Mikel Egaña Aranguren, Ph.D.

Associate Professor

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Education

2009	**Ph.D.** Computer Science, University of Manchester, UK
2005	**M.Sc.** Bioinformatics, University of Manchester, UK
2003	**B.Sc.** Biology, University of Basque Country, Spain
2002	**Invited student** Evolutionary Ecology at Canterbury Christ Church University College, UK
2002	**Erasmus student** Environmental Biology at Canterbury Christ Church University College, UK

Employment

2024/07/01 - Present	**Associate Professor**, Dept. of Computer Languages and Systems, UPV/EHU
2020/09/01 - 2024/06/30	**Assistant Professor**, Dept. of Computer Languages and Systems, UPV/EHU
2018/12/02 - 2020/08/31	**Linked Data Consultant** Eccenca GmbH Development of Linked Data solutions for the Enterprise, including project management
2018/10/01 - 2018/12/02	**Bioinformatics technician** Biocruces Bizkaia Data infrastructure development, Bioinformatics analyses
2016/01/14 - 2018/09/30	**Analyst, Torres Quevedo fellow** Eurohelp Consulting Design and development of Linked Open Data solutions
2015/04/27 - 2016/01/14	**Analyst** Eurohelp Consulting Design and development of Linked Open Data solutions

Research positions

2014/04/01 - 2015/03/31	**Post-doc researcher (80% FTE)** Genomic Resources Group, UPV/EHU Metagenomics and Life Sciences Semantic Web
2011/02/14 - 2014/02/14	**Post-doc researcher, Marie Curie Cofund fellow** Ontology Engineering Group (Computer Science); Biological Informatics Group (CBGP), UPM, Spain Ontology Engineering and Life Sciences Semantic Web
2010/12/01 - 2011/02/01	**Researcher** OGO project, UM, Spain Orthologous Genes Ontology
2006/05/01 - 2006/10/1	**Pre-doc researcher, Marie Curie EST fellow** Computational Biology group, VIB, Belgium Cell Cycle Ontology and Ontology Design Patterns

Freelance positions

2018/10/15 - 2018/12/02	**Ontology Engineering**. Cognizone, Belgium
2018/05/01 - 2018/07/31	**Public tender technical writer**. University of Murcia Project Hercules: Federated Linked Open Data for universities

Research visits

2005/09/01 - 2005/10/01	European Bioinformatics Institute (EBI), funded by the Network of Excellence on Semantic Interoperability and Data Mining in Biomedicine (EU)

Personal funding

2018-2020 (2 years)	**Declined** Bioinformatics Technician. Instituto de Salud Carlos III. CA18/00021
2016-2018 (3 years)	Torres Quevedo (Spain). 35% of salary at Eurohelp Consulting. PTQ-14-07198
2011-2014 (3 years)	Marie Curie Cofund (EU). UNITE 246565
2006 (5 months)	Marie Curie EST (EU). MEST-CT-2004-414632
2005 (One payment)	EPSRC (UK): Ph.D. fees
2005 - 2008 (3 years)	University of Manchester (UK): Ph.D. maintenance allowance
2002 (5 months)	Erasmus (EU)

Participation in projects

Research

2025	EuskoPVmap. 20.000,00 EUR.
2024 - 2027	BRAINMAP-REHAB (Biocruces)
2024	EHUkhi: una plataforma para el desarrollo del potencial fotovoltaico de la UPV/EHU (Campus Bizia Lab). 2.225,00 EUR.
2021 - 2025	SUPPORT4LHS (Process Mining and Knowledge Representation technologies to Support the Learning Health System). PID2020-113723RB-C22. Agencia Estatal de Investigación, "Proyectos I+D+i 2020" - Modalidades "Retos Investigación" y "Generación de Conocimiento" (Plan Estatal de Investigación Científica y Técnica y de Innovación 2017-2020). 136.972,00 EUR. 01/09/2021 - 31/08/2024
2010 - 2015	Grupo de Investigación del Sistema Universitario Vasco. "Análisis genómicos de la variación del ADN" (GIC10/58-IT558-10). Basque government
2012 - 2014	Genes And Proteins for AutoImmunity Diagnostics GAPAID. FP7-SME - Specific Programme "Capacities": Research for the benefit of SMEs (7PM-CAPACITIES-SMEs12/01)
2007 - 2010	Plataforma web para gestión de conocimientos guiada por ontologías en genómica funcional. Proyecto Industrial- Regional Murcia (BIO-TEC 06/01-0005)

Transfer

2025	Cybersecurity Knowledge Graphs (2). Universidad de Murcia (UM), SIEMENS (14.000,00 EUR). Knowledge transfer project (TR42623) managed by Euskoiker foundation.
2024 - 2027	GAITECH. Company: LKS Next Gob Tech Euskadi; funding program: HAZITEK. Knowledge transfer project (PT10948) managed by Euskoiker foundation.
2024	Cybersecurity Knowledge Graphs. Universidad de Murcia (UM), SIEMENS (8.000,00 EUR). Knowledge transfer project (PT10885) managed by Euskoiker foundation.
2023 - 2024	Methods for automatic generation of Knowledge Graph. Universidad de Murcia (UM), BASF (8.000,00 EUR). Knowledge transfer project (TR42135) managed by Euskoiker foundation.
2021 - 2022	Producción de Datos Enlazados para Open Data Euskadi. EJIE (Sociedad Informática del Gobierno Vasco), 2105015. (9.000,00 EUR) Knowledge transfer project (TR41652) managed by Euskoiker foundation.

Development

2017 - 2018	SOLDAGE (Semantic Open Linked DAta GEnerator). HAZITEK, Gobierno Vasco. FAIR data generator (150.000 EUR).
2016 - 2020	REPLICATE. Renaissance of Places with Innovative Citizenship And TEchnology (Project 691735), EU. Linked Open Data in Smart Cities (http://replicate-project.eu/). (Consortium: 24.965.263,09; Eurohelp: 328.580,00 EUR).
2015 - 2017	Linking Open Domains, Plataforma para la generación de datos enlazados (LODGen) (TSI-100105-2015-0012). Ministerio de Industria, Energia y Turismo (Spain), Acción Estratégica Economía y Sociedad Digital (AEESD) 1/2015. Linked Open Data pipeline (40.182,54 EUR).
2015 - 2016	Enlazando Gipuzkoa con el Mundo (ENGIMU). Gipuzkoako Foru Aldundia, Gipuzkoa IKT: Innovación digital Empresas (Spain). Linked Open Data pipeline (40.000 EUR).

Public tender

2018	Servicios Directorio. EJIE (Sociedad Informática del Gobierno Vasco). (70.000 EUR).
2016 - 2017	Servicios Open Linked Data. EJIE (Sociedad Informática del Gobierno Vasco). Linked Data implementation of Open Data Euskadi (90.000 EUR).

Publications

For publications please refer to https://mikel-egana-aranguren.github.io/publications/.

Committees and reviewer work

2025	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2025)
2024	**Reviewer** for Journal of Biomedical Semantics (JBS)
2024	**Reviewer** for Bioinformatics (https://publons.com/wos-op/review/author/73gSS0Ol/)
2023	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2023)
2022	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2022)
2020	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2020)
2019	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2019)
2018	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2018)

2017	**Program Committee Member** at Semantic Web Solutions for Large-Scale Biomedical Data Analytics (SeWeBMeDA 2017)
2017	**Chapter review** "Integrating Biological Data using Semantic Web Technology" in "Evolutionary Genomics. Computational and statistical methods", 3rd edition, Springer
2015	**Program Committee Member** at Linked Data workshop (CAEPIA 2015)
2015	**Reviewer** for BMC Medical Informatics and Decision Making
2013	**Special issue editor** for Semantic Web Journal (SWJ): Special issue on Linked Data for Health Care and the Life Sciences
2013	**Reviewer** for PeerJ
2013	**Reviewer** for Data and Knowledge Engineering (DKE)
2012	**Program Committee Member** at Managing Interoperability and compleXity in Health Systems. In conjunction with the ACM International Conference on Information and Knowledge Management
2012	**Program Committee Member** at Joint Workshop on Semantic Technologies Applied to Biomedical Informatics and Individualized Medicine (SATBI + SWIM 2012). In conjunction with International Semantic Web Conference (ISWC)
2012	**Reviewer** for BMC Bioinformatics
2012	**Reviewer** for Journal of Biomedical Informatics (JBI)
2012	**Reviewer** for Computational and Mathematical Methods in Medicine (CMMM)
2012	**Reviewer** for Journal of Medical Systems (JOMS)
2012	**Reviewer** for Journal of Biomedical Semantics (JBS)
2011	**Program Committee Member** at Managing Interoperability and compleXity in Health Systems. In conjunction with the ACM International Conference on Information and Knowledge Management
2011	**Program Committee Member** at Knowledge Capture (K-CAP)
2011	**Program Committee Member** at Semantic Applied Technologies on Biomedical Informatics (SATBI 2011). In conjunction with the ACM International Conference on Bioinformatics and Computational Biology
2011	**Reviewer** for Semantic Web Journal (SWJ)
2011	**Reviewer** for Journal of Research and Practice in Information Technology (JRPIT)
2008	**Program Committee Member** at ONTORACT

Invited Talks

2016	Los Datos Enlazados y la Web Semántica. Tikitalka, VE Interactive, Spain
2014	Building reasonable biomedical ontologies for a Life Sciences Semantic Web. 3S (Systems, Synthetic, and Semantic) Biology summer school. CIBIO (Centre for Integrative Biology), University of Trento, Italy
2011	Linked Data for Functional Genomics. NTNU, Trondheim, Norway
2010	Aplicación de la Web Semántica en Biología Molecular. Universidad de Deusto, Facultad de Ingeniería, Spain
2008	Aplicación de la Web Semántica en Bioinformática. UM, Facultad de Informática, Spain

2004	Métodos y resultados actuales en Bioinformática: know-how y know-what de las redes tecnocientíficas en Bioinformática. EHU, Facultad de Filosofía, Spain

Teaching Experience

2024	Administration of Data Bases (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2024	FAIR data (0.5 ECTS). MSc Bioinformatics, UM. Spanish
2024	Information Security (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2023	Administration of Data Bases (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2023	FAIR data (0.5 ECTS). MSc Bioinformatics, UM. Spanish
2023	Information Security (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2022	FAIR data (0.5 ECTS). MSc Bioinformatics, UM. Spanish
2022	Information Security (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2022	Analysis and Design of Information Systems (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish
2021	FAIR data (0.5 ECTS). MSc Bioinformatics, UM. Spanish
2021	Information Security (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2021	Analysis and Design of Information Systems (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish
2021	Project Management (3 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish and Basque
2020	FAIR data (0.5 ECTS). MSc Bioinformatics, UM. Spanish
2020	Information Security (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish
2020	Analysis and Design of Information Systems (6 ECTS). Degree in Computer Engineering of Management and Information Systems, UPV/EHU. Spanish
2017	Life Sciences Semantic Web (1 ECTS). MSc Bioinformatics, UM. Spanish
2016	Life Sciences Semantic Web (1 ECTS). MSc Bioinformatics, UM. Spanish
2016	Linked Open Data tutorial. EJIE. Spanish
2015	Linked Open Data tutorial. IZFE (Informatika Zerbitzuen Foru Elkartea, Gipuzkoa). Spanish
2015	Life Sciences Semantic Web (1 ECTS). MSc Bioinformatics, UM. Spanish
2014	Semantic biology tutorial: Use of Semantic Web resources for knowledge discovery. 3S (Systems, Synthetic, and Semantic) Biology summer school. CIBIO (Centre for Integrative Biology), University of Trento, Italy. English
2014	Galaxy tutorial. Erasmus mundus MSc in Marine Environment and resources, UPV-EHU. English

2014	Life Sciences Semantic Web (1 ECTS). MSc Bioinformatics, UM. Spanish
2013	Introductory talk on bioinformatics for high school students visiting the CBGP. Spanish
2013	Galaxy tutorials at CBGP. English and spanish
2013	Life Sciences Linked Data (1 ECTS). MSc Bioinformatics, UM. Spanish
2012	OWL, as part of ATHENS course (UPM). English
2012	OWL, as part of ATHENS course (UPM). English
2011	Populous tutorial at SWAT4LS (London, UK), English
2011	OWL, as part of ATHENS course (UPM). English
2011	Web Ontology Language (OWL), as part of Artificial Intelligence MSc (UPM). English
2011	OWL/Description Logics, as part of the Artificial Intelligence course (UPM). Spanish
2005-2008	OWL tutorials for biologists (University of Manchester, UK). English

Ph.D. panels

2016	Alejandro Rodríguez Iglesias, "FAIR approaches applied to unraveling plant-pathogen interactions data and RNA processing evolution", UPM, Spain
2013	Meifania Monica Chen, "Lipoprotein Ontology: A Formal Representation of Lipoproteins", Curtin University. Australia
2012	Jose Antonio Miñarro-Giménez, "Entorno para la gestión semántica de información biomédica en investigación traslacional". UM, Spain
2011	Doris Mejía Ávila, "Estrategia de interoperabilidad semántica en el contexto de integración de conocimiento geográfico y ambiental. Caso de aplicación: Biodiversity Ontology". UPM, Spain

Student supervision

2024	Unai Elorriaga. "Research and evaluation of Openpilot through adversarial examples". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2024	Unai Castro. "App para la gestión de deportes entre amigos incluyendo estadísticas". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2024	Alberto Aróstegui. "Sistema ChatGPT-RAG para una mejor interacción con Jira". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2024	Alvaro Diez-Andino. "Cifrado asimétrico: Desde la perspectiva clásica a la cuántica a través de RSA". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain

2024	Mikel Perez. "Order superfast: App para la agilización de pedidos en restaurantes". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2024	Gorka del Río. "Aplicación móvil de intercambio de parejas con conocimiento cero". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2024	Igor Isasi. "Aplicación Web de exploración de datos en mapas basada en APIs REST de Open Data Euskadi". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2024	Paul Charrier. "Party Beast" Final Degree Project (TFG/GrAL), Erasmus+ (Ecole d'Ingenieurs ESME Sudria), UPV/EHU, Spain
2023	Joel García. "Aplicación de ChatGPT para la mejora de procesos de desarrollo en un entorno empresarial". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2023	Ena Verhorst. "Migración de una aplicación de gestión a una nube comercial usando integración continua". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2023	Aitor San Jose. "Desarrollo de una aplicación de soporte a revisiones médicas usando Odoo". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2023	Jon Garcia. "'Técnicas para la gestión de secretos en entornos cloud'. Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2023	Joseba Rodriguez. "Aplicación web basada en Nmap para monitorizar seguridad de servicios en una red corporativa". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2022	Maialen Ruiz. "Hezkuntzako ordezkapenak aukeratzeko mapa bidezko aplikazioa". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2022	Jon Ander Asua. "Grafo batean balizko ustelkeriaren datuak irudikatzeko framework generikoa". Final Degree Project (TFG/GrAL), Bachelor's Degree in Computer Engineering in Management and Information Systems, UPV/EHU, Spain
2015	Salvador Alonso Martínez. "Imagen Docker para pipelines de Metagenómica", Bioinformatics MSc project (TFM), UM, Spain

Certifications and courses

2023	Tus estudiantes usan ChatGPT y lo sabes. 2 hours course by Grupo 9 de Universidades (G-9)
2023	Neo4J Certified Professional. Issued by Neo4J
2023	Semantic Integration Training. Issued by Semantic Web Company
2023	Knowledge Engineering Training. Issued by Semantic Web Company
2019	Docker Essentials: A Developer Introduction. Issued by Cognitive Class

2017	Predictive modelling. 20 hours course at Tecnalia
2011	Profesor Ayudante Doctor. Issued by ANECA
2003	Microsoft Visual Basic. 25 hours course at UPV/EHU
2003	Working risks prevention. 30h course at Bionatur Biologists Association (UPV/EHU)
2003	UNIX administration. 24 hours course at UPV/EHU
2002	ISO 9001:2000. 30h course at Bionatur Biologists Association (UPV/EHU)
2002	XML. 16 hours course at University of Deusto
1998	Environmental sciences (Ekoeskola). 65 hours course at Erreka Ecologist Platform

Technical expertise

Semantic Web stack: RDF (JSON-LD, TTL), SPARQL, OWL, SHACL, RML

Ontologies: SKOS, DCAT, VoID, Data Cube, WGS84, Open Biomedical Ontologies, Schema, European Legislation Identifier, and more

Ontology editors: Protégé

Databases: GraphDB, Stardog, Virtuoso, Blazegraph, RDFox, Neo4j, MongoDB, MariaDB

Linked/Open/FAIR Data: Trifid, Pool Party (Semantic Web Company), Corporate Memory (Eccenca GmbH), Morph-KGC, YARRRML, FAIR Data Point

Libraries: OWL API, RDFLib, Jena, RDF4J

Programming: Java, Python, Bash

Version control: Git (GitHub, GitLab)

Open Data: CKAN, Open Refine

Project management: Jira, Confluence, GitHub projects, Kanban

Cloud computing: Google Cloud, Azure

DevOps: GitHub actions, Docker, Docker compose, Ansible, Bamboo, Jenkins, Travis

Membership

Sociedad Española de Inteligencia Artificial en Biomedicina (BIOMED): https://iabiomed.org/

Sociedad Española de Bioinformática y Biología Computacional (SEBiBC): https://sebibc.es/

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