

Dong Seong Kim

List of Publications by Year in descending order

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128
papers

2,471
citations

393982

19
h-index

344852

36
g-index

133
all docs

133
docs citations

133
times ranked

1456
citing authors

#	ARTICLE	IF	CITATIONS
1	Toward Proactive, Adaptive Defense: A Survey on Moving Target Defense. IEEE Communications Surveys and Tutorials, 2020, 22, 709-745.	24.8	150
2	Availability Modeling and Analysis of a Virtualized System. , 2009, , .		149
3	A framework for automating security analysis of the internet of things. Journal of Network and Computer Applications, 2017, 83, 12-27.	5.8	122
4	Assessing the Effectiveness of Moving Target Defenses Using Security Models. IEEE Transactions on Dependable and Secure Computing, 2016, 13, 163-177.	3.7	115
5	Attack countermeasure trees (ACT): towards unifying the constructs of attack and defense trees. Security and Communication Networks, 2012, 5, 929-943.	1.0	110
6	End-to-End Performability Analysis for Infrastructure-as-a-Service Cloud: An Interacting Stochastic Models Approach. , 2010, , .		92
7	Modeling and analysis of software rejuvenation in a server virtualized system with live VM migration. Performance Evaluation, 2013, 70, 212-230.	0.9	80
8	Dependability and security models. , 2009, , .		78
9	Sensitivity Analysis of Server Virtualized System Availability. IEEE Transactions on Reliability, 2012, 61, 994-1006.	3.5	61
10	A survey on the usability and practical applications of Graphical Security Models. Computer Science Review, 2017, 26, 1-16.	10.2	61
11	Modeling and analysis of software rejuvenation in a server virtualized system. , 2010, , .		53
12	Candy: Component-based Availability Modeling Framework for Cloud Service Management Using SysML. , 2011, , .		49
13	Cyber security analysis using attack countermeasure trees. , 2010, , .		48
14	Detection of DDoS attacks using optimized traffic matrix. Computers and Mathematics With Applications, 2012, 63, 501-510.	1.4	48
15	Scalable optimal countermeasure selection using implicit enumeration on attack countermeasure trees. , 2012, , .		46
16	Towards scalable security analysis using multi-layered security models. Journal of Network and Computer Applications, 2016, 75, 156-168.	5.8	46
17	Genetic Algorithm to Improve SVM Based Network Intrusion Detection System. , 0, , .		44
18	FRVM: Flexible Random Virtual IP Multiplexing in Software-Defined Networks. , 2018, , .		42

#	ARTICLE	IF	CITATIONS
19	Availability modeling and analysis of a data center for disaster tolerance. Future Generation Computer Systems, 2016, 56, 27-50.	4.9	40
20	Attack Graph-Based Moving Target Defense in Software-Defined Networks. IEEE Transactions on Network and Service Management, 2020, 17, 1653-1668.	3.2	38
21	Systematic identification of threats in the cloud: A survey. Computer Networks, 2019, 150, 46-69.	3.2	37
22	Spam Detection Using Feature Selection and Parameters Optimization. , 2010, , .		34
23	Proactive defense mechanisms for the software-defined Internet of Things with non-patchable vulnerabilities. Future Generation Computer Systems, 2018, 78, 568-582.	4.9	30
24	System resiliency quantification using non-state-space and state-space analytic models. Reliability Engineering and System Safety, 2013, 116, 109-125.	5.1	27
25	Recovery From Software Failures Caused by Mandelbugs. IEEE Transactions on Reliability, 2016, 65, 70-87.	3.5	27
26	HARMer: Cyber-Attacks Automation and Evaluation. IEEE Access, 2020, 8, 129397-129414.	2.6	27
27	Recovery from Failures Due to Mandelbugs in IT Systems. , 2011, , .		26
28	A Comprehensive Availability Modeling and Analysis of a Virtualized Servers System Using Stochastic Reward Nets. Scientific World Journal, The, 2014, 2014, 1-18.	0.8	25
29	Optimal Network Reconfiguration for Software Defined Networks Using Shuffle-Based Online MTD. , 2017, , .		23
30	Security Modelling and Analysis of Dynamic Enterprise Networks. , 2016, , .		22
31	A systematic evaluation of cybersecurity metrics for dynamic networks. Computer Networks, 2018, 144, 216-229.	3.2	22
32	Dynamic security metrics for measuring the effectiveness of moving target defense techniques. Computers and Security, 2018, 79, 33-52.	4.0	21
33	Threat-Specific Security Risk Evaluation in the Cloud. IEEE Transactions on Cloud Computing, 2021, 9, 793-806.	3.1	21
34	A Security Framework in RFID Multi-domain System. , 2007, , .		20
35	Composite Metrics for Network Security Analysis. Software Networking, 2017, 2017, 137-160.	0.6	20
36	Scalable Attack Representation Model Using Logic Reduction Techniques. , 2013, , .		18

#	ARTICLE	IF	CITATIONS
37	Availability Modeling and Analysis for Software Defined Networks. , 2015, , .		18
38	Performance Analysis of Scalable Attack Representation Models. IFIP Advances in Information and Communication Technology, 2013, , 330-343.	0.5	18
39	Scalable Security Models for Assessing Effectiveness of Moving Target Defenses. , 2014, , .		17
40	Evaluation for Combination of Shuffle and Diversity on Moving Target Defense Strategy for Cloud Computing. , 2018, , .		16
41	Toward optimal virtual machine placement and rejuvenation scheduling in a virtualized data center. , 2008, , .		15
42	Reliability and availability analysis for an on board computer in a satellite system using standby redundancy and rejuvenation. Journal of Mechanical Science and Technology, 2012, 26, 2059-2063.	0.7	15
43	SDN-Based IP Shuffling Moving Target Defense with Multiple SDN Controllers. , 2019, , .		15
44	A Peer-to-Peer RFID Resolution Framework for Supply Chain Network. , 2010, , .		14
45	System availability assessment using stochastic models. Applied Stochastic Models in Business and Industry, 2013, 29, 94-109.	0.9	14
46	Firewall ruleset visualization analysis tool based on segmentation. , 2017, , .		14
47	Comprehensive Security Assessment of Combined MTD Techniques for the Cloud. , 2018, , .		14
48	Model-based evaluation of combinations of Shuffle and Diversity MTD techniques on the cloud. Future Generation Computer Systems, 2020, 111, 507-522.	4.9	14
49	Privacy-Preserving Reinforcement Learning Using Homomorphic Encryption in Cloud Computing Infrastructures. IEEE Access, 2020, 8, 203564-203579.	2.6	14
50	A Survey on Cyber Situation-awareness Systems: Framework, Techniques, and Insights. ACM Computing Surveys, 2023, 55, 1-37.	16.1	14
51	What Vulnerability Do We Need to Patch First?. , 2014, , .		13
52	Evaluating the effectiveness of shuffle and redundancy MTD techniques in the cloud. Computers and Security, 2021, 102, 102091.	4.0	13
53	Novel security models, metrics and security assessment for maritime vessel networks. Computer Networks, 2021, 189, 107934.	3.2	12
54	Proactive Defense for Internet-of-things: Moving Target Defense With Cyberdeception. ACM Transactions on Internet Technology, 2022, 22, 1-31.	3.0	12

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55	GBR: Grid Based Random Key Predistribution for Wireless Sensor Network. , 0, , .		11
56	A survivability model in wireless sensor networks. Computers and Mathematics With Applications, 2012, 64, 3666-3682.	1.4	11
57	Scalable security analysis in hierarchical attack representation model using centrality measures. , 2013, , .		11
58	Hurst Parameter Based Anomaly Detection for Intrusion Detection System. , 2016, , .		11
59	Effective Security Analysis for Combinations of MTD Techniques on Cloud Computing (Short Paper). Lecture Notes in Computer Science, 2017, , 539-548.	1.0	11
60	CloudSafe: A Tool for an Automated Security Analysis for Cloud Computing. , 2019, , .		11
61	Availability Modeling and Analysis of a Virtualized System Using Stochastic Reward Nets. , 2016, , .		10
62	A Systematic Approach to Threat Modeling and Security Analysis for Software Defined Networking. IEEE Access, 2019, 7, 137432-137445.	2.6	10
63	Adaptation Mechanisms for Survivable Sensor Networks against Denial of Service Attack. , 2007, , .		9
64	Security modelling and assessment of modern networks using time independent Graphical Security Models. Journal of Network and Computer Applications, 2019, 148, 102448.	5.8	9
65	Scalable Security Model Generation and Analysis Using k-importance Measures. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2013, , 270-287.	0.2	9
66	Access Control and Authorization for Security of RFID Multi-Domain Using SAML and XACML. , 2006, , .		8
67	Security and Performance Assessment of IP Multiplexing Moving Target Defence in Software Defined Networks. , 2019, , .		8
68	Dynamic Security Metrics for Software-Defined Network-based Moving Target Defense. Journal of Network and Computer Applications, 2020, 170, 102805.	5.8	8
69	A Hierarchical Model for Reliability Analysis of Sensor Networks. , 2010, , .		7
70	ACT: Attack Countermeasure Trees for Information Assurance Analysis. , 2010, , .		7
71	Performability Analysis of IaaS Cloud. , 2011, , .		7
72	Evaluating the Effectiveness of Security Metrics for Dynamic Networks. , 2017, , .		7

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73	Multi-State Availability Modeling in Practice. Springer Series in Reliability Engineering, 2012, , 165-180.	0.3	6
74	Security modeling and analysis of an intrusion tolerant cloud data center. , 2015, , .		6
75	Towards Automated Generation and Visualization of Hierarchical Attack Representation Models. , 2015, , .		6
76	Automated security investment analysis of dynamic networks. , 2018, , .		6
77	A Framework for Real-Time Intrusion Response in Software Defined Networking Using Precomputed Graphical Security Models. Security and Communication Networks, 2020, 2020, 1-15.	1.0	6
78	DESOLATER: Deep Reinforcement Learning-Based Resource Allocation and Moving Target Defense Deployment Framework. IEEE Access, 2021, 9, 70700-70714.	2.6	6
79	Performability evaluation of switch-over Moving Target Defence mechanisms in a Software Defined Networking using stochastic reward nets. Journal of Network and Computer Applications, 2022, 199, 103267.	5.8	6
80	Security modeling and analysis of a self-cleansing intrusion tolerance technique. , 2015, , .		5
81	A Framework for Modeling and Assessing Security of the Internet of Things. , 2015, , .		5
82	Hybrid Attack Path Enumeration System Based on Reputation Scores. , 2016, , .		5
83	Evaluating Security and Availability of Multiple Redundancy Designs when Applying Security Patches. , 2017, , .		5
84	Software Defined Stochastic Model for Moving Target Defense. Advances in Intelligent Systems and Computing, 2018, , 188-197.	0.5	5
85	Evaluation of a Backup-as-a-Service Environment for Disaster Recovery. , 2019, , .		5
86	Evaluating the Security and Economic Effects of Moving Target Defense Techniques on the Cloud. IEEE Transactions on Emerging Topics in Computing, 2022, , 1-1.	3.2	5
87	Towards a Stochastic Model for Integrated detection and filtering of DoS attacks in Cloud environments. , 2017, , .		4
88	Stateless Security Risk Assessment for Dynamic Networks. , 2018, , .		4
89	Multi-Objective Security Hardening Optimisation for Dynamic Networks. , 2019, , .		4
90	An Automated Security Analysis Framework and Implementation for MTD Techniques on Cloud. Lecture Notes in Computer Science, 2020, , 150-164.	1.0	4

#	ARTICLE	IF	CITATIONS
91	An integrated security hardening optimization for dynamic networks using security and availability modeling with multi-objective algorithm. Computer Networks, 2022, 208, 108864.	3.2	4
92	A practical framework for cyber defense generation, enforcement and evaluation. Computer Networks, 2022, 208, 108878.	3.2	4
93	Quantitative Intrusion Intensity Assessment Using Important Feature Selection and Proximity Metrics. , 2009, , .		3
94	DDoS Attacks Detection Using GA Based Optimized Traffic Matrix. , 2011, , .		3
95	Scalable Security Analysis Using a Partition and Merge Approach in an Infrastructure as a Service Cloud. , 2014, , .		3
96	Discovering and Mitigating New Attack Paths Using Graphical Security Models. , 2017, , .		3
97	Evaluating the Security of IoT Networks with Mobile Devices. , 2018, , .		3
98	Optimal Deployments of Defense Mechanisms for the Internet of Things. , 2018, , .		3
99	Time Independent Security Analysis for Dynamic Networks Using Graphical Security Models. , 2018, , .		3
100	Moving target defense for in-vehicle software-defined networking: IP shuffling in network slicing with multiagent deep reinforcement learning. , 2020, , .		3
101	Privacy Preserving Support Vector Machines in Wireless Sensor Networks. , 2008, , .		2
102	Analyzing the Effectiveness of Privacy Related Add-Ons Employed to Thwart Web Based Tracking. , 2015, , .		2
103	Security Modeling and Analysis of a SDN Based Web Service. Lecture Notes in Computer Science, 2015, , 746-756.	1.0	2
104	Security Modeling and Analysis of Cross-Protocol IoT Devices. , 2017, , .		2
105	Availability and resiliency analysis of modern distribution grids using stochastic reward nets. , 2017, , .		2
106	Spiral^SRA: A Threat-Specific Security Risk Assessment Framework for the Cloud. , 2018, , .		2
107	Random Host and Service Multiplexing for Moving Target Defense in Software-Defined Networks. , 2019, , .		2
108	ThreatRiskEvaluator: A Tool for Assessing Threat-Specific Security Risks in the Cloud. , 2019, , .		2

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109	Model-based Cybersecurity Analysis: Past Work and Future Directions. , 2021, , .		2
110	An Optimized Intrusion Detection System Using PCA and BNN. , 2005, , .		1
111	Toward Assessing Vulnerability and Risk of Sensor Networks under Node Compromise. , 2007, , .		1
112	Quantitative intrusion intensity assessment for intrusion detection systems. Security and Communication Networks, 2012, 5, 1199-1208.	1.0	1
113	MASAT: Model-based automated security assessment tool for cloud computing. , 2015, , .		1
114	Defending against DDoS Attacks under IP Spoofing Using Image Processing Approach. IEICE Transactions on Communications, 2016, E99.B, 1511-1522.	0.4	1
115	SAGA: Secure Auto-Configurable Gateway Architecture for Smart Home. , 2019, , .		1
116	A Novel Graphical Security Model for Evolving Cyber Attacks in Internet of Things. , 2020, , .		1
117	Integrated Proactive Defense for Software Defined Internet of Things under Multi-Target Attacks. , 2020, , .		1
118	Multiple-criteria Evaluation of Disaster Recovery Strategies Based on Stochastic Models. , 2020, , .		1
119	Design of Intelligent Security Management System Using Simulation-Based Analysis. Lecture Notes in Computer Science, 2005, , 766-775.	1.0	1
120	Statistical Calibration and Validation of Mathematical Model to Predict Motion of Paper Helicopter. Transactions of the Korean Society of Mechanical Engineers, A, 2015, 39, 751-758.	0.1	1
121	Dependability and Security for Wireless Ad Hoc and Sensor Networks and Their Applications. International Journal of Distributed Sensor Networks, 2013, 9, 505313.	1.3	0
122	Scalable Network Intrusion Detection and Countermeasure Selection in Virtual Network Systems. Lecture Notes in Computer Science, 2015, , 582-592.	1.0	0
123	A Secure Server-Based Pseudorandom Number Generator Protocol for Mobile Devices. Lecture Notes in Computer Science, 2017, , 860-876.	1.0	0
124	A Game Theoretic Approach for Cloud Computing Security Assessment Using Moving Target Defense Mechanisms. Lecture Notes in Networks and Systems, 2018, , 242-254.	0.5	0
125	Reliability and Resiliency Analysis of Modern Distribution Grids Using Reliability Graphs. , 2018, , .		0
126	Security and Performance Modeling and Optimization for Software Defined Networking. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
127	Panop: Mimicry-Resistant ANN-Based Distributed NIDS for IoT Networks. IEEE Access, 2021, 9, 111853-111864.	2.6	0
128	A Hierarchical Modeling Approach for Evaluating Availability of Dynamic Networks Considering Hardening Options. , 2021, , .		0