



RIKARDO MINGUEZ GABIÑA CURRICULUM VITAE

WORK PLACE DETAILS

Department: GRAPHIC DESIGN AND ENGINEERING PROJECTS

Knowledge Areas (UNESCO Codes): 1203.09 3312.00 3313.00

Work Place: FACULTY OF ENGINEERING IN BILBAO

Http: <http://www.ehu.es/PDL> / <http://www.ehu.es/agip>

Address: Torres Quevedo Ingeniariaren Plaza, 1 48013 BILBAO – BIZKAIA

e-mail: rikardo.minguez@ehu.eus

Tel.: 34 94 601 73 25



Professional Status: ASSOCIATED PROFESSOR (at university since January 1998)

HEAD OF DEPARTMENT GRAPHIC DESIGN AND ENGINEERING PROJECTS since November 2016

QUALIFIED AS A FULL PROFESSOR BY THE BASQUE UNIVERSITY AGENCY FOR QUALITY ASSESSMENT (UNIBASQ) in 2019

ACADEMIC DETAILS

<u>Engineering Degree</u>	<u>Place</u>	<u>Date</u>
Industrial Engineering (Mechanical area)	Faculty of Engineering in Bilbao	1995
<u>PhD</u>	<u>Place</u>	<u>Date</u>
Chemistry And Environmental Engineering	Faculty of Engineering in Bilbao	2001

Advisor: José Luis Rodríguez Frutos

LANGUAGES

BASQUE: Fluent

SPANISH: Fluent

ENGLISH: Upper-Intermediate

FRENCH: Upper-Intermediate

GERMAN: Intermediate

Undergraduate Teaching Experience

Industrial Engineering (First Term). Representation Systems. 1998 - 2004 School Years

Industrial Engineering (Second Term). Technical Drawing. 2000 - 2017 School Years

Industrial Engineering (Tenth Term). Advanced Graphics. 2005-2014 School Years

Chemical Engineering (Second Term). Graphic Expression in Engineering. 2002-2003 School Years

Telecommunication Engineering (Third Term). Graphic Expression in Engineering. 2001-2005 School Years

Postgraduate Teaching Experience

Industrial Engineering master´s Degree (2nd Term). Product Lifecycle Management. 2014-2020 School Years

PhD Program `Design Engineering` 2003-2005: Assembly Verification: Digital Mock-Up

PhD Program `Design Engineering` 2004-2010: Construction Methods and Quality Concepts in Surface Styling

2001/2020 Advanced CATIA V5 Teacher. Master Studies in Aeronautic Technologies.

2010/2020 Advanced UNIGRAPHICS NX Teacher. Master Studies in Machine Tool Technologies

2003/2015 Advanced UNIGRAPHICS NX Teacher. Master Studies in Product Lifecycle Management.

Computer Literacy (Computer Aided Design)

Skilled in Surface Modelling and Surface Styling with UNIGRAPHICS NX, CATIA V5 R25, Solid Edge ST2020

Reverse Engineering: Geomagid Studio, Geomagic Design X (Rapidform XOR), ATOS-GOM

Non Academic Professional Career

Period: 1.994 – 2.000

Job: PROJECT MANAGER

Company: SUEZ - DEGRÉMONT

Hobbies and Interests

Member of the non-governmental organization `medicus mundi` in Biscay (www.medicusmundi.es/bizkaia)

Open Water swimmer in a Master Team

RESEARCH EXPERIENCE

MAIN RESEARCH PROJECTS IN RECENT YEARS

Title: Funding of the Product Design Laboratory Research Group

Principal Investigator: Rikardo Minguez

Financial Institution: Basque Government (GIC18/87)

Start Date: 2018

End Date: 2021

Title: Hybrid Metrological Technologies for Advanced Manufacturing and 3D Printing Processes - II

Principal Investigator: Rikardo Minguez

Financial Institution: Basque Government / ELKARTEK 2018

Start Date: 2018

End Date: 2019

Title: Integration of Reverse Engineering Techniques and Augmented Reality into the Digital Dental Workflow

Principal Investigator: Eneko Solaberrieta

Financial Institution: Foral Institution of Gipuzkoa

Start Date: 2017

End Date: 2018

Title: Hybrid Metrological Technologies for Advanced Manufacturing and 3D Printing Processes

Principal Investigator: Rikardo Minguez

Financial Institution: Basque Government / ELKARTEK 2017

Start Date: 2017

End Date: 2018

Title: Integral Development of the Laser-Contribution Process for the Additive Manufacturing and Repair of High Value-Added Components

Principal Investigator: Aitzol Lamikiz

Financial Institution: Spanish Ministry of Economy and Competitiveness - MINECO

Start Date: 2016

End Date: 2019

Title: Funding of the Product Design Laboratory Research Group

Principal Investigator: Rikardo Minguez

Financial Institution: Basque Government / University of the Basque Country (GIU15/22)

Start Date: 2015

End Date: 2018

Title: ODONTEK - SAIOTEK 2013

Principal Investigator: Eneko Solaberrieta

Financial Institution: Basque Government

Start Date: 2013

End Date: 2014

Title: Funding of the Product Design Laboratory Research Group

Principal Investigator: Rikardo Minguez

Financial Institution: Basque Government / University of the Basque Country (GIU10/15)

Start Date: 2010

End Date: 2013

Title: GD&T inspection semiautomatic method based in a non-contact 3D digitalization by means of Reverse Engineering

Principal Investigator: Rikardo Minguez

Financial Institution: Basque Government / University of the Basque Country (EHU08/48)

Start Date: 2008

End Date: 2010

Title: eCO-BERRI - Eco-Innovación en Euskadi: Políticas, Tecnología y Competitividad

Principal Investigator: Javier Muniozguren

Financial Institution: Basque Government / ETORTEK 2008

Start Date: 2008

End Date: 2010

Title: Innovation in Reverse Engineering Techniques in Industrial Product Design

Principal Investigator: Javier Muniozguren

Financial Institution: Foral Institution of Biscay / Ekinberri Program (7 / 12 / EK / 2007 / 52)

Start Date: 2007

End Date: 2008

LATEST PUBLICATIONS / ARTICLES

Authors: Aitor San-Francisco, Nerea Sopelana, Jose-Maria Fernandez, Jose-Ramon Otegi, Rikardo Minguéz

Title: Analysis about the incorporation of remanufacturing concept into life cycle assessment theories

Journal: Journal of Remanufacturing

Date: 2020

Ref: <https://doi.org/10.1007/s13243-019-00078-3>

Authors: Gorka Kortaberria, Eneko Gómez-Acedo, Jorge Molina, Alberto Tellaeche, Rikardo Minguéz

Title: Theoretical accuracy assessment of model-based photogrammetric approach for pose estimation of cylindrical elements

Journal: Measurement Science and Technology

Date: 2019

Ref: <https://doi.org/10.1088/1361-6501/ab0b7d>

Authors: Agustín Arias, Rikardo Minguéz, Eneko Solaberrieta, Nestor Goikoetxea, Jokin Gorozika, Egoitz Sierra, Javier Muniozgueren

Title: Effect of the matte powder coating on the accuracy of the measurement of a conical characteristic by optical techniques

Journal: DYNA

Date: 2019

Ref: 94(2). 209-214. DOI: <http://dx.doi.org/10.6036/8897>

Authors: Rikardo Minguéz, Lander Barrenetxea, Eneko Solaberrieta, Erlantz Lizundia

Title: A simple approach to understand the physical aging in polymers

Journal: European Journal of Physics

Date: 2019

Ref: DOI: 10.1088/1361-6404/aaf244

Authors: Mikel Iturrate, Rikardo Minguéz, Guillermo Pradies, Eneko Solaberrieta

Title: Obtaining reliable intraoral digital impressions in a multiple implants edentulous scenario. Description of the technique

Journal: The Journal of Prosthetic Dentistry

Date: 2019

Ref: DOI: 10.1016/J.PROSDENT.2018.03.008

Authors: Eneko Solaberrieta, Lander Barrenetxea, Rikardo Minguéz, Mikel Iturrate, Iñigo De Prado

Title: Registration of mandibular movement for dental diagnosis, planning and treatment

Journal: International Journal on Interactive Design and Manufacturing

Date: 2018

Ref: Vol. 12, no. 3, pp. 1027-1038

Authors: Iñigo De Prado; Mikel Iturrate, Rikardo Minguéz, Eneko Solaberrieta

Title: Evaluation of the accuracy of a system to align occlusal dynamic data on 3d digital casts

Journal: Biomed Research International

Date: 2018

Ref: Vol. 2018, DOI: 10.1155/2018/8079089 (open access)

Authors: Gorka Kortaberria, Unai Mutilba, Eneko Gomez, Alberto Tellaeche, Rikardo Minguéz

Title: Accuracy evaluation of dense matching techniques for casting part dimensional verification

Journal: Sensors

Date: 2018

Ref: Vol. 18, no. 9, pp. 3074

Authors: Gorka Kortaberria, Aitor Olarra, Alberto Tellaeche, Rikardo Minguéz

Title: Close Range Photogrammetry for Direct Multiple Feature Positioning Measurement without Targets

Journal: Journal of Sensors

Date: 2017

Ref: Vol. 2017, pp. 1-10 (open access)

Authors: Rikardo Minguéz, Agustín Arias, Olatz Etxaniz, Eneko Solaberrieta, Lander Barrenetxea

Title: Framework for verification of positional tolerances with a 3D non-contact measurement method

Journal: International Journal on Interactive Design and Manufacturing

Date: 2016

Ref: Vol. 10, no. 2, pp. 85-93

Authors: Eneko Solaberrieta, Asier Garmendia, Rikardo Minguez, Aritz Brizuela, Guillermo Pradies

Title: Virtual Facebow Technique

Journal: The Journal of Prosthetic Dentistry

Date: 2015 **Ref:** Vol. 114, no. 6, pp. 751-755

Authors: Eneko Solaberrieta, Rikardo Minguez, Lander Barrenetxea, Jose Ramon Otegi, Andras Szentpetery

Title: Comparison of the accuracy of a 3-dimensional virtual method and the conventional method for transferring the maxillary cast to a virtual articulator

Journal: The Journal of Prosthetic Dentistry

Date: 2015 **Ref:** Vol. 113, no. 3, pp. 191-197

Authors: Eneko Solaberrieta, Rikardo Minguez, Olatz Etxaniz, Jose Ramon Otegi

Title: Improved digital transfer of the maxillary cast to a virtual articulator

Journal: The Journal of Prosthetic Dentistry

Date: 2014 **Ref:** Vol. 112, no. 4, pp. 921-924

Authors: Eneko Solaberrieta, Rikardo Minguez, Olatz Etxaniz, Lander Barrenetxea, Egoitz Sierra

Title: Computer-aided dental prostheses construction using reverse engineering

Journal: Computer Methods in Biomechanics and Biomedical Engineering

Date: 2014 **Ref:** Vol. 17, no. 12, pp. 1335-1346

Authors: Eneko Solaberrieta, Rikardo Minguez, Olatz Etxaniz, Lander Barrenetxea, Jokin Gorozika, Egoitz Sierra

Title: Virtual production of dental prostheses using a dental virtual articulator

Journal: International Journal on Interactive Design and Manufacturing

Date: 2014 **Ref:** Vol. 9, no. 1, pp. 19-30

Authors: Eneko Solaberrieta, Rikardo Minguez, Olatz Etxaniz, Lander Barrenetxea

Title: Improving the digital workflow: direct transfer from patient to virtual articulator

Journal: International Journal of Computerized Dentistry

Date: 2013 **Ref:** Vol. 16, no. 4, pp. 285-292

Author(s): Rikardo Minguez, Lander Barrenetxea, Eneko Solaberrieta, Olatz Etxaniz

Title: Retrieval of unfiltered digitized cylindrical surfaces based on spin-images

Journal: Computers and Industrial Engineering

Date: 2013 **Ref:** Vol. 65, no. 4, pp. 544-550

Author(s): Eneko Solaberrieta, Rikardo Minguez, Lander Barrenetxea, Egoitz Sierra, Olatz Etxaniz

Title: Novel methodology to transfer digitized casts onto a virtual dental articulator

Journal: CIRP Journal of Manufacturing Science and Technology

Date: 2013 **Ref:** Vol. 6, no. 2, pp. 149-155

Author(s): Rikardo Minguez, Sharay Zamora, Lander Barrenetxea, Eneko Solaberrieta, Olatz Etxaniz, Javier Muniozguren, Jesus Izcara, Javier Larrieta, Jaime López

Title: Life cycle assessment for switchgears for primary electrical distribution

Journal: DYNA, Revista de Ingeniería

Date: 2013 **Ref:** ISSN: 0012-7361 **DOI:**10.6036/5575

Author(s): Eneko Solaberrieta, Rikardo Minguez, Lander Barrenetxea, Olatz Etxaniz

Title: Direct transfer of the position of digitized casts to a virtual articulator

Journal: The Journal of Prosthetic Dentistry

Date: 2013 **Ref:** Vol. 109, no. 6, pp. 411-414

Author(s): Eneko Solaberrieta, Rikardo Minguez, Lander Barrenetxea, Egoitz Sierra, Olatz Etxaniz

Title: Computer-aided dental prostheses construction using reverse engineering

Journal: Computer Methods in Biomechanics and Biomedical Engineering

Date: 2013 **DOI:**10.1080/10255842.2012.745859

INTERNATIONAL CONGRESSES IN RECENT YEARS

Authors: Agustín Arias, Rikardo Minguez, Eneko Solaberrieta, Nestor Goikoetxea, Jokin Orozika, Javier Muniozguren, Egoitz Sierra

Title: Effect of the matte powder coating in the 3d optical precision of the measurement of a conical feature

Congress: JCM 2018 International Joint Conference on Graphic Engineering INGEGRAF ADM AIP PRIMECA

Date: June 2018 **Ref:** ISBN: 978-84-16325-71-9 **Place:** Cartagena (Spain)

Authors: Mikel Iturrate, Rikardo Minguez, Nerea Toledo, Harkaitz Eguiraun, Iñigo De Prado, Eneko Solaberrieta

Title: A virtual kinematic design of dental restorations using reverse engineering

Congress: JCM 2018 International Joint Conference on Graphic Engineering INGEGRAF ADM AIP PRIMECA

Date: June 2018 **Ref:** ISBN: 978-84-16325-71-9 **Place:** Cartagena (Spain)

Authors: Iñigo Aramendia, Unai Fernandez-Gamiz, Alberto Lopez-Arraiza, M.A. Gomez-Solaetxe, Lander Barrenetxea, Ebeke Solaberrieta, Rikardo Minguez, Javier Sancho

Title: Aerosol delivery by inhalation catheter and trachea digitalization

Congress: CASEIB 2017 XXXV CONGRESO ANUAL DE LA SOCIEDAD ESPAÑOLA DE INGENIERÍA BIOMÉDICA

Date: November 2017 **Ref:** ISBN: 978-84-9082-797-0 **Place:** Bilbao

Authors: Rikardo Minguez, Olatz Etxaniz, Agustín Arias, Nestor Goikoetxea, Inaki Zuazo

Title: Semiautomatic Surface Reconstruction in Forging Dies

Congress: JCM 2016 International Joint Conference on Graphic Engineering INGEGRAF ADM AIP PRIMECA

Date: September 2016 **Ref:** ISBN: 978-3-319-45780-2 **Place:** Catania (Italy)

Authors: Eneko Solaberrieta, Rikardo Minguez, Aritza Brizuela, Olatz Etxaniz, Lander Barrenetxea, Mikel Iturrate, Iñigo de Prado

Title: Dynamic Designing of Dental Prostheses

Congress: DESIGN 2016 - 14th International Design Conference

Date: May 2016 **Ref:** ISSN: 1847-9073 **Place:** Dubrovnik (Croatia)

Authors: Rikardo Minguez, Lander Barrenetxea, Eneko Solaberrieta, Olatz Etxaniz, Agustín Arias, Aitor Olano

Title: Verification of positional tolerances with a 3d non-contact measurement method

Congress: XXIII International conference on Graphic Engineering INGEGRAF ADM AIP PRIMECA 2013

Date: June 2013 **Ref:** ISBN: 978-84-695-7930-5 **Place:** Madrid (Spain)

Authors: Eneko Solaberrieta, Olatz Etxaniz, Rikardo Minguez, Agustín Arias

Title: Construction of a Digital Facebow

Congress: 4rd Intl Conf on Changeable, Agile, Reconfigurable and Virtual Production (CARV 2011)

Date: October 2011 **Ref:** ISBN: 978-38-31609-33-8 **Place:** Montreal (Quebec)

Authors: Eneko Solaberrieta, Olatz Etxaniz, Rikardo Minguez, Javier Muniozguren, Agustín Arias

Title: Design of a virtual articulator for the simulation and analysis of mandibular movements in dental CAD/CAM

Congress: 19th CIRP Design Conference

Date: March 2009 **Ref:** ISBN: 978-0-9557436-4-1 **Place:** Cranfield (UK)

Authors: Lander Barrenetxea, Rikardo Minguez, Agustín Arias, Jokin Gorozika

Title: A new partition and extraction algorithm of non-ideal, cylindrical surfaces based on spin-images

Congress: 11th CIRP INTL Conference on Computer Aided Tolerancing

Date: March 2009 **Ref:** ISBN: 978-1-4020-5437-2 **Place:** Annecy (France)

Authors: Eneko Solaberrieta, Olatz Etxaniz, Rikardo Minguez, Javier Muniozguren, Agustín Arias

Title: Design of dental prostheses using a dental virtual articulator

Congress: 3rd Intl Conf on Changeable, Agile, Reconfigurable and Virtual Production (CARV 2009)

Date: October 2009 **Ref:** ISBN: 978-38-31609-33-8 **Place:** Munich (Germany)

Authors: Lander Barrenetxea, Rikardo Minguez, Agustín Arias, Jokin Gorozika, Nestor Goikoetxea

Title: A partition and extraction algorithm of non-ideal, cylindrical surfaces based on spin-images

Congress: 3rd Intl Conf on Changeable, Agile, Reconfigurable and Virtual Production (CARV 2009)

Date: October 2009 **Ref:** ISBN: 978-38-31609-33-8 **Place:** Munich (Germany)

Authors: Olatz Etxaniz, Rikardo Minguez, Agustín Arias, Eneko Solaberrieta, Javier Muniozguren

Title: Digital Modeling of a Human Skull

Congress: 6th International Scientific Conference on "Achievements In Mechanical And Materials Engineering" AMME'2008

Date: June 2008 **Ref:** ISBN: 978-83-89728-47-0 **Place:** Giliwice-Ryn (Poland)

Authors: Olatz Etxaniz, Rikardo Mínguez, Agustín Arias, Eneko Solaberrieta, Lander Barrenetxea

Title: Digital Reconstruction of a Human Skull

Congress: DESIGN 2008 - 10th International Design Conference

Date: May 2008

Ref: ISBN: 978-953-6313-90-7

Place: Dubrovnik (Croatia)

Authors: Rikardo Mínguez, Egoitz Sierra, Eneko Solaberrieta, Lander Barrenetxea, Isabel Larrakoetxea

Title: A New Surfboards Design and Modelling Process

Congress: XVII ADM - XIX INGEGRAF Joint International Congress

Date: June 2007

Ref: ISBN: 978-884671842-6

Place: Perugia (Italy)

Authors: Eneko Solaberrieta, Egoitz Sierra, Rikardo Mínguez, Lander Barrenetxea, Beñat Belaustegigoitia, Isabel Larrakoetxea

Title: A University-Company Project: Design of a New Surfboards Digital Modeling Process

Congress: 12th International Conference on Geometry and Graphics

Date: August 2006

Ref: ISBN: 85-86686-38-7

Place: Salvador (Brazil)