

The 2015 International Conference on Soft Computing and Software Engineering (SCSE 2015)

Tutorial

CLOURA: CLOUD Risk Assessor (with Stochastic & Non-Stochastic Simulations)



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Abstract.

The speaker will explain in detail, regarding the “CLOUD Simulation” tool (CLOURA). In comparison to other alternatives, scalable CLOURA comparatively is faster, i.e. it can simulate a CLOUD system such as with 443 servers and load demand of 8760 hours or 1000 years in <4 minutes and 10,000 years in 40 minutes covering many billions of calculations. SOCIAL CLOUD version to serve HUMAN RESOURCES data to prejudice performance risk will also be covered. A discrete event CLOUD simulator, CLOURA, is hereby examined to estimate the risk indices in large CLOUD computing environments, comparing favorably with the intractably tedious theoretical Markov solutions limited in scope. The details of input (wizard) and output specs will be explained in the Help Desk of the software. Cost related risk mitigation can be conducted for how many to invest for i) reserve repair crews, and ii) adding products.



About Mehmet Sahinoglu:

Dr. M. Sahinoglu, Professor Emeritus and formerly the Distinguished Professor of AUM (2008) is the founder of the Informatics Institute (2009) and its SACS-accredited (2010) and NSA-certified (2013) flagship Cybersystems and Information Security (CSIS) graduate program (the first such full degree program in Southeastern USA) at Auburn University's metropolitan campus in Montgomery, Alabama. Formerly, the founder Dean of Arts and Sciences, and founder Chair of the Department of (Computational) Statistics at DEU/Izmir (1992-97), and the visiting Fulbright and NATO Scholar at Purdue (1989-90, 1997-98) and Case Western Reserve University (1998-99) and the Eminent Scholar and Chair-Professor of the Troy University Montgomery campus (1999-08); Dr. Sahinoglu has a BSEE from METU/Ankara (1973), MSEE from University of Manchester (1975), and PhD in ECE and Statistics from Texas A&M University (1981). Dr. Sahinoglu taught at Texas A&M (1978-81), METU/Ankara (1982-1992) and DEU/Izmir (1992-97), Purdue (1998-99, 1997-98), CWRU (1998-99), Troy University at Montgomery (1999-2008), and AUM (2008-). The recipient of

Microsoft's Trustworthy Computing Curriculum (TCC) award as one of 14 in the world (2006) and a Fellow Member of SDPS (www.sdpsnet.org), and a Senior (Life) Member of IEEE (www.ieee.org) and Elected Member of ISI (www.isi-web.org); Dr. Sahinoglu's journal articles titled "Network Reliability" and "CLOUD Computing" appearing in WIREs (Wiley Interdisciplinary Review) stayed atop the most accessed in 2010 and 2011-12).

Dr. Sahinoglu has recently established a Cyber- Security Lab at AUM's Informatics Institute (2014). He is the recipient of the "Software Engineering Society Excellence in Leadership" award and presented at the Twelfth Transdisciplinary Conference Workshop on Integrated Design and Process Science: Informatics and Cyberspace" in Montgomery, Alabama in November 2009. He is the author of the textbook titled, *Trustworthy Computing* (2007, by John Wiley and Sons, Inc.) and more than 60 journal and 130 peer-reviewed proceedings articles and 20 project grants since 1982. He independently co-created the "Sahinoglu & Libby Probability Distribution (1981)" with Dr. Libby and also derived "Compound Poisson Software Reliability Model & Stopping Rule in Software Testing" in hardware and software reliability domains, and most recently, "Security Meter Quantitative Risk Assessment and Management" algorithms and "CLOURAM (Cloud Risk Assessor and Manager)". He authored four memoirs-based social style books: *Wrist-Fight of the Giants: Japan & USA* (1992), *Made In China/Made in Japan* (1993), *Dreaming America* (2004) all in Turkish, and recently, *Raindrops Falling on My Life's Umbrella* (2013) in English, beside his texts, He is married since 1983 and has 3 boys. He has been invited by Turkish State and Private TV in 1990s and 2000s respectively, and NPR in USA locally on educational topics several times since 1999. Dr. Sahinoglu is currently writing a sequel to his 2007 Wiley book (*Trustworthy Computing*), titled "Cyber-Risk Informatics: Metrics-Based Engineering Evaluation and Statistical Analysis of Cybersystems Information Security and Reliability".