CURRICULUM VITAE

NAME

Dr. Andoni García Alonso

DATE AND PLACE OF BIRTH

August 7, 1980, Vitoria-Gasteiz, Spain.

PROFESSIONAL DATA

POSITION: Associate Professor (Profesor Ayudante Doctor)
CENTER: Facultad de Ciencia y Tecnología, Euskal Herriko Unibertsitatea
(UPV/EHU)
DEPARTMENT: Matemáticas
POSTAL ADDRESS: Departamento de Matemáticas, UPV/EHU,
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WORK HISTORY

- **From September 2019 to August 2020** Faculty of Engineering, Mondragon Unibertsitatea.

  Job title: Lecturer, Basic Sciences Department.

- **From August 2016 to June 2019** Basque Center for Applied Mathematics, Bilbao, Spain.

  Job title: Juan de la Cierva Postdoctoral researcher .

  Main Duties: Research in the areas of Inverse Problems, Spectral Theory for Partial Differential Equations and Geometric Inverse Problems.

  Skills: Developed research in Inverse boundary value problems, Boundary determination for nonlinear inverse boundary value problems, Transmission eigenvalues for higher order partial differential operators.

- **From August 2016 to June 2017** Basque Center for Applied Mathematics, Bilbao, Spain.

  Job title: Postdoctoral researcher .

  Main Duties: Research in the areas of Inverse Problems, Spectral Theory for Partial Differential Equations and Geometric Inverse Problems.

  Skills: Developed research in Inverse boundary value problems, Boundary determination for nonlinear inverse boundary value problems, Transmission eigenvalues for higher order partial differential operators.

- **September 2013 to June 2014** University of Jyväskylä, Finland.

  Job title: Postdoctoral researcher in Inverse Problems.

  Main Duties: Research in the areas of Inverse Problems, Spectral Theory for Partial Differential Equations and Geometric Inverse Problems.

Skills: Developed research in Inverse boundary value problems, Boundary determination for nonlinear inverse boundary value problems, p-Laplace equation, Transmission eigenvalues for higher order partial differential operators.

- **September 2011 to September 2013** University of Helsinki, Helsinki, Finland.

  Job title: Postdoctoral researcher in Inverse Problems.

  Main Duties: Research in the areas of Inverse Problems, Spectral Theory for Partial Differential Equations and Geometric Inverse Problems.

  Skills: Developed research in Inverse boundary value problems, Electro Impedance Tomography, Stability and Reconstruction for the Calderón problem with less regular conductivities.

- **April 2011 to July 2011** University of the Basque Country, Bilbao, Spain.

  Job title : Researcher in Partial Differential Equations.

  Main Duties: Research in dispersive estimates for Partial Differential Equations, Strichartz estimates for Dirac Equation.

  Skills: Developed research in Partial Differential Equations constructing counterexamples to Strichartz estimates for the solution of Dirac Equation with magnetic potential.

- **October 2006 to September 2010** University of the Basque Country, Bilbao, Spain.

  Job title : PhD student

  Skills: Ph.D. in Mathematics. University of the Basque Country, Spain Thesis supervisor: Prof. Luis Vega González. Thesis title: Electromagnetic Schrödinger Hamiltonians. Ph.D. defense date: March 18, 2011. Qualification: Summa Cum Laude.

RELEVANT EDUCATION / QUALIFICATIONS

- **From 2006 to 2011** Ph.D. in Mathematics, University of the Basque Country, Spain (Doctor por la Universidad del País Vasco/Euskal Herriko Unibertsitatea dentro del Programa oficial de posgrado en matemáticas), March 18, 2011,
Thesis supervisor: Prof. Luis Vega González.
Thesis title: Electromagnetic Schrödinger Hamiltonians.
Summa Cum Laude.

- **From 2001 to 2006** 5-year University Degree in Mathematics, Bachelor of Mathematics (Licenciado en Matemáticas), University of the Basque Country, Spain.

- **From 2005 to 2006** Collaboration Fellowship: Antoine's Necklace and Alexander's Horned Sphere, under the supervision of Prof. Marta Macho Stadler, University of the Basque Country, Spain.

- **From 1999 to 2002** Ingeniero Técnico Industrial Especialidad Electrónica, University of the Basque Country, Spain.

TEACHING EXPERIENCE

- **From February 2015 to June 2015**

  - **Type of teaching** Official teaching
  - **Name of the course** Cálculo de Probabilidades
  - **Course given** 2
  - **Type of programme** Grado
  - **Type of subject** Obligatory
  - **University degree** Grado en Matemáticas
  - **Entity** Universidad del País Vasco/Euskal Herriko Unibertsitatea
  - **Faculty, institute or centre** Facultad de Ciencia y Tecnología
  - **Department** Matemática Aplicada, Estadística e Investigación Operativa
  - **City of entity** Leioa, Basque Country, Spain
  - **Subject language** Spanish

- **From February 2015 to June 2015**

  - **Type of teaching** Official teaching

- **Name of the course** Probabilidad y Procesos Estocásticos
- **Course given** 4
- **Type of programme** Grado
- **Type of subject** Optional
- **University degree** Grado en Matemáticas
- **Entity** Universidad del País Vasco/Euskal Herriko Unibertsitatea
- **Faculty, institute or centre** Facultad de Ciencia y Tecnología
- **Department** Matemática Aplicada, Estadística e Investigación Operativa
- **City of entity** Leioa, Basque Country, Spain
- **Subject language** Spanish

- **From February 2014 to June 2015**

  - **Type of teaching** Official teaching
  - **Name of the course** Análisis Complejo
  - **Course given** 2
  - **Type of programme** Grado
  - **Type of subject** Obligatory
  - **University degree** Grado en Matemáticas
  - **Entity** Universidad del País Vasco/Euskal Herriko Unibertsitatea
  - **Faculty, institute or centre** Facultad de Ciencia y Tecnología
  - **Department** Matemáticas
  - **City of entity** Leioa, Basque Country, Spain
  - **Subject language** Spanish

PARTICIPATION IN CONGRESSES

- International Congress of Mathematicians 2006, Ordinary Member, Madrid, Spain, August 2006.

- *SMI (Scuola Matematica Interuniversitaria)*, Cortona, Italy, July 2007, attending the following course:
  Partial Differential Equations, July 16th-July 28th
  C. Da Fermos - Brown Univ.
  P. D'Ancona - Univ. Roma "La Sapienza"

- *Topics in PDE's and applications 2008, CRM*, Campus de la Universitat Autónoma de Barcelona, Bellaterra, Spain, May 2008.

- *8th International Conference on Harmonic Analysis and Partial Differential Equations*, El Escorial, Madrid, June 2008.

- *Clay Mathematics Institute 2008 Summer School*, Eidgensseische Technische Hochschule, Zürich, Switzerland, July 2008, attending the following course:
  Evolution Equations, June 23 - July 18.

- Workshop *Non linear waves and dispersion*, IHP, Paris, France April 2009.

- *SIMUMAT Summer School 2009*, Castro Urdiales, Spain, July 2009, attending the following course:
  Inverses problems in PDEs, July 6-11.

- *XII Encuentros de Análisis Real y Complejo, EARCO*, Haro, Spain, April 2010.

- *Calculus of Variations, Singular Integrals and Incompressible flows*, ICMAT, Madrid, Spain, September 29 - December 18, 2010.

- *XII Encuentros de Análisis Real y Complejo, EARCO*, Zarautz, Spain, May 2011.

- *Special Trimester on Inverse Problems:* Theoretical and numerical aspects of inverse problems and scattering theory, Madrid, Spain, May 2 - June 12, 2011.

- *Special Trimester on Inverse Problems:* Workshop A Coruña, Spain, July 4- July 8, 2011.

- *Workshop on Inverse Problems:* Isaac Newton Institute for Mathematical Sciences, Cambridge, UK:
  Introductory Workshop, July 25 - July 29, 2011.
  Inverse Problems in Analysis and Geometry, August 1 - August 5, 2011.

- *Finnish-Japanese-Korean workshop on inverse problems*, Helsinki, Finland, December 13 - December 16, 2011.

- *PASI - Inverse problems and PDE control*, Santiago de Chile, Chile, January 16 - January 27, 2012.

- *9th International Conference on Harmonic Analysis and Partial Differential Equations*, El Escorial, Madrid, Spain, June 2012.

- *Inverse days 2012*, Jyväskylä, Finland, December 17 - December 19, 2012.

- *Program on inverse problems and applications*, invited participant, Institut Mittag-Leffler, Stockholm, Sweden, March 15 - May 15, 2013.

- *Conference on Inverse Problems and Applications*, Linköping, Sweden, April 2 - April 6, 2013.

- *XIV Earco*, Teruel, Spain, May 16 - May 18, 2013.

- *Young Researchers Conference, Royal Spanish Mathematical Society*, Seville, Spain, September 16 - September 20, 2013.

- *Inverse days 2013*, Sodankylä and Inari, Finland, December 10 - December 13, 2013.

- *FinEst Math 2014*, Helsinki, Finland, January 9 - January 10, 2014.

- *7th International Conference, Inverse Problems: Modeling and Simulation*, Fethiye, Turkey, May 16 - May 31, 2014.

- *Three days on Analysis and PDEs*, Madrid, Spain, June 3 - June 5, 2014.

- *The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Madrid, Spain, July 7 - July 11, 2014.

- *Distinguised Lectures on Inverse Problems*, Helsinki, Finland, August 4 - August 8, 2014.

- *Inverse days 2014*, Tampere, Finland, December 9 - December 11, 2014.

- *Congreso de Jovenes Investigadores, Real Sociedad atemática Espaõla*, Murcia, Spain, September 7 - September 11, 2015.

- *Numerical Resolution of Inverse Problems II*, Bilbao, Spain, January 14- January 15 , 2016.

- *9th Applied Inverse Problems Conference*, Hangzhou, China, May 29- June 2, 2017.

- *Matematikari Euskaldunen III. Topaketak*, Eibar, Spain, July 4, 2018.

- *Jornadas Cantábricas de EDP's*, Castro Urdiales, Spain, September 10, 2018.

- *VII Encuentro Ibérico de Matemáticas RSME-SPM*, Évora, Portugal, October 12 - October 14, 2018.

- *Sinergy of Inverse Problems at Bilbao*, Bilbao, Spain, June 26, 2019

CONFERENCE ORGANIZATION

- *Sinergy of Inverse Problems at Bilbao*, BCAM, Bilbao, Spain, June 16, 2019. Scientific organizer.

- *Numerical Resolution for Inverse Problems*, BCAM, Bilbao, Spain, January 8 - January 9, 2015. Scientific organizer.

- *XIII Encuentros de Análisis Real y Complejo, EARCO 2011*, Universidad del País Vasco/Euskal Herriko Unibertsitatea, Bilbao, Spain, May 5 - May 7, 2011. Scientific organizer.

RESEARCH FIELDS

- Inverse Problems and Spectral Theory for Partial Differential Equations.

- Geometric Inverse Problems.

- Linear and nonlinear dispersive equations. Electromagnetic potentials.

- Harmonic Analysis.

- Spectral Theory.

PAPERS AND PUBLICATIONS

- L. FANELLI AND A. GARCÍA: Counterexamples to Strichartz estimates for the magnetic Schrödinger equation, *Comm. Cont. Math*, **13** 2 (2011) 213–234.
  http://www.worldscinet.com/ccm/13/1302/S0219199711004245.html

- A. GARCÍA: L^p-L^q estimates for electromagnetic Helmholtz equation, *J. Math. Anal. Appl*, **384** 2 (2011) 409–420.
  http://www.sciencedirect.com/science/article/pii/S0022247X11005397

- A. GARCÍA: Magnetic Virial and applications to blow up for Schrödinger and wave equations, *J. Phys. A: Math. Theor.*, **45** 1 (2012) 015202.
  http://iopscience.iop.org/1751-8121/45/1/015202

- N. ARRIZABALAGA, L. FANELLI AND A. GARCÍA: On the lack of dispersion for a class of magnetic Dirac flows, *Journal of Evolution Equations.*, **13** 1 (2013) 89–106.
  http://link.springer.com/article/10.1007/s00028-012-0170-2

- P. CARO, A. GARCÍA AND J. M. REYES: Stability of the Calderón problem for less regular conductivities, *J. Differential Equations.*, **254** 2 (2013) 469–492.
  http://dx.doi.org/10.1016/j.jde.2012.08.018

- A. GARCÍA AND G. ZHANG: Reconstruction from boundary measurements for less regular conductivities, *Inverse Problems*, **32** 11 (2016) 115015.
  https://doi.org/10.1088/0266-5611/32/11/115015

- A. GARCÍA: L^p-L^q estimates for electromagnetic Helmholtz equation. Singular potentials, *J. Funct. Anal.*, **268** 10 (2015) 2787–2819.
  https://doi.org/10.1016/j.jfa.2015.03.004

- A. GARCÍA, E. V. VESALAINEN AND M. ZUBELDIA: Transmission eigenvalues for higher-order operators and higher-order perturbations, *SIAM J. Math. Anal.* , **48** 4 (2016), 2382–2398
  https://doi.org/10.1137/15M1053323

- P. CARO, A. GARCÍA: The Calderón problem with corrupted data, *Inverse Problems*, **33** 8 (2017) 08500.
  https://doi.org/10.1088/1361-6420/aa7425

- P. CARO, A. GARCÍA: Scattering with critically-singular and δ-shell potentials, *Comm. Math. Phys.* **379** 2 (2020), 543–587
  https://doi.org/10.1007/s00220-020-03847-5

INVITED TALKS AND SEMINARS

- Counterexamples to Strichartz estimates for the magnetic Schrödinger equation, Universidad Autónoma de Madrid, Madrid, Spain, November 5, 2010.

- L^p-L^q estimates for electromagnetic Helmholtz equation, ICMAT, Madrid, Spain, November 26, 2010.

- L^p-L^q estimates for electromagnetic Helmholtz equation, Centennial of the Royal Spanish Mathematical Society, Ávila, Spain, 1-5 February, 2011.

- Electromagnetic Schrödinger Hamiltonians, University of Helsinki, Helsinki, Finland, November 3, 2011.

- Stability of the Calderón problem for less regular conductivities, University of Helsinki, Helsinki, Finland, April 2, 2012.

- Stability of the Calderón problem for less regular conductivities, University of the Basque Country, Bilbao Spain, April 17, 2012.

- Reconstruction from boundary measurements for less regular conductivities, University of Helsinki, Helsinki, Finland, January 31, 2013.

- Reconstruction from boundary measurements for less regular conductivities, XIV Earco, Teruel, Spain, May 18, 2013.

- Reconstruction from boundary measurements for less regular conductivities, University of Jyväskylä, Finland, October 2, 2013.

- Reconstruction from boundary measurements for less regular conductivities, 7th International Conference, Inverse Problems: Modeling and Simulation, Fethiye, Turkey, May 29, 2014.

- Reconstruction from boundary measurements for less regular conductivities, The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain July 8, 2014.

- Stability of the Calderón problem for less regular conductivities, Distinguised Lectures on Inverse Problems, Helsinki, Finland, 4-8 August, 2014.

- Transmission eigenvalues for higher-order operators and higher-order perturbations, Congreso de Jovenes Investigadores, Real Sociedad Matemática Española, Murcia, Spain, 7-11 September, 2015.

- Transmission eigenvalues for higher-order operators and higher-order perturbations, Numerical Resolution of Inverse Problems II, Bilbao, Spain, 14-15 January, 2016.

- Discreteness of transmission eigenvalues for higher-order main terms and perturbations, 9th Applied Inverse Problems Conference, Hangzhou, China, 29 May - 2 June, 2017.

- Alderantzizko problemak. Matematika eguneroko bizitzan, Matematikari Euskaldunen III. Topaketak, Eibar, Spain, 4 July, 2018.

- The Calderón problem with corrupted data, Jornadas Cantábricas of EDP's, CIEM, Castro Urdiales, Spain, 10 September, 2018.

- The Calderón problem with corrupted data, Universidad de Santander, Santander, Spain, 14 November, 2018.

- Scattering with critically-singular and δ-shell potentials, Sinergy of Inverse Problems at Bilbao, BCAM, Bilbao, Spain, 26 June, 2019.

SPOKEN LENGUAGES

- Spanish: C2 (written and spoken).

- English: C1 (written and spoken).
  C1 Advanced (CAE).

- Basque: C1 (written and spoken).
  EIGA (Euskal Herriko Unibertsitatean Euskaraz Irakasteko Gaitasun Agiria).
  Euskarazko komunikagaitasun-mailaren ziurtagiria C1.