

Curriculum Vitae

Standard Form (LEC)

Number of pages: 25

Name and Surname: Diego Fernando Aponte Hernández

Date: 7/04/2019

The undersigned hereby states that the information in this CV is true and is notified that she/he shall be held liable for any claims arising from inaccuracies and that she/he may be subject to requests for further information or proof of veracity during the assessment process.

1. Personal details

Name and surname		ID/Passport number
Diego Fernando Aponte Hernández		26651440Y
Nationality	Date of Birth	Sex
Spain	07/10/1976	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female
Address		
Carrer de Sant Baltasar, 11. Atico 3ro. C.P 08014, Barcelona		

2. Current job status

Institution/organization/Company		School
Universitat Politècnica de Catalunya		Barcelona School of Civil Engineering (ETSECCPB)
Department/section/unit		Address
Department of Civil and environmental Engineering		C/Jordi Girona, 1 -3. Campus Nord. Edf. B1-112.
Post code	City	Town
08034	Barcelona	Barcelona
Post held		Start date
Adjunt lecturer/Researcher		2013/2010
Administrative status		
<input type="checkbox"/> Publicly contracted <input checked="" type="checkbox"/> fixed term contract <input type="checkbox"/> Grant holder <input type="checkbox"/> Statutory <input type="checkbox"/> Other		
Commitment		
<input checked="" type="checkbox"/> Full time <input type="checkbox"/> Part time		

3. Scientific identification

ORCID ID: 0000-0001-5737-7819 Scopus ID: 37261077500 Researcher ID:

4. Education

Undergraduate degree	School	Date of graduation
1. Materials Engineer	1. Iniversidad del Valle (Colombia)	1. 08/25/2000
2.	2.	2.
Doctoral degree	School	Date of graduation
1. Construction engineering	1. Universitat Politècnica de Catalunya	1. 06/18/2010
2.	2.	2.
Other master's degrees	School	Date of graduation
1. Sufficiency in research. DEA	1. Universitat Politècnica de Catalunya	1. 19/07/2005
2.	2.	2.

5. Scientific or professional activities prior to current status

Category	Institution	Period
1. Researcher assistant	1. UPC	1. 2010- to date
2. Researcher	2. Adec Global	2. 2012-2015
3. Researcher	3. Construir Corporation	3. 2000-2003

6. Languages (A= excellent, B= good, C = fair)

Language	Speaking	Reading	Writing
1. Spanish	1. A	1. A	1. A
2. English	2. B	2. B	2. B
3. Catalan	3. F	3. B	3. F

7. Doctoral Thesis

Title: A study of cementitious efficiency of fly ash (Un estudio de la eficacia cementante de las cenizas volantes).

supervisors: Enric Vazquez Ramonich/Marilda Barra

Institution: Universitat Politècnica de Catalunya

Departament: : Construction engineering

Mark: Excellent Cum Laude

European Doctor : Yes No

Date of oral defence: 18/06/2010

Date of de expedition of degree: 2011

8. Publications derived from the doctoral thesis

Authors: D. Aponte*; M. Barra; E. Vázquez

Title: Durability and cementing efficiency of fly ash in concretes

Journal (title, volume, first-last page): Construction & building materials, vol. 30, pàgs. 537-546

Year: 2012

Key (A: paper, R: review): A

Impact factor (SCI/SSCI):1.366

Number of citations (SCI/SSCI): 24

Authors: D. Aponte; M. Barra; E. Vázquez

Title: Quantification and qualification of high lime fly ash by efficiency factor: Mechanical and durability aspects

Journal (title, volume, first-last page): EUROCOALASH 2012 Conference

Year: 2012

ISBN/ISSN :

Authors: Vazquez, E.; Barra, M.; Aponte, D.*

Title: Efficiency of fly ash in mortar

Journal (title, volume, first-last page): AshTech 2006 Proceedings. -Pàgs. 67-76

Year: 2006

ISBN/ISSN : 0-95553490-0-1

Authors: Vazquez, E.; Barra, M.; Aponte, D.

Title: Beton ekwiwalentny w hiszpaniic

Journal (title, volume, first-last page): Comunicaciones Proceedings- II Seminarium Techniczne Popioly w Betonie 2005. Pàgs132-137

Year: 2005

ISBN/ISSN : 83-60050-02-3

A. Projects

A.1 Participation in R&D Calls

Title: New market niches for the pulp and paper industry waste base on circular economy approaches

Funding bodies: European Community

Project reference: 730305CE

Duration: Start date 2017 End date 2020

Head researcher: Rodrigo Miró

Title: Materiales proyectados ligeros para refuerzo y la rehabilitación del patrimonio urbano (*lightweight shotcrete materials for reinforcement and rehabilitation of urban heritage*)

Funding bodies: Ministerio de Economía (MINECO)

Project reference: BIA2016-78740-R

Duration: Start date 2016 End date 2019

Head researcher: Oriol Pons

Title: Efectos de los periodos de reposo en la vida a fatiga de las mezclas bituminosas: Healing vs Tixotropia (*Effects of rest periods on the fatigue life of bituminous mixtures: Healing vs Tixotropy*).

Funding bodies: Ministerio de Economía (MINECO)

Project reference: BIA2015-67494-P

Duration: Start date 2015 End date 2018

Head researcher: Rodrigo Miró

Title: Árido siderúrgico en capa de sub-base y de forma en plataformas ferroviarias ASICAP (*Steel slag aggregates in subbase layer on railway platforms. ASICAP*)

Funding bodies: Ministerio de Ciencia e Innovación

Project reference: IPT-2011-1778-370000

Duration: Start date 2011 End date 2014

Head researcher: Marilda Barra

Title: Estudio de la aplicación de árido reciclado (RCD) contaminado por compuestos de azufre como suelo cemento, y las soluciones para su uso durable en carreteras. (*Study of the application of recycled aggregate (CDW) contaminated by sulphur compounds as soil cement, and solutions for its durable use on roads*).

Funding bodies: Ministerio de Ciencia e Innovación

Project reference: BIA-2011-28798-C02-01

Duration: Start date 2012 End date 2014

Head researcher: Marilda Barra

Title: MATCAR

Funding bodies: AGAUR. Agència de Gestió d'Ajuts Universitaris i de Recerca

Project reference: 2009 SGR 1021

Duration: Start date 2009 End date 2012

Head researcher: Marilda Barra/Enric Vazquez/Rodrigo Miró

Title: Estudio del ataque por sulfatos de áridos reciclados estabilizado con diferentes aglomerantes: evolución de los procesos expansivos y soluciones para la aplicación durable. (*Study of sulphate attack of recycled aggregate stabilized with different binders: Evolution of expansive processes and solutions for durable applications*).

Funding bodies: Ministerio de Ciencia e Innovación

Project reference: BIA 2010-21275-C02-01

Duration: Start date 2010 End date 2012

Head researcher: Marilda Barra

Title: Guía española de áridos reciclados procedentes de residuos de construcción y demolición. (*Spanish guide to recycled aggregates from construction and demolition waste*).

Funding bodies: Ministerio de Medio Ambiente y Medio Rural y Marino

Project reference: 202/PC08/3-03.2

Duration: Start date 2008 End date 2010

Head researcher: Marilda Barra

Title: Estudio pre-normativo sobre la utilización de los RCD's en hormigón reciclado de aplicación estructural (RECNHOR). (*Pre-normative study on the use of CDW in recycled concrete for structural application*).

Funding bodies: Ministerio de Medio Ambiente

Project reference: 2005)-3.2-358/2005/3-B; (2006) 111/2006/2-3.2; (2007)B019/2007/1-03.2

Duration: Start date 2005 **End date** 2008

Head researcher: Marilda Barra

A.2 Participation in research contracts and technology transfer of special relevance with companies or administrations

Title: Utilización durable y ambientalmente segura de las cenizas blancas y grises procedentes de la valorización de residuos de la empresa SAICA como materia prima en obra civil (C-10675). (*Durable and environmentally safe use of the white and grey ashes from the waste recovery of SAICA as raw material in civil works*).

Funding bodies: Benito Arnó e hijos SAU y SA industrias Celulosa Aragonesa **Country:** Spain

Duration: Start date 23/09/2016 **End date** 30/06/2018

Head researcher: Marilda Barra Bizinotto

Title: Estudio de la expansividad de la escoria negra, uso de la escoria negra en mezclas asfálticas y la posibilidad de uso de la escoria blanca en obra civil (C-10860). (*Study of expansión of Steel slag. Use of steel slag in asphalt mixes and possibility of using ladle slag in civil works*).

Funding bodies: Adec Global/ Compañía Española de Laminación (CELSA) **Country:** Spain

Duration: Start date 08/05/2017 **End date** to date

Head researcher: Diego Aponte/Marilda Barra

Title: Optimización del proceso de valorización de las escorias de acero (C-08580). (*Optimisation of Steel slag valorisation process*).

Funding bodies: Adec Global y Compañía española de laminación (Celsa) **Country:** Spain

Duration: Start date 01/09/2011 **End date** 10/09/2016

Head researcher: Marilda Barra

Title: transformación de escorias de aceria de arco eléctrico para áridos para la construcción (C-07116). (*Transformation of steel slag into aggregates for construction purposes*).

Funding bodies: Compañía española de laminación; Depurambi; Copcisa **Country:** Spain

Duration: Start date 21/11/2007 **End date** 31/12/2010

Head researcher: Enric Vázquez Ramonich

B. Publications

B.1 Journal papers

Authors: Jochem, L.; **Aponte, D.F.**; Barra, M.; Cavalcante, J.

Title : Effects of pre-wetting aggregate on the properties of mortars made with recycled concrete and lightweight aggregates

Journal (title, volume, first-last page): Materia-Rio de Janeiro, vol. 24, no. 2, pp. 1-16

Year : 2019

Key (A: paper, R: review): A

Impact factor (SCI/SSCI):0.34

Number of citations (SCI/SSCI): 0

Quartile and Category (SCI/SSCI): Q4 -
MATERIALS SCIENCE, MULTIDISCIPLINARY

ISSN: 1517-7076

Authors: Barra, M., Faleschini, F.; Jimenez, C.; **Aponte, D.F.**

Title: Effects of chemical admixtures on the rheology of fresh recycled aggregate concretes

Journal (title, volume, first-last page): Construction & building materials, vol. 151, pàgs. 353-362

Year: 2017

Key (A: paper, R: review): A

Impact factor (SCI/SSCI):3.169

Number of citations (SCI/SSCI): 0

Quartile and Category (SCI/SSCI): Q1 -
Construction and Building Technologies

ISSN: 0950-0618

Authors: Faleschini, F.; Jimenez, C.; Barra, M.; **Aponte, D.F.**; Vazquez, E.; Pellegrino, C.

Title: Rheology of fresh concretes with recycled aggregates

Journal (title, volume, first-last page): Construction & building materials

Year: 2015

Key (A: paper, R: review):A

Impact factor (SCI/SSCI): 2.421

Number of citations (SCI/SSCI): 19

Quartile and Category (SCI/SSCI): Q1 -
Construction and Building Technologies

ISSN: 0950-0618

Authors: Vazquez, E.; Barra, M.; **Aponte, D.F.**; Jiménez, C.; Valls, S.

Title : Improvement of the durability of concrete with recycled aggregates in chloride exposed environment

Journal (title, volume, first-last page): Construction & building materials, vol. 67, pàgs. 61-67

Year: 2014

Key (A: paper, R: review):A

Impact factor (SCI/SSCI): 2.296

Number of citations (SCI/SSCI): 10

Quartile and Category (SCI/SSCI): Q1 -
Construction and Building Technologies

ISSN: 0950-0618

Authors: Jimenez, C.; Barra, M.; Valls, S.; **Aponte, D.F.**; Vazquez, E

Title: Durability of recycled aggregate concrete designed with the Equivalent Mortar Volume (EMV) method: Validation under the Spanish context and its adaptation to Bolomey methodology

Journal (title, volume, first-last page): Materiales de construcción (Madrid), vol. 64, núm. 313, pàgs. e006-1-e006-12

Year: 2014

Key (A: paper, R: review):A

Impact factor (SCI/SSCI):0.961

Number of citations (SCI/SSCI): 0

Quartile and Category (SCI/SSCI): Q2 -
Construction and Building Technologies
ISSN: 0465-2746

Authors: Jimenez, C.; **Aponte, D.F.**; Vazquez, E.; Barra, M.; Valls, S.

Title : Diseño de mezclas de hormigón reciclado mediante el método Volumen de Mortero Equivalente (EMV): Validación bajo el contexto español y su adaptación al método de diseño de Bolomey

Journal (title, volume, first-last page): Materiales de construcción (Madrid), vol. 63, núm. 311, págs. 341-360

Year: 2013

Key (A: paper, R: review):A

Impact factor (SCI/SSCI):0.734

Number of citations (SCI/SSCI): 4

Quartile and Category (SCI/SSCI): Q2 -
Construction and Building Technologies
ISSN: 0465-2746

Authors: Jimenez, C.; **Aponte, D.F.**; Vazquez, E.; Barra, M.; Valls, S.

Title: Diseño de mezclas de hormigón reciclado mediante el método Volumen de Mortero Equivalente (EMV): Validación bajo el contexto español y su adaptación al método de diseño de Bolomey

Journal (title, volume, first-last page): Materiales de construcción (Madrid), vol. 63, núm. 311, págs. 341-360

Year: 2013

Key (A: paper, R: review):A

Impact factor (SCI/SSCI):0.734

Number of citations (SCI/SSCI): 4

Quartile and Category (SCI/SSCI): Q2 -
Construction and Building Technologies
ISSN: 0465-2746

Authors: Tovar, G.; Barra, M.; Píalarissi Cavalaro, S.H.; **Aponte, D.F.**; Vazquez, E.

Title : Expansion of mortars with gypsum contaminated fine recycled aggregates

Journal (title, volume, first-last page): Construction & building materials, vol. 38, págs. 537-546

Year : 2013

Key (A: paper, R: review):A

Impact factor (SCI/SSCI):2.293

Number of citations (SCI/SSCI): 22

Quartile and Category (SCI/SSCI): Q1 -
Construction and Building Technologies
ISSN: 0950-0618

Authors: D. **Aponte***; M. Barra; E. Vázquez

Title : Durability and cementing efficiency of fly ash in concretes

Journal (title, volume, first-last page): Construction & building materials, vol. 30, págs. 537-546

Year: 2012

Key (A: paper, R: review): A

Impact factor (SCI/SSCI):1.366

Number of citations (SCI/SSCI): 24

Quartile and Category (SCI/SSCI): Q1 -
Construction and Building Technologies
ISSN: 0950-0618

Authors: Lucia J Fernández, R. Ferrer, **D.F. Aponte**, P. Fernández.

Title: Recycling silicon solar waste in cement based systems

Journal (title, volume, first-last page): Solar energy materials and solar cells, vol. 95, págs. 1701-1706

Year: 2011

Key (A: paper, R: review): A

Impact factor (SCI/SSCI):4.784

Number of citations (SCI/SSCI): 16

**Quartile and Category (SCI/SSCI): Q1 –
Renewable energy, sustainability and the
environment**

ISSN: 0927-0248

B.2 Book and book chapters

Author/s of the chapter: Vazquez, E.; Barra, M.; Aponte, D.F.

Title of the chapter: Chapter 9. Control of the environmental impact of recycled aggregates by leaching.

Title of the book: Spanish Guide to Recycled Aggregates from CDW.

Publisher: GERD-Asociación española de gestores de residuos de construcción y demolición

ISBN: 978-84-939391-2-0

Legal deposit: M-31357-2012

Year: 2012

Author/s of the chapter: Vazquez, E.; Barra, M.; Valls, S; Aponte, D.F.

Title of the chapter: Chapter. Chloride penetration, Capillary suction and Sulfate attack.

Title of the book: Pre-regulatory study on the use of CDWs in recycled concrete of structural application (RECNHOR Project). Recycling of construction and demolition waste as aggregates in structural concrete (CLEAM Project).

Publisher: IECA

ISBN: 978-84-695-0461-1

Legal deposit: --

Year: 2011

B.3 Conference papers

Authors: Karmele Otegi, Tanya Richter, **Diego Aponte**, Marilda Barra

Title: AN ENVIRONMENTAL STUDY OF THE USE OF STEEL SLAG AGGREGATE IN GABION CAGES

Conference edition: IV International Conference Progress of Recycling in the Built Environment. 11-12 October 2018 - Lisbon, Portugal

Year : 2018

Type of document: Article conference paper

ISBN/ISSN:<http://recycle18.inec.pt/index.html>

Authors: Marilda Barra, Susanna Valls, **Diego Aponte**, Karen Cabrera, Enric Vazquez.

Title: INFLUENCE OF THE NATURE OF FRACTION UNBOUND NATURAL AGGREGATES ON THE SENSIBILITY TO SULFATE ATTACK OF RECYCLED AGGREGATES STABILIZED WITH CEMENT

Conference edition: IV International Conference Progress of Recycling in the Built Environment. 11-12 October 2018 - Lisbon, Portugal

Year : 2018

Type of document: Article conference paper

ISBN/ISSN:<http://recycle18.inec.pt/index.html>

Authors: Barra, M., **Aponte, D.F.**, Vazquez, E., Méndez Candelario, B., Miro, R., Valls, S.

Title: Experimental study of the effect of the thermal conductivity of EAF slag aggregates used in asphaltic concrete of wearing courses on the durability of road pavements

Conference edition: Fourth International Conference on Sustainable Construction Materials and Technologies: Las Vegas, Nevada, USA 7-11 August 2016, University on Nevada Las Vegas USA, 2016, p. 1-10

Year: 2016

Type of document: Article conference paper

ISBN/ISSN:

<http://hdl.handle.net/2117/100228>

Authors: Sidorova, A.; Barra, M.; **Aponte, D.**; Vázquez, E

Title: Micromechanical and microstructural study of ZTI paste/recycled aggregate

Conference edition: International conference on sustainable structural concrete: Sustain Concrete 2015, La Plata, 15-18 september 2015, Argentina. Proceedings. Pàgs 300-310

Year : 2015

Type of document: Article conference paper

ISBN/ISSN: 978-987-3838-02-6

Authors: Otegi, K.; **Aponte, D.**; Barra, M.; Moral, A

Title: Aggregates from electric arc furnace slag as material for sub-ballast layer, environmental considerations

Conference edition: 9th International Conference on the Environmental and Technical Implications of Construction with Alternative Materials - Resource Efficiency in Construction - Proceedings. Pags 275-280

Year : 2015

Type of document: Article conference paper

ISBN/ISSN: 978-84-606-8422-0

Authors: Otegui, K.; Barra, M.; **Aponte, D.**; Vázquez, E.

Title : Characterization, use and environmental assessment by leaching of ladle steel slag in granular unbounded layers

Conference edition: International Scientific Conference People, Buildings and Environment 2014 (PBE2014); : Proceedings (www.fce.vutbr.cz/ekr/pbe/Proc.htm) - Vol 3 (2014)

Year: 2013

Type of document: Article conference paper

ISBN/ISSN: 9788862650281 / 2282-0027

Authors: D. **Aponte**; M. Barra; E. Vázquez

Title: Quantification and qualification of high lime fly ash by efficiency factor: Mechanical and durability aspects

Conference edition: EUROCOALASH 2012 Conference

Year: 2012

Type of document: Article conference paper

ISBN/ISSN: --

Authors: M. Barra, E. Vázquez, D.F. Aponte and J. Ainchil

Title: Application of earth pressure balance tunnel boring machines sludge in construction projects

Conference edition: 2nd International RILEM Conference on Progress of Recycling in the Built Environment; Proceedings pro082 pàgs. 109-118

Year: 2011

Type of document: Article conference paper

ISBN/ISSN: e-ISBN 978-2-35158-122-3

Authors: Borrell, M.; Ainchil, J.; Vazquez, E.; Aponte, D.; Barra, M.

Title: Tratamiento y empleo de los materiales obtenidos en la excavación de una tuneladora integral BTM en aplicaciones dentro de la misma obra

Conference edition: Congreso AETOS 2007: Los tuneles, factor de transformación.

Year: 2007

Type of document: Article conference paper

ISBN/ISSN: --

Authors: Vazquez, E.; Barra, M.; Aponte, D.*

Title: Efficiency of fly ash in mortar

Conference edition: AshTech 2006 Proceedings. -Pàgs. 67-76

Year: 2006

Type of document: Article conference paper

ISBN/ISSN: 0-95553490-0-1

Authors: Vazquez, E.; Barra, M.; Aponte, D.

Title: Beton ekwiwalentny w hiszpaniic

Conference edition: Comunicaciones Proceedings- II Seminarium Techniczne Popioly w Betonie 2005. Pàgs132-137

Year: 2005

Type of document: Article conference paper

ISBN/ISSN: 83-60050-02-3

C. Conferences

Authors: Karmele Otegi, Tanya Richter, **Diego Aponte**, Marilda Barra

Title: AN ENVIRONMENTAL STUDY OF THE USE OF STEEL SLAG AGGREGATE IN GABION CAGES

Type of participation: Paper/Oral communication

Conference edition: IV International Conference Progress of Recycling in the Built Environment. 11-12 October.

Town/city: Lisbon-Portugal

Year: 2018

Published: LNEC-RILEM

Authors: Marilda Barra, Susanna Valls, **Diego Aponte**, Karen Cabrera, Enric Vazquez.

Title: INFLUENCE OF THE NATURE OF FRACTION UNBOUND NATURAL AGGREGATES ON THE SENSIBILITY TO SULFATE ATTACK OF RECYCLED AGGREGATES STABILIZED WITH CEMENT

Type of participation: Paper/Oral communication

Conference edition: IV International Conference Progress of Recycling in the Built Environment. 11-12 October.

Town/city: Lisbon-Portugal

Year: 2018

Published: LNEC-RILEM

Authors: **Diego Aponte**, Marilda Barra

Title: Contradicciones de la normativa y otros supuestos cuando se utilizan áridos siderúrgicos

Type of participation: Oral communication

Conference edition: las jornadas nacionales sobre la aplicación e innovación en áridos siderúrgicos y escorias

Town/city: Madrid

Year: 2017

Published: UNESID

Authors: Otegi, K.; **Aponte, D.**; Barra, M.; Moral, A

Title: Aggregates from electric arc furnace slag as material for sub-ballast layer, environmental considerations

Type of participation: Paper/Oral communication

Conference edition: 9th International Conference on the Environmental and Technical Implications of Construction with Alternative Materials - Resource Efficiency in Construction - Proceedings. Pags 275-280

Town/city: Santander-Spain

Year: 2015

Published: UC-WASCON

Authors: Borrell, M.; Ainchil, J.; Vazquez, E.; **Aponte, D.**; Barra, M.

Title: Tratamiento y empleo de los materiales obtenidos en la excavación de una tuneladora integral BTM en aplicaciones dentro de la misma obra

Type of participation: Paper/Oral communication

Conference edition: Congreso AETOS 2007: Los tuneles, factor de transformación

Town/city: Madrid-España

Year: 2007

Published: AETOS

Authors : Vazquez, E.; Barra, M.; **Aponte, D.***

Title: Efficiency of fly ash in mortar

Type of participation: Paper/Oral communication

Conference edition : AshTech 2006

Town/city: Birmingham-UK

Year: 2006

Published: AshTech

D. Teaching experience

Academic year (2013/2014, **Body:** Universitat Politècnica de Catalunya-UPC)

Degree	Cycle	Course	Course credits	Credits allocated	Theo./Prac.
Degree in Civil Engineering	First	Construction Materials	6	2	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.697	T
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.967	P

Academic year (2014/2015, **Body:** Universitat Politècnica de Catalunya-UPC)

Degree	Cycle	Course	Course credits	Credits allocated	Theo./Prac.
Degree in Civil Engineering	First	Construction Materials	6	0.160	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.1353	T
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.1877	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	9	P
Degree in Geological Engineering	First	Materials science and technology	4.5	0.8	P
Master in structural engineering and construction	Second	Durability of structures	4.0	0.667	T/P
Master in structural engineering and construction	Second	Use of waste in construction	4.0	0.667	T/P
Supervisor. Master Thesis		Estudio de la microestructura de escoria de acería de horno de arco eléctrico	Excellent		

Academic year (2015/2016, **Body:** Universitat Politècnica de Catalunya-UPC)

Degree	Cycle	Course	Course credits	Credits allocated	Theo./Prac.
Degree in Civil Engineering	First	Construction Materials	6	4.667	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.1333	T

Degree in Civil Engineering	First	Materials Chemistry	7.5	0.12	P
Degree in Public Works Engineering	First	Materials Chemistry	7.5	0.267	T
Degree in Public Works Engineering	First	Materials Chemistry	7.5	0.840	P
Degree in Geological Engineering	First	Materials science and technology	4.5	0.1533	P
Master in structural engineering and construction	Second	Durability of structures	4.0	0.60	T/P
Master in structural engineering and construction	Second	Use of waste in construction	4.0	0.3	T/P
Supervisor. Bachelor Thesis		Durability of concrete	Excellent		
Supervisor. Master Thesis		Estudio de la escoria blanca en matrices cementantes	Excellent		
Supervisor. Master Thesis		Estudio del comportamiento térmico de mezclas bituminosas con árido siderúrgico	Excellent		
Supervisor. Master Thesis		Estudio deformacional de mezclas asfálticas con áridos siderúrgicos debido a la temperatura	Excellent		
Supervisor. Master Thesis		Estudio comparativo de los fenómenos de expansión de la escoria negra de horno de arco eléctrico	Excellent		
Supervisor. Master Thesis		Secondary materials in mortars for use in historical building	Excellent		

Academic year (2016/2017, **Body:** Universitat Politècnica de Catalunya-UPC)

Degree	Cycle	Course	Course credits	Credits allocated	Theo./Prac.
Degree in Civil Engineering	First	Construction Materials	6.0	4.013	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	2.750	P
Degree in Geological Engineering	First	Materials science and technology	4.5	0.20	T
Degree in Geological Engineering	First	Materials science and technology	4.5	1.533	P
Master in structural engineering and construction	Second	Durability of structures	4.0	0.777	T/P
Master in structural engineering and construction	Second	Use of waste in construction	4.0	0.777	T/P

Supervisor. Master Thesis	Estudio de la durabilidad en hormigones con áridos reciclados: Transporte de cloruros y humedad	Excellent
Supervisor. Bachelor Thesis	Aspectos relativos a la durabilidad de hormigones proyectados	Notable
Supervisor. Master Thesis	Influencia del envejecido controlado sobre las propiedades físico-químicas y ambientales de la escoria negra	Excellent

Academic year (2017/2018, Body: Universitat Politècnica de Catalunya-UPC)

Degree	Cycle	Course	Course credits	Credits allocated	Theo./Prac.
Degree in Civil Engineering	First	Construction Materials	6.0	3.64	T
Degree in Civil Engineering	First	Construction Materials	6.0	3.947	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.310	P
Degree in Geological Engineering	First	Materials science and technology	4.5	0.333	T
Degree in Geological Engineering	First	Materials science and technology	4.5	0.950	P
Master in structural engineering and construction	Second	Durability of structures	4.0	0.813	T/P
Master in structural engineering and construction	Second	Use of waste in construction	4.0	0.387	T/P
Supervisor. Master Thesis		Study of the use of alternative fillers in asphalt mixtures			Excellent
Supervisor. Master Thesis		Estabilización de suelos con materiales cementicios alternativos			Honors graduate
Supervisor. Master Thesis		Utilización de escorias de acería en la fabricación de hormigones de bajo a medio desempeño			Notable
Supervisor. Master Thesis		Procesos de lixiviación al interior de un suelo			Notable
Supervisor. Master Thesis		Obtention of asphalt mixtures for the purpose of reducing the urban heat island effect			Honors graduate

Academic year (2018/2019, Body: Universitat Politècnica de Catalunya-UPC)

Degree	Cycle	Course	Course credits	Credits allocated	Theo./Prac.
Degree in Civil Engineering	First	Construction Materials	6.0	3.64	T

Degree in Civil Engineering	First	Construction Materials	6.0	3.947	P
Degree in Civil Engineering	First	Materials Chemistry	7.5	0.310	P
Degree in Geological Engineering	First	Materials science and technology	4.5	0.333	T
Degree in Geological Engineering	First	Materials science and technology	4.5	0.950	P
Master in structural engineering and construction	Second	Durability of structures	4.0	0.813	T/P
Master in structural engineering and construction	Second	Use of waste in construction	4.0	0.387	T/P
Supervisor. Bachelor Thesis		Estudio de la caracterización de áridos naturales versus áridos siderúrgicos			Notable
Supervisor. Bachelor Thesis		Posible aplicación de escorias de acería en sistemas activados para su uso en construcción			Notable
Supervisor. Master Thesis		Estudio del impacto ambiental de hormigones proyectados: Estudios de lixiviación			Excellent
Supervisor. Bachelor Thesis		Study of the long term properties of sprayed concrete			Notable
Supervisor. Doctoral Thesis		Study of Steel slag from EAF- expansive and environmental aspects-			Excellent Cum Laude

E. Teaching materials

(Key: M: manuals, LP: practice books, G: guides, MOL: on-line material, or others to be specified)

Authors: Diego Aponte

Título: Practicas de laboratorio - Granulometría y densidad de partículas; Fabricación de hormigón y Hormigón fresco; Hormigón endurecido - propiedades mecánicas; Fabricación de mezclas asfálticas

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2014

Key : MOL

Authors: Diego Aponte

Título: Practicas de laboratorio - Granulometría y densidad de partículas; Fabricación de hormigón y Hormigón fresco; Hormigón endurecido - propiedades mecánicas; Fabricación de mezclas asfálticas

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2015

Key : MOL

Authors: Diego Aponte

Título: Practicas de laboratorio - Granulometría y densidad de partículas; Fabricación de hormigón y Hormigón fresco; Hormigón endurecido - propiedades mecánicas; Fabricación de mezclas asfálticas

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2016

Key : MOL

Authors: Diego Aponte

Título: Practicas de laboratorio - Granulometría y densidad de partículas; Fabricación de hormigón y Hormigón fresco; Hormigón endurecido - propiedades mecánicas; Fabricación de mezclas asfálticas

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Año: 2017

Key : MOL

Authors: Diego Aponte

Título: Concrete: Volumetric stability: shrinkage and creep

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2017

Key : MOL

Authors: Diego Aponte

Título: Asphalt: Bituminous binders

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2017

Key : MOL

Authors: Diego Aponte

Título: Asphalt: Asphalt mixes design

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2017

Key : MOL

Authors: Diego Aponte

Título: Durabilidad del hormigón: Carbonatación y penetración de cloruros

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2014

Key : MOL

Authors: Diego Aponte

Título: Hormigones con adiciones minerales: El caso de los hormigones con cenizas volantes

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2014

Key : MOL

Authors: Diego Aponte

Título: Durabilidad del hormigón: Carbonatación y penetración de cloruros

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2015

Key : MOL

Authors: Diego Aponte

Título: Hormigones con adiciones minerales: El caso de los hormigones con cenizas volantes

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Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2017

Key : MOL

Authors: Diego Aponte

Título: Hormigones con adiciones minerales: El caso de los hormigones con cenizas volantes

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2017

Key : MOL

Authors: Diego Aponte

Título : Unit 0: Basic physical and mechanical properties

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2018

Key : MOL

Autores (p.o. de firma): Diego Aponte

Title : Unit 1: Aggregates

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2018

Key : MOL

Authors: Diego Aponte

Title: Unit 2: Strength of concrete

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2018

Key : MOL

Authors: Diego Aponte

Title: Unit 3: Concrete mix design

Electronic address: <https://atenea.upc.edu/my/>

ISBN:

Legal deposit:

Year: 2018

Key : MOL

K. Teaching innovation

K.1 Teaching innovation projects

Project title: ECO-CONSTRUIM preparación de material docente per a la asignatura de Materiales para la construcción Sostenible en el marco del nuevo plan de estudios de GEGA.

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 02/2019 **End date** 2019 **Cordinating teacher:** Susanna Valls

Project title: Aprendizaje activo en la Química de materiales en el Grado de Ingeniería Civil: trabajo cooperativo, "Flipped Classrom" y cuestionarios interactivos"

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 10/2018 **End date** 12/2018 **Cordinating teacher:** Susanna Valls

Project title: Elaboración de material docente de la asignatura de Materiales de construcción en el marco de la docencia en inglés en el Grado de Ingeniería Civil curso 2018-2019.

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 10/2018 **End date** 12/2018 **Cordinating teacher:** Diego Aponte/Marilda Barra

Project title: Cuestionarios de repaso bajo la aplicación KAHOOT IT b) Traducción de material para la docencia en lengua inglesa, en el marco de la asignatura de Química de Materiales del Grado de Ingeniería Civil, curso 2017-2018"

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 10/2017 **End date** 5/2018 **Cordinating teacher:** Susanna Valls

Project title: Parte II: "Material docente multimedia en la asignatura de Ciencia y Tecnología de los materiales de IG para su publicación en las plataformas docentes"

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 10/2017 **End date** 5/2018 **Cordinating teacher:** Susanna Valls

Project title: "Adaptación de la asignatura Materiales de Construcción al inglés, Inclusión de competencias transversales de sostenibilidad y desarrollo de herramienta informática para dosificación de hormigones"

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 10/2016 **End date** 12/2016 **Cordinating teacher:** Marilda Barra

Project title: Elaboración de material docente en inglés en las asignaturas de máster: "Durabilidad de estructuras" y "Utilización de residuos en la Construcción"

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 12/2016 **End date** 5/2017 **Cordinating teacher:** Marilda Barra

Project title: "Material docente en la asignatura de Química de Material de EOP para su publicación en las plataformas docentes:" Formularios autoevaluables y autocorrectivos bajo la plataforma MOODLE"

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 2/2017 **End date** 5/2017 **Cordinating teacher:** Susanna Valls

Project title: Elaboración de material docente de la asignatura de Química de Materiales en el nuevo marco de la docencia en inglés en el Grado de Ingeniería Civil curso 2016-2017.

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 12/2016 **End date** 5/2017 **Cordinating teacher:** Susanna Valls

Project title: Material docente multimedia en la asignatura de Ciencia y Tecnología de los materiales de IG para su publicación en las plataformas docentes

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 10/2015 **End date** 5/2016 **Cordinating teacher:** Susanna Valls

Project title: Videos de corta duración (MEDIATIC) de procedimientos y ensayos de laboratorio para su publicación en las plataformas docentes: portal CaminsOpenCourseWare y ATENEA

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 12/2015 **End date** 5/2016 **Cordinating teacher:** Marilda Barra

Project title: Desarrollo de material docente digital de: materiales de construcción de EC y ciencia y tecnología de los materiales de IG para su publicación en el portal CaminsOpenCourseWare

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 12/2014 **End date** 5/2015 **Cordinating teacher:** Marilda Barra

Project title: Protección del medio ambiente en la praxis de nuevos materiales de construcción. Estudio de la huella del CO2 en los materiales de construcción. Para los estudiantes de materiales de construcción de ingeniería civil y para los estudiantes de ciencia y tecnología de los materiales de ingeniería geológica.

Funding body: ETSECCPB-UPC

Call reference: Ayudas para proyectos de mejora docente

Duration: Start date 12/2013 **End date** 5/2014 **Cordinating teacher:** Marilda Barra

L. Professional activities

Company: Adec Global

Position: Researcher

Dedication: Part-time

Period: 2012-2015

Company: Construir corporation

Position: Researcher

Dedication: Full-time

Period: 200-2003

M. Other scientific merits

(Awards, recognitions, positions, etc.)

2013: Award SCMT3 – Paper Select for Journal. Authors: Vázquez, E.; Barra, M.; **Aponte, D.F.**; Jimenez, C.; Valls, S.
Date: 21/08/2013. Paper selected to be published in the special Edition of journal Construction and Building Materials.
Title: Improvement of the durability of concrete with recycled aggregates.
