**Marist Technical Publications**

**Casimer DeCusatis - Updated August 2018**

**(publications/patents before joining Marist available upon request)**

**Peer Reviewed Scholarly Publications**

C. DeCusatis and P. Mueller, “Virtual firewall performance as a waypoint on a software defined network”, Proc. IEEE 6th International Symposium on Cyberspace Safety and Security (CSS), part of the International Conference on High Performance Computing and Communications (HPCC), Paris, France (August 20-22, 2014)

C. DeCusatis, R. Cannistra, and L. Hazard, “Managing multi-tenant services for software-defined cloud data center networks”, Proc. 6th annual IEEE international conference on Adaptive Science & Technology (ICAST 2014), Covenant University, Nigeria (October 29-31, 2014)

C. DeCusatis, R. Cannistra, B. Carle, “Energy efficient optical networks for cloud computing using software-defined provisioning”, Proc. IEEE GreenCom (November 12-14, 2014)

C. DeCusatis, A. Carranza, and C.J. Sher-DeCusatis, “Dynamic Software Defined Network Provisioning for Resilient Cloud Service Provider Optical Network” Proc. International Conference on Computer and Information Science and Technology (CIST), Ottawa, Canada (May 11-12, 2015)

Y. Estrella, A. Carranza, and C. DeCusatis, “Comparing performance of physical and virtual environment penetration testing using Kali Linux”, Proc. Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) XIII Conference, paper 0422, p. 20-27, Santo Domingo, Dominican Republic (July 29-31, 2015)

C. DeCusatis, “Reference Architecture for Multi-Layer Software Defined Optical Data Center Networks” *Electronics* (special issue on SDN) vol. 4 no 3, 633-650 (September 2015) <http://www.mdpi.com/2079-9292/4/3/633/html>

C. DeCusatis, A. Carranza, A. Ngaide, S. Zafar, and N. Landaez, “Methodology for an open digital forensics model based on CAINE”, Proc. 15th IEEE International Conference on computer and information technology (CIT 2015), Liverpool, U.K. (October 26-28, 2015)

C. DeCusatis and Ioannis Papapanagiotou “A service industry perspective on software defined radio access networks”, *Algorithms and Architectures for Parallel Processing*, Volume 9528, pp 357-369, published by Springer (December 2015)

C. DeCusatis and A. Carranza, “Hybrid implementation of the flipped classroom approach to cybersecurity education”, National Cybersecurity Institute Journal vol 2 no 3 pp. 45-55 (January 2016)

C. DeCusatis, A. Carranza, “Modeling software defined networks using Mininet”, Proc. 2nd International Conference on Computer and Information Science and Technology (CIST), Montreal, Canada (May 20-21, 2016) **(Best Paper Award)**

S. Nanda, F. Zafari, C. DeCusatis, E. Wedaa and B. Yang, “Predicting Network Attack Patterns in SDN using Machine Learning Approach”, Proc. IEEE 2016 Conference on Network Function Virtualization and Software Defined Networks (SDN/NFV 2016), Palo Alto, CA (Nov. 7-9, 2016)

C. DeCusatis, P. Liengtiraphan, A. Sager, and M. Pinelli, “Implementing Zero Trust Cloud Networks with Transport Access Control and First Packet Authentication”, Proc. IEEE International Conference on Smart Cloud (SmartCloud 2016), New York, NY (Nov. 18-20, 2016)

C. DeCusatis, P. Liengtiraphan, A. Sager, “Advanced Intrusion Prevention for Geographically Dispersed Higher Education Cloud Networks”, Proc. IEEE/ACM International Conference on Remote Engineering & Virtual Instrumentation (REV 2017), Columbia University, New York, NY (March 15-17, 2017)

Vallie Joseph, Piradon Liengtiraphan, G. Leaden, and Casimer DeCusatis, “A Software-Defined Network Honeypot with Geolocation and Analytic Data Collection”, Proc. 12th Annual IEEE/ACM Information Technology Professional Conference, Trenton, NJ (March 17, 2017)

J. Magallanes, J. Espinal, A. Carranza, and C. DeCusatis, “Automated wireless network penetration testing using Wifite and Reaver”, Proc. Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) XV Conference, Florida Atlantic University, Boca Raton, Florida (July 19-21, 2017)

D. Eidle, S. Ni, C. DeCusatis, and A. Sager, “Autonomic security for zero trust networks”, Proc. IEEE 8th annual Ubiquitous Computing, Electronics, and Mobile Communications Conference (UEMCON), Columbia University, New York, NY

G. Leaden, M. Zimmermann, C. DeCusatis, and A. Labouseur, “An API Honeypot for DDoS and XSS Analysis”, Proc. IEEE/MIT Undergraduate Research Technology Conference, Cambridge, MA (Nov. 3-5 2017)

C. DeCusatis, M. Zimmerman, and A. Sager, “Identity based network security for commercial Blockchain services“, Proc. 8th annual IEEE Computing and Communications Workshop and Conference, Las Vegas, NV (January 8-10, 2018)

M. Ganesh, D. Berrios-Vasquez, A. Menmou, M. Arthur, A. Carranza, and C. DeCusatis, “Performance evaluation of a Raspberry Pi Bramble cluster for penetration testing”, Proc. LACCEI XVI conference, Lima, Peru (July 18-20, 2018)

C. DeCusatis, K. Lotay, “Secure, decentralized energy resource management using the Ethereum blockchain”, Proc. IEEE Trustcon 2018, International Workshop on Cyber-Physical Systems, pp. 1-7, New York, NY (August 2-5, 2018)  
 **Other Publications**

1) C. DeCusatis, “Data Center Architectures”, Chapter 1 in the book *Optical Interconnects for Data Centers* (T. Tekin, N. Pleros, R. Pitwon, and A. Hakansson, editors), Elsevier, New York, NY (first edition, 2017), pp. 3-42 <https://www.elsevier.com/books/optical-interconnects-for-data-centers/tekin/978-0-08-100512-5>

**Refereed Conference Presentations**(presentation material published in proceedings without full papers)

1) R. Cannistra, B. Carle, and C. DeCusatis, “Bandwidth Provisioning for Hybrid Cloud Environments”, SDN & OpenFlow World Congress, Frankfurt, Germany (October 7-10, 2014)

2) C. DeCusatis, “SDN and NFV Applications to the IT Service Industry”, Proc. SDN Workshop, 2014 Annual Meeting of the Association of Technology Management and Applied Engineering (ATMAE), St. Louis, MO (November 20-22, 2014)

3) C. DeCusatis, R. Cannistra, B. Carle, “Automated management and orchestration for software-defined environments”, Proc. IEEE Mid-Hudson Section Workshop on Advanced Technology for Next Generation Computing, State University of New York (November 6, 2014)

4) C. DeCusatis and J. Baijian, “Software defined networking and cloud computing for the service industry”, Proc. ITERA 2015 (Information and Telecommunication Education and Research Association), March 27-29, 2015

5) C. DeCusatis, “Value and cost of multi-layer SDN”, Proc. OFC Service Provider Summit, Optical Fiber Communication (OFC) conference, Los Angeles, CA (March 22-26, 2015)

6) R. Cannistra and C. DeCusatis, “Academic and banking collaboration using cloud security and NFV”, Research, Education, and Technology Activities Group (RETAG), Internet 2 Global Summit, Washington, D.C. (April 26-30, 2015)

7) C. DeCustis, R. Cannistra, A. Kippins, K. Maude, and M. Miller, “Building a cohesive cloud platform for collaboration”, Internet 2 Global Summit, Washington, D.C. (April 26-30, 2015)

8) R. Cannistra, C. DeCusatis, “ NFV Integration and Orchestration for Resource Automation within Hybrid Cloud Environments”, Proc. NFV World Congress, San Francisco, CA (May 2015)  
  
9) C. DeCusatis, “Cloudy with a chance of SDN”, BRKCRT-2603 (1 hour 30 minutes), Cisco Live, San Diego, CA (June 7-11, 2015) **(Cisco Distinguished Speaker Award)**

10) C. DeCusatis, “Automated management using SDN/NFV“, Cisco Live DevNet Session 1114, San Diego, CA (June 7-11, 2015)   
  
11) C. DeCusaits, “Open source and open SDN standards“,Cisco Live DevNet Session 1154, San Diego, CA (June 7-11, 2015)

12) C. DeCusatis, “Cybersecurity Education: A National Imperative”, NSF Enterprise Computing Conference, Marist College, Poughkeepsie, NY (June 14-16, 2015)

13) A. Carranza and C. DeCusatis, “Cybersecurity education using open source software and academic/industry partnerships”, Proc. Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) XIII Conference, paper 0422, p. 10-11, Santo Domingo, Dominican Republic (July 29-31, 2015)

14) C. DeCusatis, “Empowering women in technology through FIRST robotics”, Marist annual Women in Society conference Marist 24th Women & Society Conference (October 23-24, 2015)

15) C. DeCusatis, “It’s 2015, why are we still being hacked”, Proc IEEE Workshop on Cybersecurity, State University of New York at New Paltz (November 12, 2015)   
  
16) C. DeCusatis, “Security, Reliability and Availability in a Disaggregated SDN World”, Presented during the Fujitsu Network Communication Symposium, Pearl River, NY (Nov. 18-19, 2015)

17) C. DeCusatis, “Advising challenges in undergraduate cybersecurity programs”, Proc. National Academic Advising Association (NACADA) conference, Marist College, Poughkeepsie, NY (April 8, 2016)   
  
18) C. DeCusatis, “The NSF SecureCloud project: cybersecurity for enterprise class data centers”, Proc. NSF Enterprise Computing Conference (ECC), Marist College, Poughkeepsie, NY (June 15-17, 2016)  
  
19) C. DeCusatis, “Zero trust cybersecurity architecture for software defined data centers”, Proc. NYSERNET Tech Summit, Vassar College, Poughkeepsie, NY (June 2016)

20) C. DeCusatis, “Cloudy with a chance of SDN Part II”, BRKCRT-2605 (1 hour 30 minutes), Cisco Live, Las Vegas, NV(July 12-15, 2016)

C. DeCusatis, “NSF SecureCloud, year 2: autonomic cybersecurity using OODA loops”, Proc. NSF Enterprise Computing Conference (ECC), Marist College, Poughkeepsie, NY (June 11-13, 2017)

C. DeCusatis, “Cloudy with a chance of SDN Part III”, BRKCRT-2605, Cisco Live, Las Vegas, NV(June 29-July 2, 2017)

**Invited Presentations**  
  
1) R. Cannistra, C. DeCusatis, B. Carle, and T. Bundy, “Software-Defined Networking: Real World Use Cases in the Marist/IBM Test Bed”, Adva North America Technology Symposium, Chelsea Pier, New York, NY (September 15-17, 2014)

2) A. Rao and C. DeCusatis, “Design analytics for cost modeling of circuit board packages”, Proc. IBM TCEC, E. Fishkill, NY (September 26, 2014)

3) C. DeCusatis, J. Hollingsworth et.al., IBM Academy of Technology report, “Cloud computing and the Impact to Data Center Facilities”, 96 pages, (September 29, 2014)

4) C. DeCusatis, “Fulfilling the potential of SDN”, invited presentation for “Majorca at MIT” conference, Cambridge, MA (July 27-30, 2015)

5) C. DeCusatis, “SecureCloud: Autonomic security for zero trust cloud computing”, invited presentation, NSF Internet2 Cybersecurity Transition to Practice Acceleration Workshop, New York, NY (April 17, 2018)  
  
**Student Presentations**  
1) R. Cannistra, B. Carle, C. DeCusatis, M. Johnson, C. Proce, C. Ahmed, A. Kippins, M. Iori, M. Miller, K. Maud, C. Ferguson, “Dynamic bandwidth provisioning for hybrid cloud environments”, 14th annual CURSCA meeting (April 15, 2015)

2) Y. Estrella, A. Carranza, and C. DeCusatis, “Report of physical and virtual environment penetration testing results using Kali Linux”, New York Institute of Technology Cybersecurity Conference, New York, NY (September 24, 2015)  
  
3) R. Cannistra, B. Carle, C. DeCusatis, C. Proce, M. Miller, K. Maud, C. Ferguson, “Software defined environment test bed for VM migration and virtual storage”, Proc. IBM TechConnect **(Best Paper Award, Solutions Category)**, IBM Poughkeepsie/Yorktown Heights, NY (October 15, 2014)  
  
4) S. O’Meara and C. DeCusatis, “IBM Cloud Orchestrator with BlueMix for Software Defined Data Center Security”, IBM TechConnect (October 2015)

5) M. Crawley, M. Molenaer, T. Liengtiraphan, V. Joseph, and C. DeCusatis, “NSF SecureCloud zero trust cloud networking”, 15th annual CURSCA meeting (April 2016)

6) M. Crawley, M. Barbieri, V. Joseph, M. Molenaer, T. Liengtiraphan, and C. DeCusatis, “Cybersecurity and threat intelligence for zSystems and cloud networks”, Proc. IBM TechConnect **(Best Paper Award, Solutions Category)**, IBM Poughkeepsie, NY (October 2016)

7) T. Liengtiraphan, C. DeCusatis, and T. Sager, “Zero trust networking using first packet authentication and transport layer access control”, Proc. NYIT Cybersecurity Conference **(Highest Ranked Undergraduate Presentation, 4th Ranked Overall Student Presentation),** New York Institute of Technology, New York, NY (October 2016)

8) M. Molenaer (advisor C. DeCusatis), “SecureCloud: An Autonomic Cybersecurity Test Bed for Cloud Computing Networks”, Proc. ACM New York State Women in Computing (NYSWIC 2017), Rochester, NY (April 21-22, 2017)

9) Joseph Abel, Mike Otis, and Casimer DeCusatis, “Integrating cybersecurity into Internet of Things design”, Proc. SUNY Undergraduate Research Conference (SURC) 2017, SUNY Fredonia, NY (April 22, 2017)

10) C. DeCusatis, D. Eidle, S. Ni, B. Ross, M. Miller, and B. Traditit, “Autonomic security: real time response to cybersecurity threats”, Proc. IBM TechConnect (Best of Solutions Award, Early Tenure Category), IBM Pougkeepsie/Yorktown Heights, NY (September 28, 2017)  
  
11) C. DeCusatis, A. Labouseur, T. Famularo, J. Heiden, G. Leaden, T. Magnusson, and M. Zimmermann, “An API Honeypot for DDoS and XSS Analysis”, Proc. IBM TechConnect, IBM Pougkeepsie/Yorktown Heights, NY (September 28, 2017)

12) K. Lotay and C. DeCusatis, “Using Blockchain technology to digitize supply chain systems”, Proc. National Undergraduate Research Conference, Atlanta, GA (November 2017)