference on Disaster Management (ICDM 2012), Peshawar, Pakistan, June 30, 2012.

- *[C10] Disaster Recovery Planning in a Museum Environment.* C. Hale, *N. Shashidhar*. International Conference on Disaster Management (ICDM 2012), Peshawar, Pakistan, June 30, 2012.

- *[C09] Key-Efficient Steganography.* A. Kiayias, A. Russell and *N. Shashidhar*. 14th Information Hiding Conference, May 15–18, 2012, Berkeley, California.

- *[C08] Scalable Resource Discovery in Bandwidth Bounded Networks.* C. Kari, *N. Shashidhar* and S. Kentros. 8th Annual International Conference on Computer Science and Information Systems, 21-24 May 2012, Athens, Greece.

- *[C07] Scalable Secure MJPEG Video Streaming.* Lei Chen, *Narasimha Shashidhar*, and Qingzhong Liu. *8th International Symposium on Frontiers of Information Systems and Network Applications (FINA-2012),* in conjunction with the 26th IEEE International Conference on Advanced Information Networking and Applications (AINA-2012), Fukuoka, Japan, March 26-30, 2012. (Acceptance rate: 29.4%)

- *[C06] A Phishing Model and Its applications to Evaluating Phishing Attacks. N. Shashidhar* and L. Chen. 2011 International Cyber Resilience Conference, August 1-2, 2011, Perth, Western Australia. (Acceptance rate: 34%)

- *[C05] Taking Total Control of Voting Systems: Firmware Manipulations on an Optical Scan Voting Terminal.* S. Davtyan, S. Kentros, A. Kiayias, L. Michel, N. Nicolaou, A. Russell, See, *N. Shashidhar* and A. Shvartsman. 2009 ACM Symposium on Applied Computing (SAC 2009), Honolulu, Hawaii, March 9-12, 2009.

- *[C04] Randomized Work-Competitive Scheduling for Cooperative Computing on*

k-partite Task Graphs. C. Kari, A. Russell and *N. Shashidhar.* The Seventh IEEE International Symposium on Networking Computing and Applications, (NCA 2008), July 10-12, 2008, Cambridge, Massachusetts.

- *[C03] Pre-Election Testing and Post-Election Audit of Optical Scan Voting Terminal Memory Cards.* S. Davtyan, S. Kentros, A. Kiayias, L. Michel, N. Nicolaou, A. Russell, See, *N. Shashidhar* and A. Shvartsman. USENIX/ACCURATE Electronic Voting Workshop (EVT 2008), July 28-29, 2008, San Jose, CA.

- *[C02] Tampering with Special Purpose Trusted Computing Devices: A Case Study in Optical Scan E-Voting.* A. Kiayias, L. Michel, A. Russell, *N. Shashidhar,* A. See, A. Shvartsman, S. Davtyan. 23rd Annual Computer Security Applications Conference (ACSAC 2007), December 10-14, 2007, Miami Beach, Florida.

- *[C01] An Authentication and Ballot Layout Attack against an Optical Scan Voting Terminal.* A. Kiayias, L. Michel, A. Russell, *N. Shashidhar*, A. See and A. Shvartsman. 16th USENIX Security Symposium, 2007 USENIX/ACCURATE Electronic Voting Technology Workshop (EVT 2007), August 6, 2007. Boston, MA.

BOOK CHAPTERS

- *[BC05] Digital Forensics Analysis in NVMe SSDs inside USB Enclosure Adapters.* Ashar Neyaz, *Narasimha Shashidhar*, Cihan Varol, and Amar Rasheed. Kevin Daimi, Guillermo Francia III, Luis Hernández Encinas, Editors, Springer, Breakthroughs in Digital Biometrics and Forensics. page 109. 2022.

- *[BC04] Windows Prefetch Forensics.* Ashar Neyaz, and *Narasimha Shashidhar.* Kevin Daimi, Guillermo Francia III, Luis Hernández Encinas, Editors, Springer, Breakthroughs in Digital Biometrics and Forensics. page 191. 2022.

- *[BC03] Digital Forensics Process and Model in the Cloud. Narasimha Shashidhar* and Lei Chen. To appear in Security, Privacy, and Digital Forensics in the Cloud, Wiley (USA) and Higher Education Press (HEP, China), 2016/17 (editors: Lei Chen, and Hassan Takabi).

- *[BC02] Cyber Law and Cyber Terrorism in the Cloud.* Lei Chen and *Narasimha Shashidhar*. To appear in Security, Privacy, and Digital Forensics in the Cloud, Wiley (USA) and Higher Education Press (HEP, China), 2016/17 (editors: Lei Chen, and Hassan Takabi).

- *[BC01] Security in Wireless Metropolitan Area Networks*. Lei Chen, *Narasimha Shashidhar*, Shengli Yuan, and Ming Yang. To appear in Wireless Network Security: Theories and Applications, Springer (U.S.) and Higher Education Press (China), 2012 (editors: Lei Chen, Jiahuang Ji, and Zihong Zhang).

IACR CRYPTOLOGY EPRINT ARCHIVE

- International Association for Cryptologic Research - Cryptology ePrint Archive: Report 2015/684A. *One-time Stegosystem and Applications to Efficient Covert Communication*. A. Kiayias, Y. Raekow, A. Russell and *N. Shashidhar*. DOI: 10.1007/s00145-012-9135-4. 7 Jul 2015. Short URL: ia.cr/2015/684

DISSERTATION

Dissertation: Narasimha Shashidhar, "Efficient Steganography with Provable Security Guarantees", University of Connecticut Theses and Dissertations, Aug. 15, 2010. (Advisors: Drs. Russell, Kiayias, and Rajasekaran) Publication Number: 3428895 (http://gradworks.umi.com/34/28/3428895.html)

POSTERS	• *[P06] The future of Biometric Authentication Techniques and Privacy*. T. Gross and N. Shashidhar. Sam Houston State University, Undergraduate Research Symposium, October 2020.
	• *[P05] MyHealthChart Mobile App: Gives people control and access to their Medical Records*. J. Byrd, S. McManus, R. Islam and N. Shashidhar. University of Texas at San Antonio College of Sciences Research Conference. October 3, 2014. CCSC, 36th Annual Regional Conference of CCSC-EA, 2020 CCSC-EA 2020.
	• *[P04] Prefetch File Forensics.* D. Novak and *N. Shashidhar*. University of Texas at San Antonio College of Sciences Research Conference. October 3, 2014.
	• *[P03] Parallel Imaging and Collaborative Analysis.* K. Cohn and *N. Shashidhar*. University of Texas at San Antonio College of Sciences Research Conference. October 3, 2014. (**Best Poster Award**)
	• *[P02] Forensic USB Evidence Recovery.* E. Deering and *N. Shashidhar*. University of Texas at San Antonio College of Sciences Research Conference. October 3, 2014.
	• *[P01] Natural Language Approaches to Phishing Email Detection*. N. Hossain, **N. Shashidhar** and R. Verma. Second Annual Mid-Atlantic Student Colloquium on Speech, Language and Learning. MASC 2012, October 29th, 2012. College Park, MD, USA

PROJECTS IN PROGRESS	• *[W10]* RFID System Vulnerabilities
	• *[W09]* Forensic Analysis of Android Based Spy Applications
	• *[W08]* Analysis of IOT Device Security and Vulnerability
	• *[W07]* Acquisition of Windows 10 Hibernation Data
	• *[W06]* Archive Violent E-mail Tool (AVET)
	• *[W05]* Mobilyze: An Educational Tool To Automate Forensic Image Creation
	• *[W04]* SMS/MMS Simulation in a Courtroom.
	• *[W03]* iBaTs: Interactive Bash Shell Adaptive Tutoring System.
	• *[W02]* Decentralized community-based autonomous cryptocurrency.
	• *[W01]* Predicting wear leveling by performing forensics in solid state media.

EDITORIAL BOARDS/ REVIEWER	• International Journal of Security, CSC Journals (IJS/CSC) - Editor in Chief
	• JDFSL, Editorial Board Member
	• Information Journal, MDPI.
	• Journal of Entropy, MDPI.
	• Journal of technologies, MDPI.
	• Journal of Electronics, MDPI, Editorial Board Member.
	• Applied Sciences, MDPI.
	• Journal of Symmetry, MDPI.
	• Journal of Security and Communication Networks.
	• Associate Editor, Journal of Networks, *2012* – Present.
	• Journal of Mathematical and Computational Applications (MCA).
	• Editorial Review Board, Intl. Journal of Information Security Science, 2014 – Present.
	• Editorial Review Board, International Journal of Security and Networks, 2013 – Present.

CONFERENCE TECHNICAL PROGRAM COMMITTEE *AND* REVIEWER	• 3ICT'21, The 2021 International Conference on Innovation and Intelligence For Informatics, Computing and Technologies.

- 3ICT'21, The 2021 International Conference on Innovation and Intelligence For Informatics, Computing and Technologies.
- ICR'22, ICR'23 The International Conference on Innovations in Computing Research
- SAM'22, SAM'23 The International Conference on Security and Management
- Review Editor, Editorial Board, Cybersecurity and Privacy (specialty section of Frontiers in Big Data.
- Association of Digital Forensics, Security and Law, (ADFSL). Technical Program Chair, 2019/2020.
- 7th International Conference on Mathematics and Computing (ICMC 2021), TPC member.
- The Hawaii International Conference on System Sciences (HICSS 2021), TPC member.
- PODC 2017 TPC Member.
- WCSF 2017/2018 TPC Member.
- ICMLA 2018 TPC Member.
- International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT 2020), TPC member.
- SYNASC 2018 Workshop TPC Member.
- MobiSec 2017/2019 TPC Member and Publicity Chair.
- Technical Program Committee (TPC/Reviewer). International Workshop on The Security, Privacy, and Digital Forensics of Mobile Cloud (SeMoCloud 2017).
- InfoComm 2017, publication chair/TPC Member.
- Technical Program Committee (TPC/Reviewer). Thirteenth Annual IFIP WG 11.9 International Conference on Digital Forensics.
- Technical Program Committee (TPC/Reviewer). CSIT 2016/2018: The International Conference on Computer Science & Information Technology, 2016/2018.
- Technical Program Committee (TPC/Reviewer). IEEE Symposium on Industrial Electronics and Applications, ISIEA *2012*, *2013 and 2014*.
- TPC/Reviewer, International Conference on Computing, Networking and Communications, ICNC *2012*, *2014*.
- PCSSNSE and MAPS *2012* (ICNC *2012*), International Workshop on Pervasive Communication Security, Social Networking and Social Engineering, Workshop Chair.
- SPAN 2013, *2014, 2015, 2016* (ICNC *2014, 2015, 2016*), International Workshop on Sensor, Peer-to-Peer and Social Networks, Workshop Chair.
- TPC/Reviewer for The 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021 International Conference on Security and Management (SAM 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021).
- TPC/Reviewer, The 25th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE *2012*. Special Session: Data Mining and Computational Intelligence for Digital Forensics and Information Assurance.
- TPC/Reviewer, 2014 IEEE Symposium on Computer Applications and Industrial Electronics.
- The International Conference on Soft Computing and Software Engineering (SCSE'15).
- TPC/Reviewer, International conference on soft computing and software, 2015.
- TPC/Reviewer, International Symposium on Digital Forensics and Security (ISDFS 2014, 2015, 2016, 2017, 2018, 2019).
- TPC/Reviewer, IEEE TENSYMP 2015, 2016.
- TPC/Reviewer, The 2013 IEEE Symposium on Computers & Informatics.
- TPC/Reviewer, The 2013 IEEE International Conference on Control System, Computing and Engineering (ICCSCE 2013).
- The 2013 World Congress in Computer Science, Computer Engineering and Applied Computing, The 2013 International Conference on Artificial Intelligence (ICAI'13), Session Co-Chair on Swarm Optimization Algorithms and Applications.

- The 2013 World Congress in Computer Science, Computer Engineering and Applied Computing, The 2013 International Conference on Grid and Cloud Computing and Applications (GCA'13), Session Co-Chair on Parallel and Distributed Algorithms and Applications, Grid and Cloud Computing.
- TPC/Reviewer, The 2013, 2014 National Engineering Conference of the University of Moratuwa, Engineering Research Unit (ERU), University of Moratuwa, Moratuwa, Sri Lanka.
- The IEEE International Multidisciplinary Engineering Conference MERCon, Moratuwa Engineering Research Conference, University of Moratuwa, Sri Lanka co-sponsored by the IEEE. (2015, 2016, 2017 and 2018)
- Reviewer, National Center for Women & IT (NCWIT), 2014

NSF REVIEW PANELS

- National Science Foundation, Transforming Undergraduate Education in Science (TUES), Invited Panelist/Reviewer, 2011.
- National Science Foundation, Directorate for Education and Human Resources (EHR), EHR Core Research Invited Panelist/Reviewer, 2013.
- National Science Foundation, Scholarship for Service, Invited Panelist/Reviewer, 2018.

HONORS AND AWARDS

- Public Service Award, Office of the Secretary of the State of Connecticut, 2009.
  - Awarded for substantial contribution towards ensuring the integrity and accuracy of Connecticut state's Voting Equipment
- ICNC Silver Contribution Award, Feb 17th, 2016.
- Graduate PreDoctoral Fellowship, Univ. of Connecticut, 2004, 2008 & 2009
- Recognition for significant contribution to the success of SHSU students, Office of the Vice President for Student Services, Sam Houston State University, SHSU, 2011, 2014, 2016, 2019, 2021.
- Graduate Fellowship, Pace University, 2001
- Elevator Pitch Competition Winner, Business Plan Competition 2012, Wolff Center for Entrepreneurship (WCE) at the University of Houston.

FUNDING

- NSF SFS, Bing Zhou, Cihan Varol, Qingzhong Liu, Narasimha Shashidhar, Min Kyung An. Award Number: 2234710. Award Date: 12/14/2022. Award Period of Performance: Start Date: 01/01/2023, End Date: 12/31/2027.
  Project Title: CyberCorps Scholarship for Service: Interdisciplinary Cybersecurity and Cyber Forensics Education at SHSU. Funding Opportunity: NSF 21-580 CyberCorps(R) Scholarship for Service.
  Total Intended Award Amount: $2,792,651
- College of Science & Tech, Undergraduate Student Research Award, SHSU, 2021.
  - Granting Agency: COSET, SHSU, $4,000
  - Title: *RFID System Vulnerabilities*
- 2021 DoD CYSP Award. Grant # 22196, by the Department of Defense. B. Glisson, N. Shashidhar, and Cihan Varol. Student beneficiary: Valentin Gazeau. Amount of Award: $65,635 per year, renewable.
- EURECA/FAST Undergraduate Research Award, SHSU. *MobiLyze: Mobile Device Evidence Planting and Forensic Analysis*, $8000, 2018. N. Shashidhar and U. Karabiyik.
- STEM Center Teaching Mini Grant, $2,000, N. Shashidhar.
- Relativity Fest Scholarship, Travel Grant to doctoral students, Relativity Fest, Chicago, IL, USA. $3,000 student travel/stay allowance and registration fee waiver.
- Relativity Academic Software License granted to CS Department, SHSU
- Faculty Enhancement Research Grant, ERG 2012, June 2012 – July 2013.
  - Granting Agency: Faculty Research Council, SHSU, $15,000
  - Title: *Secure Patch Distribution over Peer-to-Peer Networks*

- College of Science Undergraduate Student Research Award, SHSU, 2013.
  - Granting Agency: College of Science, SHSU, $6,000
  - Title: *Private Browsing Forensics*
- Faculty And Student Team, EURECA Center, SHSU, 2013.
  - Granting Agency: EURECA Center, SHSU, $6,000
  - Title: *Digital Forensics Exploring the Forensic Artifacts of Prefetch Files*
- EURECA/FAST Undergraduate Research Award, 2014.
  - Granting Agency: EURECA Center SHSU, $6,000
  - Title: *Investigating the Security and Forensics of PlayStation 4 (PS4) System and Games.*
- Faculty Enhancement Research Grant, ERG 2012, June 2014 – July 2015.
  - Granting Agency: Faculty Research Council, SHSU, $15,000
  - Title: *iBaTs: Interactive Bash Shell Adaptive Tutoring System*
- The IEEE CS Security and Privacy Workshops (SPW) Student Travel Grant. $1000.

PATENT

Automatic phishing email detection based on natural language processing techniques
R Verma, N. Shashidhar, N Hossain, N Rai - US Patent 10,404,745, 2019/9/3
US Patent number: 10404745
Application number: 15225587

ABET PEV

- Serve as the Program Evaluator for the Computing Accreditation Commission, ABET.
- 2018 – present
- Perform at least one physical/virtual campus ABET evaluation visit per year

GRADUATE TEACHING CERTIFICATE

- Graduate Certificate in College Instruction
  - Awarded by the Graduate School and the Institute for Teaching and Learning, University of Connecticut, 2009
  - Courses and Workshops Attended, ITL, University of Connecticut
    - Advanced Issues in Teaching and Learning, Spring 2009
    - Teaching and Learning Issues in Engineering, Spring 2009
    - Summer Institute in College Instruction, Summer 2008
    - Teaching and Learning Fundamentals, Spring 2008
    - Reflections on Teaching Practices, Fall 2008

TECHNICAL SKILLS

- Programming Languages: C, C++ , Java, Matlab, Python
- Software: LATEX, Adobe Suite: Captivate, Dreamweaver
- Operating Systems: Linux/Unix, Mac OS, Windows
- Digital Forensics: Forensic Toolkit, Password Recovery Toolkit, FTK Imager
- Digital Forensics *Certifications*:
  - AccessData Certified Examiner
  - AccessData Mobile Examiner

CITATION INDICES

- Citations - All: 620
- h-index - All: 12
- i10-index - All: 14
- https://scholar.google.com/citations?user=sPv7ob0AAAAJ&hl=en

PROFESSIONAL MEMBERSHIP AND SERVICE	- Association for Computing Machinery (ACM) - Society for Industrial and Applied Mathematics (SIAM) - Institute of Electrical and Electronics Engineers (IEEE) - Accreditation Board for Engineering and Technology ABET PEV for Computing Accreditation Commission, CAC (CS and CY). 2018 – present. - Member of the IEEE SA P2834 working group. This standard specifies technical requirements for student data management and privacy protection in Learning online systems and services. 2020 – present.

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- Association for Computing Machinery (ACM)
- Society for Industrial and Applied Mathematics (SIAM)
- Institute of Electrical and Electronics Engineers (IEEE)
- Accreditation Board for Engineering and Technology ABET PEV for Computing Accreditation Commission, CAC (CS and CY). 2018 – present.
- Member of the IEEE SA P2834 working group. This standard specifies technical requirements for student data management and privacy protection in Learning online systems and services. 2020 – present.

CURRENT POSITION & CONTACT INFORMATION

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REFERENCES

- Dr. Alexander Russell, University of Connecticut, Storrs, CT, USA.
- Dr. Rakesh Verma, University of Houston, TX, USA.
- Dr. Lei Chen, Georgia Southern University, Statesboro, GA, USA.
- Dr. Chadi Kari, University of the Pacific, Stockton, CA, USA.
- Dr. Cihan Varol, Sam Houston State University, Huntsville, TX, USA.
- Dr. Umit Karabiyik, Purdue University, West Lafayette, IN, USA.