K-riptography and Information Security for Open Networks (KISON)

Características generales | Características del Equipo de Investigación | Características de la Investigación

IDENTIFICACIÓN DEL EQUIPO INVESTIGADOR

NOMBRE DEL EQUIPO O GRUPO DE INVESTIGACIÓN	K-riptography and Information Security for Open Networks (KISON)
UNIDAD/DEPARTAMENTO DE PERTENENCIA	Internet Interdisciplinary Institute (IN3)
CENTRO/INSTITUTO/UNIVERSIDAD/ORGANISMO DE PERTENENCIA	Universitat Oberta de Catalunya

DATOS DE CONTACTO

DATOS DE CONTACTO DEL EQUIPO

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WEB DEL EQUIPO	http://kison.uoc.edu		

DIRECCIÓN POSTAL DEL EQUIPO

EDIFICIO	Parc Mediterrani de la Tecnologia (Edifici B3)	CENTRO	Internet Interdisciplinary Institute (IN3)
TIPO DE VÍA	Avenida	NOMBRE DE LA VÍA	Carl Friedrich Gauss
NÚMERO	5	CIUDAD	Castelldefels
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DIRECCIÓN POSTAL DEL ORGANISMO

EDIFICIO	Rectorado	CENTRO	
TIPO DE VÍA	Avenida	NOMBRE DE LA VÍA	Tibidabo
NÚMERO	39-43	CIUDAD	Barcelona
PROVINCIA	Barcelona	CÓDIGO POSTAL	8035

K-riptography and Information Security for Open Networks (KISON)

Características generales | **Características del Equipo de Investigación** | Características de la Investigación

INVESTIGADOR PRINCIPAL

NOMBRE	TITULACIÓN
David Megías Jiménez	Doctor en Ingeniería Informática Máster en Técnicas Adelantadas de Automatización de Procesos

TRAYECTORIA PROFESIONAL

Profesor catedrático
Cargo directivos en la universidad:
• Director of the Master programme in Free Software at UOC (2006-2009)
• Associate director of the Doctoral programme in Information and Knowledge Society at UOC (2009-2012)
• Director of the Doctoral programme in Network and Information Technologies at UOC (2012-2013)
• Director of the Doctoral School at UOC (2014-2015)
• Director of the Internet Interdisciplinary Institute (IN3) at UOC, from April 2015 (current)
Temas de investigación:
• Protección de los derechos de autor (copyright)
• Control de procesos industriales
• Industrial security
• Criptografía
• Software libre, Software de código abierto
Sexenios de investigación: 3
Tesis doctorales dirigidas: 4
Citas (google): 1358; h-index (google): 20

WEB Y REDES SOCIALES

https://www.uoc.edu/webs/dmegias/

MIEMBROS DEL EQUIPO

Garcia Font, Victor	Garrigues Olivella, Carles	Kabir, Farzana
Pérez Solà, Cristina	Prieto Blázquez, Josep	Qureshi, Amna
Rifà Pous, Helena	Romero Tris, Cristina	Serra-Ruiz, Jordi
Thankappan, Manesh		

K-riptography and Information Security for Open Networks (KISON)		
Características generales	Características del Equipo de Investigación	Características de la Investigación

LÍNEAS Y ÁREAS DE INVESTIGACIÓN	
ÁREAS DE INVESTIGACIÓN	**PRINCIPALES LÍNEAS DE INVESTIGACIÓN**
ATAQUES Y DEFENSA ANTE AMENAZAS	Detección de anomalías Identificación y localización del atacante Ciencia Forense Gestión de evidencias electrónicas Sistemas de comunicación resistentes a ataques programados
PRIVACIDAD	Sanitización y anonimización de datos Protocolos criptográficos de preservación de la privacidad Privacidad en IoT Tecnologías de seguridad respetuosas con la privacidad Sistemas de anonimidad Análisis Big Data enfocado al respeto de la privacidad
MÉTRICAS	Evaluación y métricas de privacidad
GESTIÓN DE LA IDENTIDAD	Protocolos de autenticación Autenticación criptográfica
SISTEMAS FIABLES Y ACTUALIZABLES	Internet of Things Seguridad / Privacidad mediante el diseño
ÁREAS DE INTERÉS	Fog Computing Gestión de derechos digitales Seguridad de redes Seguridad en Big Data
OTRAS	Privacidad en sistemas de blockchain Integración de DLT Smart contracts Esteganografía Fingerprinting

PUBLICACIONES RELACIONADAS DESTACADAS

PUBLICACIONES AÑO 2020

Qureshi, A., Garcia-Font, V., Rifà Pous, H. & Megías, D. (2021). Collaborative and efficient privacy-preserving critical incident management system. Expert Systems with Applications, 163(), 1-26. doi: 10.1016/j.eswa.2020.113727

Batet-Sanromà, M. & Sánchez Ruenes, D. (2020). Leveraging synonymy and polysemy to improve semantic similarity assessments based on intrinsic information content. Artificial Intelligence Review, 53(3), 2023-2041. doi: 10.1007/s10462-019-09725-4

Pérez Solà, C. & Herrera-Joancomartí, J. (2020). BArt: Trading digital contents through digital assets. Concurrency and Computation: Practice and Experience, 32(12), 1-19. doi: 10.1002/cpe.5490

Casas-Roma, J. (2020). DUEF-GA: data utility and privacy evaluation framework for graph anonymization. International Journal of Information Security, 19(4), 465-478. doi: 10.1007/s10207-019-00469-4

Prieto-Blázquez, J. & Gañán-Jimenez, D. (2020). A Methodology Approach to Evaluate Cloud-Based Infrastructures in Support for e-Assessment. Lecture Notes in Networks and Systems, 96(), 525-536. doi: 10.1007/978-3-030-33509-0_49

Salas-Piñón, J., Megías, D., Torra, V., Toger, M., Dahne, J. & Sainudiin, R. (2020). Swapping trajectories with a sufficient sanitizer. Pattern Recognition Letters, 131(), 474-480. doi: 10.1016/j.patrec.2020.02.011

Sánchez Ruenes, D., Martínez, S., Domingo Ferrer, J., Soria-Comas, J. & Batet-Sanromà, M. (2020). -ANT: Semantic microaggregation-based anonymization tool. Bioinformatics, 36(5), 1652-1653. doi: 10.1093/bioinformatics/btz792

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Garcia-Font, V. (2020). SocialBlock: An architecture for decentralized user-centric data management applications for communications in smart cities. Journal of Parallel and Distributed Computing, 145(), 13-23. doi: 10.1016/j.jpdc.2020.06.004

Pérez Navarro, A., Garcia-Font, V. & Conesa, J. (2020). Students perception of videos in introductory physics courses of engineering in face-to-face and online environments. Multimedia Tools and Applications, (), -. doi: 10.1007/s11042-020-09665-0

PUBLICACIONES AÑO 2019

Ros Martín, M., Salas-Piñón, J. & Casas-Roma, J. (2019). Scalable non-deterministic clustering-based k-anonymization for rich networks. International Journal of Information Security, 18(2), 218-238. doi: 10.1007/s10207-018-0409-1

Casas-Roma, J., Salas-Piñón, J., Malliaros, F. & Vazirgiannis, M. (2019). k-Degree anonymity on directed networks. Knowledge and Information Systems, 61(3), 1743-1768. doi: 10.1007/s10115-018-1251-5

Rodríguez-García, M., Batet-Sanromà, M. & Sánchez Ruenes, D. (2019). Utility-preserving privacy protection of nominal data sets via semantic rank swapping. Information Fusion, 45(), 282-295. doi: 10.1016/j.inffus.2018.02.008

Qureshi, A., Megías, D. & Rifà Pous, H. (2019). SeVEP: Secure and Verifiable Electronic Polling System. IEEE Access, 7(), 19266-19290. doi: 10.1109/ACCESS.2019.2897252

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Sabillon, R., Serra-Ruiz, J., Cavaller Reyes, V. & Cano, J. (2019). An Effective Cybersecurity Training Model to Support an Organizational Awareness Program: The Cybersecurity Awareness Training Model (CATRAM). A Case Study in Canada. Journal of Cases on Information Technology, 21(3), 26-39. doi: 10.4018/JCIT.2019070102

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Serra-Ruiz, J., Qureshi, A. & Megías, D. (2019). Entropy-Based Semi-Fragile Watermarking of Remote Sensing Images in the Wavelet Domain. Entropy, 21(9), -. doi: 10.3390/e21090847

Oukemeni, S., Rifà Pous, H. & Marquès, J. (2019). IPAM: Information Privacy Assessment Metric in Microblogging Online Social Networks. IEEE Access, 7(), 114817-114836. doi: 10.1109/ACCESS.2019.2932899

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González Campos, J.S., Sánchez-Navarro, J. & Arnedo Moreno, J. (2019). An empirical study of the effect that a computer graphics course has on visual-spatial abilities. International Journal of Educational Technology in Higher Education, 16(), 1-21. doi: 10.1186/s41239-019-0169-7

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Torra, V. & Salas-Piñón, J. (2019). Graph Perturbation as Noise Graph Addition: A New Perspective for Graph Anonymization. Lecture Notes in Computer Science, 11737(), 121-137. doi: 10.1007/978-3-030-31500-9_8

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Baró Solé, X., Guerrero-Roldán, A.E., Prieto-Blázquez, J., Rozeva, A., Marinov, O., Kiennert, C., Rocher, P.-O. & García Alfaro, J. (2018). Integration of an adaptive trust-based e-assessment system into virtual learning environments - The TeSLA project experience. Internet Technology Letters, 1(4), 1-6. doi: 10.1002/itl2.56

Garcia-Font, V., Garrigues Olivella, C. & Rifà Pous, H. (2018). Difficulties and challenges of anomaly detection in smart cities: a laboratory analysis. Sensors, 18(10), 1-21. doi: 10.3390/s18103198

Romero-Tris, C. & Megías, D. (2018). Protecting privacy in trajectories with a user-centric approach. ACM Transactions on Knowledge Discovery from Data, 12(6), 1-27. doi: 10.1145/3233185

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Características generales | Características del Equipo de Investigación | **Características de la Investigación**

PUBLICACIONES RELACIONADAS DESTACADAS

Pérez Solà, C., Herrera-Joancomartí, J. & Rifà Pous, H. (2018). On improving automated self-assessment with moodle quizzes: Experiences from a cryptography course. Communications in Computer and Information Science, 829(), 176-189. doi: 10.1007/978-3-319-97807-9_14

Salas-Piñón, J., Megías, D. & Torra, V. (2018). SwapMob: Swapping trajectories for mobility anonymization. Lecture Notes in Computer Science, 11126(), 331-346. doi: 10.1007/978-3-319-99771-1_22

Torra, V., Jonsson, A., Navarro-Arribas, G. & Salas-Piñón, J. (2018). Synthetic generation of spatial graphs. International Journal of Intelligent Systems, 33(12), 2364-2378. doi: 10.1002/int.22034

Cánovas Izquierdo, J.L. & Salas-Piñón, J. (2018). A UML profile for privacy enforcement. Lecture Notes in Computer Science, 11176(), 609-616. doi: 10.1007/978-3-030-04771-9_46

Salas-Piñón, J. & Torra, V. (2018). A General Algorithm for k-anonymity on Dynamic Databases. Lecture Notes in Computer Science, 11025(), 407-414. doi: 10.1007/978-3-030-00305-0_28

PUBLICACIONES AÑO 2017

Casas-Roma, J., Herrera-Joancomartí, J. & Torra, V. (2017). k-Degree Anonymity And Edge Selection: Improving Data Utility In Large Networks. Knowledge and Information Systems, 50(2), 447-474. doi: 10.1007/s10115-016-0947-7

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Megías, D. & Qureshi, A. (2017). Collusion-resistant and privacy-preserving P2P multimedia distribution based on recombined fingerprinting. Expert Systems with Applications, 71(), 147-172. doi: 10.1016/j.eswa.2016.11.015

Soria-Comas, J., Domingo Ferrer, J., Sánchez Ruenes, D. & Megías, D. (2017). Individual Differential Privacy: A Utility-Preserving Formulation of Differential Privacy Guarantees. IEEE Transactions on Information Forensics and Security, 12(6), 1418-1429. doi: 10.1109/TIFS.2017.2663337

Rodríguez-García, M., Batet-Sanromà, M. & Sánchez Ruenes, D. (2017). A semantic framework for noise addition with nominal data. Knowledge-Based Systems, 122(), 103-118. doi: 10.1016/j.knosys.2017.01.032

Sánchez Ruenes, D. & Batet-Sanromà, M. (2017). Toward sensitive document release with privacy guarantees. Engineering Applications of Artificial Intelligence, 59(), 23-34. doi: 10.1016/j.engappai.2016.12.013

Garcia-Font, V., Garrigues Olivella, C. & Rifà Pous, H. (2017). Attack Classification Schema for Smart City WSNs. Sensors, 17(4), 1-24. doi: 10.3390/s17040771

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Lastra-Díaz, J.J., García-Serrano, A., Batet-Sanromà, M., Fernández, M. & Chirigati, F. (2017). HESML: A scalable ontology-based semantic similarity measures library with a set of reproducible experiments and a replication dataset. Information Systems, 66(), 97-118. doi: 10.1016/j.is.2017.02.002

Mora Carreño, A., Riera-Terrén, D., González, C. & Arnedo Moreno, J. (2017). Gamification: a systematic review of design frameworks. Journal of Computing in Higher Education, 29(3), 516-548. doi: 10.1007/s12528-017-9150-4

Sánchez Ruenes, D. & Batet-Sanromà, M. (2017). Privacy-preserving data outsourcing in the cloud via semantic data splitting. Computer Communications, 110(), 187-201. doi: 10.1016/j.comcom.2017.06.012

Amigud, A., Arnedo Moreno, J., Daradoumis, T. & Guerrero-Roldán, A.E. (2017). Using learning analytics for preserving academic integrity. International Review of Research in Open and Distance Learning, 18(5), 192-210. doi: 10.19173/irrodl.v18i5.3103

PUBLICACIONES AÑO 2016

Miguel Moneo, J., Caballé, S., Xhafa, F., Prieto-Blázquez, J. & Barolli, L. (2016). A methodological approach for trustworthiness assessment and prediction in mobile online collaborative learning. Computer Standards & Interfaces, 44(), 122-136. doi: 10.1016/j.csi.2015.04.008

Lerch-Hostalot, Daniel & Megías, D. (2016). Unsupervised steganalysis based on artificial training sets. Engineering Applications of Artificial Intelligence, 50(), 45-59. doi: 10.1016/j.engappai.2015.12.013

Qureshi, A., Megías, D. & Rifà Pous, H. (2016). PSUM: Peer-to-peer multimedia content distribution using collusion-resistant fingerprinting. Journal of Network and Computer Applications, 66(), 180-197. doi: 10.1016/j.jnca.2016.03.007

Romero-Tris, C. & Megías, D. (2016). User-centric Privacy-Preserving Collection and Analysis of Trajectory Data. Lecture Notes in Computer Science, 9481(), 245-253. doi: 10.1007/978-3-319-29883-2_17

Garcia-Font, V., Garrigues Olivella, C. & Rifà Pous, H. (2016). A Comparative Study of Anomaly Detection Techniques for Smart City Wireless Sensor Networks. Sensors, 16(6), 0-0. doi: 10.3390/s16060868

Sabillon, R., Cano, J., Cavaller Reyes, V. & Serra-Ruiz, J. (2016). Cybercrime and Cybercriminals: A Comprehensive Study. International Journal of Computer Networks and Communications Security, 4(6), 165-176.

Qureshi, A., Rifà Pous, H. & Megías, D. (2016). Enabling collaborative privacy in user-generated emergency reports. Lecture Notes in Computer Science, 9867(), 255-271. doi: 10.1007/978-3-319-45381-1_19

Marqués Arpa, T. & Serra-Ruiz, J. (2016). Procedure for Obtaining and Sharing the Digital Evidence. International Journal of Chaotic Computing, 4(1), 79-86. doi: 10.20533/ijcc.2046.3359.2016.0010