Curriculum Vitae

Carlos Pérez-Arancibia

e-mail: cperez@alumni.caltech.edu ◇ web: https://caperezar.github.io

Research Interests

Scientific computing; high-order PDE solvers; fast algorithms; numerical analysis; boundary and volume integral equations; wave phenomena; computational electromagnetics; optical metamaterials.

Employment History

Associate Professor (UHD2, tenured) *Dec 2024 – Present*
Department of Applied Mathematics, Mathematics of Computational Science
Faculty of Electrical Engineering, Mathematics and Computer Science
University of Twente, Enschede, The Netherlands

Assistant Professor (UD1, tenured) *Sep 2021 – Nov 2024*
Department of Applied Mathematics, Mathematics of Computational Science
Faculty of Electrical Engineering, Mathematics and Computer Science
University of Twente, Enschede, The Netherlands

Assistant Professor *Jul 2017 – Aug 2021*
Institute for Mathematical and Computational Engineering
Pontificia Universidad Católica de Chile, Santiago, Chile

Instructor in Applied Mathematics *Sep 2016 – Jun 2018*
Department of Mathematics
Massachusetts Institute of Technology, Cambridge, MA, USA

Education

California Institute of Technology, Pasadena, CA, USA *Aug 2016*
· PhD in Applied & Computational Mathematics
· Thesis supervisor: Oscar P. Bruno

Pontificia Universidad Católica de Chile, Santiago, Chile
· Master of Science in Engineering (with highest distinction) *May 2010*
· Professional Degree in Mathematical Engineering (Ingeniería Matemática) (with highest distinction) *May 2010*
· Minor in Philosophy *May 2010*
· Bachelor in Engineering Sciences *Dec 2008*

Journal Papers[1]

32.† T. G. Anderson, M. Bonnet, L. M. Faria and C. Pérez-Arancibia, *A general-purpose global regularization method for 3D volume integral operators*, submitted, arXiv:2606.13549, 2026.

31.† C. Pérez-Arancibia and C. Turc, *Maxwell à la Helmholtz: Direct boundary integral equations for 3D scattering by perfect electric conductors via Helmholtz operators*, submitted, arXiv:2605.01670, 2026.

30.† Y.Tan, C. Pérez-Arancibia, and T. Yin, *A uniformly high-accuracy PML-BIE method for scattering by periodic arrays of obstacles: The 2D case*, submitted, arXiv:2606.07971, 2026.

29.† L. M. Faria, C. Pérez-Arancibia and S. Tlupova, *High-order kernel regularization of singular and hypersingular Helmholtz boundary integral operators*, submitted, arXiv:2604.14797, 2026.

28.‡ J. Burbano-Gallegos, C. Turc and C. Pérez-Arancibia, *Maxwell à la Helmholtz: Electromagnetic scattering by 3D perfect electric conductors via Helmholtz integral operators*, *ESAIM: Mathematical Modelling and Numerical Analysis*, 60(1):273–315, 2026.

[1]Papers marked with the symbol † follow the mathematical tradition of alphabetical authorship ordering, whereas those marked with ‡ denote work with mentored students.

27.‡ V. Hojas, C. Pérez-Arancibia and M. A. Sánchez, *Reflectionless discrete perfectly matched layers for higher-order finite difference schemes*. SIAM J. Sci. Comput. 46.5 (2024), pp. A3094-A3123.

26.† A.-S. Bonnet-Ben Dhia, L. Faria and C. Pérez-Arancibia, *A complex-scaled boundary integral equation for time-harmonic water waves*. SIAM J. Appl. Math., 84.4 (2024), pp. 1532-1556.

25.† T. G. Anderson, M. Bonnet, L. M. Faria and C. Pérez-Arancibia, *Fast, high-order accurate numerical evaluation of volume potentials via polynomial density interpolation*, J. Comput. Phys., 511 (2024), p. 11309.

24.† T. G. Anderson, M. Bonnet, L. M. Faria, and C. Pérez-Arancibia. *Construction of polynomial particular solutions of linear constant-coefficient partial differential equations*, Comput. Math. Appl., 162 (2024), pp. 94-103.

23.† L. Faria, C. Pérez-Arancibia and C. Turc. *Combined field-only boundary integral equations for PEC electromagnetic scattering problem in spherical geometries*, SIAM J. Appl. Math., 84.1 (2024), pp. 1-38.

22.‡ T. Strauszer-Caussade, L. Faria, A. Fernandez-Lado and C. Pérez-Arancibia, *Windowed Green function method for wave scattering by periodic arrays of 2D obstacles*, Stud. Appl. Math., 150.1. (2023), pp. 277-315.

21.‡ R. Arrieta and C. Pérez-Arancibia, *Windowed Green function MoM for second-kind surface integral equation formulations of layered media electromagnetic scattering problems*, IEEE Trans. Antennas Propag., 70.12 (2022), pp. 11978-11989.

20.‡ V. Gómez and C. Pérez-Arancibia, *On the regularization of Cauchy-type integral operators via the density interpolation method and applications*, Comput. Math. Appl., 87 (2021), pp. 108-119.

19. L. Faria, C. Pérez-Arancibia and M. Bonnet, *General-purpose kernel regularization of boundary integral equations via density interpolation*, Comput. Methods Appl. Mech. Eng., 378 (2021), p. 113703.

18. C. Pérez-Arancibia, C. Turc, L. Faria and C. Sideris, *Planewave density interpolation methods for the EFIE on simple and composite surfaces*, IEEE Trans. Antennas Propag., 69.1 (2021), pp. 317-331.

17.† D. Nicholls, C. Pérez-Arancibia, and C. Turc, *Sweeping preconditioners for the iterative solution of quasiperiodic Helmholtz transmission problems in layered media*, J. Sci. Comput., 82.44 (2020), pp. 1-45.

16.‡ I. Labarca, L. Faria and C. Pérez-Arancibia, *Convolution quadrature methods for time-domain scattering from unbounded penetrable interfaces*, Proc. R. Soc. A, 475.2027 (2019), pp. 1-18.

15. C. Pérez-Arancibia, C. Turc and L. Faria, *Planewave density interpolation methods for 3D Helmholtz boundary integral equations*, SIAM J. Sci. Comput., 41.4. (2019), pp. A2065-A2087.

14.† C. Pérez-Arancibia, S. Shipman, C. Turc and S. Venakides, *Domain decomposition for quasi-periodic scattering by layered media via robust boundary-integral equations at all frequencies*, Commun. Comput. Phys., 26 (2019), pp. 265-310.

13. C. Pérez-Arancibia, L. Faria and C. Turc, *Harmonic density interpolation methods for high-order evaluation of Laplace layer potentials in 2D and 3D*, J. Comput. Phys., 376 (2019), pp. 411-434.

12. R. Pestourie, C. Pérez-Arancibia, Z. Lin, W. Shin, F. Capasso and S. G. Johnson, *Inverse design of large-area metasurfaces*, Opt. Express, 26.26. (2018), pp. 33732-33747.

11. C. Pérez-Arancibia, R. Pestourie and S. G. Johnson, *Sideways adiabaticity: Beyond ray optics for slowly varying metasurfaces*, Opt. Express, 26.23. (2018), pp. 30202-30230.

10. C. Pérez-Arancibia, E. Godoy and M. Durán, *Modeling and simulation of an acoustic well stimulation method*, Wave Motion, 77 (2018), pp. 214-228.

9. C. Pérez-Arancibia, *A planewave singularity subtraction technique for the classical Dirichlet and Neumann combined field integral equations*, Appl. Numer. Math., 123 (2018), pp. 221-240.

8.† C. Jerez-Hanckes, C. Pérez-Arancibia and C. Turc, *Multitrace/singletrace formulations and domain decomposition methods for the solution of Helmholtz transmission problems for bounded composite scatterers*, J. Comput. Phys., 350 (2017), pp. 343-360.

7.† O. P. Bruno, E. Garza-Gonzalez and C. Pérez-Arancibia, *Windowed Green Function method for nonuniform open-waveguide problems*, IEEE Trans. Antennas Propag., 65.9 (2017), pp. 4684-4692.

6.† O. P. Bruno and C. Pérez-Arancibia, *Windowed Green Function method for the Helmholtz equation in presence of multiply layered media*, Proc. R. Soc. A, 473.2202 (2017), pp. 1-20.

5.† O. P. Bruno, M. Lyon, C. Pérez-Arancibia and C. Turc, *Windowed Green Function method for layered-media scattering*, SIAM J. Appl. Math., 76.5 (2016), pp. 1871-1898.

4. C. Pérez-Arancibia and O. Bruno, *High-order integral equation methods for problems of scattering by bumps and cavities on half-planes*, J. Opt. Soc. Am. A, 31.8 (2014), pp. 1738-1746.

3. C. Pérez-Arancibia, P. Zhang, O. P. Bruno and Y. Y. Lau, *Electromagnetic power absorption due to bumps and trenches on flat surfaces*, J. Appl. Phys., 116.12 (2014), p. 124904.

2. C. Pérez-Arancibia, P. Ramaciotti, R. Hein and M. Durán, *Fast multipole boundary element method for the Laplace equation in a locally perturbed half-plane with a Robin boundary condition*, Comput. Methods Appl. Mech. Engrg., 233.1. (2012), pp. 152-163.

1. C. Pérez-Arancibia and M. Durán, *On the Green's function for the Helmholtz operator in an impedance circular cylindrical waveguide*, J. Comput. Appl. Math., 235.1 (2010), pp. 244-262.

Conference (Peer-Reviewed) Papers[2]

· L. M. Faria, C. Pérez-Arancibia, and C. Turc. Combined field-only boundary integral equations for electromagnetic scattering. Accepted to *WAVES 2024: The 16th International Conference on Mathematical and Numerical Aspects of Wave Propagation*, June 30–July 5, 2024, Berlin, Germany.

· T. G. Anderson, L. M. Faria, and C. Pérez-Arancibia. Solving boundary and volume integral equations with `Inti.jl`. Accepted to *WAVES 2024: The 16th International Conference on Mathematical and Numerical Aspects of Wave Propagation*, June 30–July 5, 2024, Berlin, Germany.

· T. G. Anderson, M. Bonnet, L. M. Faria, and C. Pérez-Arancibia. Fast, provably high-order accurate methods for volume integral operators. Accepted to *WAVES 2024: The 16th International Conference on Mathematical and Numerical Aspects of Wave Propagation*, June 30–July 5, 2024, Berlin, Germany.

· T. Strauszer-Caussade, L. M. Faria, and C. Pérez-Arancibia, Windowed Green function method for wave scattering by periodic arrays of 2D obstacles. Accepted to *WAVES 2024: The 16th International Conference on Mathematical and Numerical Aspects of Wave Propagation*, June 30–July 5, 2024, Berlin, Germany.

· R. Arrieta, L. Faria, C. Pérez-Arancibia, and C. Turc. A high-order density-interpolation-based Nyström method for three-dimensional electromagnetic boundary integral equations. *WAVES 2022: The 15th International Conference on Mathematical and Numerical Aspects of Wave Propagation*, July 24–29 2022, Palaiseau, France.

· J. Hu, E. Garza, C. Pérez-Arancibia and C. Sideris. High-Order accurate integral equation based mode solver for layered nanophotonic waveguides. *International Microwave Symposium*, June 6–11 2021, Atlanta, GA, USA.

· C. Pérez-Arancibia and O. P. Bruno. A high-order integral equation solver for problems of electromagnetic scattering by three-dimensional open surfaces. *WAVES 2015: The 12th International Conference on Mathematical and Numerical Aspects of Wave Propagation*, July 20–24 2015, Karlsruhe, Germany.

Selected Talks and Presentations

Invited Seminar Talks

- Seminars in PDE and Applications, Delft University of Technology, September 18, 2025.
- POEMS Seminar, ENSTA Paris, Palaiseau, France, July 17, 2025.
- Institute of Computational Mathematics and Scientific Computing Seminar, Chinese Academy of Sciences, May 7, 2024 (online).
- Seminario del Instituto de Ingeniería Matemática y Computacional, Pontificia Universidad Católica de Chile, Santiago, Chile, April 21, 2025.
- Seminars in Numerical Analysis, Delft University of Technology, Delft, March 16, 2024.
- IEEE GRSS-APS Joint Student Chapter, University of Southern California, Los Angeles, CA, USA, April 7, 2022 (online).

[2]The speaker's name is underlined.

- Applied Mathematics Colloquium, University of Colorado at Boulder, January 21, 2022 (online).
- POEMS Seminar, ENSTA Paris, Palaiseau, France, April 15, 2021 (online).
- Applied Mathematics Colloquium, New Jersey Institute of Technology, Newark, NJ, USA, January 31, 2020.
- Numerical Methods for Partial Differential Equations Seminar, MIT, Cambridge, MA, USA, January 29, 2020.
- Applied Mathematics and Scientific Computing Seminar, Temple University, Philadelphia, PA, USA, January 27, 2020.
- Coloquio del Departamento de Ingeniería Matemática, Universidad de Concepción, Chile, May 23, 2019.
- Mathematical Sciences Colloquium, University of Massachusetts at Lowell, MA, USA, October 13, 2017.
- Seminario del Instituto de Ingeniería Matemática y Computacional, Pontificia Universidad Católica de Chile, Santiago, Chile, August 24, 2017.
- Numerical Methods for Partial Differential Equations Seminar, MIT, Cambridge, MA, USA, April 19, 2017.
- Applied and Computational Mathematics Seminar, University of California, Irvine, CA, USA, February 22, 2016.
- Applied and Computational Mathematics Seminar, University of California, Merced, CA, USA, February 2, 2016.

Invited Minisymposium/Workshop Talks

- NDNS+ yearly meeting: Nonlinear Dynamics of Natural Systems Cluster, VU Amsterdam, Amsterdam, the Netherlands, March 13, 2026.
- PoWER2025: Propagation of Waves, European Researchers, TU Wien, Vienna, Austria, July 2–4, 2025.
- Institut Mittag-Leffler, Djursholm, Sweden, October 30, 2025. (Invited participant, research program: *Interfaces and Unfitted Discretization Methods*.)
- International Conference on Applied Mathematics (ICAM 2024), City University of Hong Kong, Hong Kong, May 28 – June 1, 2024.
- The 10^{th} International Congress on Industrial and Applied Mathematics (ICIAM 2023), Tokyo, Japan, August 20–25, 2023.
- Workshop on Computational Methods for Multiple Scattering. Isaac Newton Institute, Cambridge, UK, April 17–21, 2023. Link to video.
- Conference on Mathematics of Wave Phenomena, Karlsruhe, Germany, February 14–18, 2022 (online).
- Numerical Analysis of Electromagnetic Problems, Oberwolfach Mathematical Research Institute, Germany, March 23, 2021 (online).
- French Latin-American Conference on New Trends in Applied Mathematics, Center for Mathematical Modeling, Universidad de Chile, Santiago, Chile, November 5-8, 2019.
- PUC-Bath Workshop on PDE's and Applications, Santiago, Chile, September 12, 2019.
- SIAM Conference on Computational Science and Engineering, Spokane, Washington, WA, USA, March 1, 2019.
- The 2^{nd} Chilean Symposium on Boundary Element Methods, Universidad Federico Santa María, Valparaíso, Chile, December 14, 2018.
- Caleta Numérica, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile, August 18, 2017.
- The 10^{th} International Conference on Scientific Computing and Applications, Fields Institute, Toronto, Canada, June 6–10, 2016.
- The 13^{th} Annual Conference on Frontiers in Applied and Computational Mathematics (FACM 2016), Newark, NJ, USA, June 3–4, 2016.
- AMMCS-CAIMS Congress, Waterloo, Ontario, Canada, June 7-12, 2015.
- SIAM Conference on Computational Science and Engineering, Salt Lake City, Utah, USA, March 14–18, 2015.
- Valparaíso's Mathematics and its Applications Days, Pontificia Universidad Católica de Valparaiso, Valparaíso, Chile, December 12-14, 2012.

Contributed Talks

- The 16^{th} International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2024), Berlin, Germany, June 30–July 24, 2024.
- SIAM Conference on Computational Science and Engineering, Amsterdam, The Netherlands, March 1, 2023.
- The 15^{th} International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2022), Palaiseau, France, July 25-29, 2022.
- International Conference on Spectral and High Order Methods (ICOSAHOM 2020+1), Vienna, Austria, July 12–16, 2021.

- The 6th Chilean Workshop on Numerical Analysis of Partial Differential Equations (WONAPDE 2019), Concepción, Chile, January 22, 2019.
- The 9th Meeting on Numerical Analysis of Partial Differential Equations (Santiago Numérico III), Santiago, Chile, June 28–30, 2017.
- The 12th International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2015), Karlsruhe, Germany, July 20–24, 2015.
- International Conference on Spectral and High Order Methods (ICOSAHOM 2014), Salt Lake City, UT, USA, June 23–27, 2014.

Teaching Experience

Teaching Qualification

· University Teaching Qualification (UTQ) (Basiskwalificatie Onderwijs), University of Twente, The Netherlands, November 2024. Certified according to the Dutch national standards in university-level teaching.

University of Twente *Sep 2021 – Present*
Course Instructor

· Analysis I (202200143), 1st term, 2022 and 2023
· Analysis II (202400660), 2nd term, 2022 and 2023
· Introduction to Partial Differential Equations (202400632), 3rd term, 2024 and 2025
· Finite Element Methods: Theory and Applications (202100097), 3rd term, 2024 and 2025
· Calculus A (202001171), 1st term 2025 (∼200 students)

Pontificia Universidad Católica de Chile *Jun 2018 – Aug 2021*
Course Instructor

· Calculus III (MAT1630), 1st semester 2020 (∼240 students) and 2021 (∼190 students)
· Engineering Applications of PDEs and Functional Analysis (IMT3130/3773), 1st semester 2019, 2020, and 2021
· Scientific Computing II (MAT2615), 2nd semester 2020
· Scientific Computing I (MAT2605), 2nd semester 2019
· Advanced Topics in Numerical Analysis (IMT3810), 2nd semester 2019
· Capstone Course on Mathematical and Computational Engineering (IMT3500), 2nd semester 2018

Massachusetts Institute of Technology *Sep 2016 – Jun 2018*
Course Instructor

· Fast Methods for Partial Differential and Integral Equations (18.336J/6.335J), Fall 2016 and 2017
· Linear Partial Differential Equations: Analysis and Numerics (18.303), Spring 2018

California Institute of Technology *Sep 2012 – Jun 2016*
Teaching Assistant

· Methods of Applied Mathematics A (ACM101A), Fall 2014 and 2015
· Methods of Applied Mathematics B (ACM101B), Winter 2015 and 2016
· Introductory Methods of Applied Mathematics A (ACM100A), Fall 2012, 2013, and 2014
· Introductory Methods of Applied Mathematics B (ACM100B), Winter 2013
· Introductory Methods of Applied Mathematics C (ACM100C), Spring 2013, 2014, and 2015
· Introductory Methods of Computational Mathematics B (ACM106B), Winter 2014

Pontificia Universidad Católica de Chile *Aug 2010 – Dec 2010*
Course Instructor

· Mathematical Methods Applied to Engineering (IMM2650), 2nd semester 2010

Pontificia Universidad Católica de Chile *Mar 2006 – Dec 2009*
Teaching Assistant

· Numerical Analysis of Partial Differential Equations, 2nd semester 2009

· Introduction to Numerical Analysis of Partial Differential Equations, 1st semester 2009
· Calculus II, 2nd semester 2008
· Calculus III, 2nd semester 2008
· Partial Differential Equations, 1st semester 2007 and 2008
· Calculus I (Maple laboratory), 1st semester 2008
· Differential Equations, 1st semester 2006 and 2nd semester 2007
· Linear Algebra, 1st and 2nd semesters 2006

Funding

· NWO Open Competition Domain Science (M1) awarded by the Dutch Research Council, the Netherlands
  Title: *Density interpolation methods for the fast and high-order evaluation of volume potentials in complex geometries*
  Role: Principal investigator
  Period: 2024 – 2028 (4 years)
  Budget: €372,565

· Strategic Research Initiative awarded by the 4TU Applied Mathematics Institute, the Netherlands
  Title: *Advancing mathematical methods for wave phenomena*
  Role: Co-principal investigator
  Period: 2024 – 2026 (2 years)
  Budget: €5,000 extendable to €20,000.

· Fondecyt de Iniciación en Investigación awarded by Agencia Nacional de Investigación y Desarrollo, Chile
  Title: *Fast and efficient method of moments for electromagnetic wave propagation and scattering in the presence of unbounded material interfaces*
  Role: Principal investigator
  Period: 2018 – 2021 (3 years)
  Budget: CLP 61,298,000 (∼ €75.832)

· MISTI Global Seed Funds awarded by the Massachusetts Institute Technology and the Pontificia Universidad Católica de Chile
  Title: *High-Contrast challenges in numerical wave scattering*
  Role: Co-principal investigator
  Period: 2016 – 2017 (2 years)

Awards

· Invited Research Visit, POEMS Lab, ENSTA Paris, Palaiseau, France, Summer 2025 (one month; funded accommodation and travel).

· Top China UC Santander Fellowship, December 2018.

· ICES Postdoctoral Fellowship, University of Texas at Austin, February 2016 (declined).

· IMA Postdoctoral Fellowship, University of Minnesota, January 2016 (declined).

· PIMS Postdoctoral Fellowship (Canada), December 2015 (declined).

· AMMCS-CAIMS Student Travel Award, June 2015.

· SIAM Student Travel Award, March 2015.

· Student Travel Award, NSF Workshop on the BEM, University of Minnesota, April 2012.

· Caltech Institute Fellowship, September 2011.

· Conicyt Scholarship for Master's Studies in Chile, January 2009.

· Padre Alberto Hurtado Award, Pontificia Universidad Católica de Chile, March 2003.

Service

Editorial Activities

- M. Lucido, K. Kobayashi, A. I. Nosich, C. Pérez-Arancibia, and A. Vukovic. Theme issue "Analytically grounded full-wave methods for advances in computational electromagnetics" in *Philosophical Transactions of the Royal Society A* (2025).
- F. Amlani, N. M. Pahlevan, and C. Pérez-Arancibia. Special issue "Recent advances in Fourier-based computational approache for PDEs" in *Advanced Modeling and Simulation in Engineering Sciences*, Springer (2024).

Journal Review

Journal of Computational Physics
SIAM Journal on Scientific Computing
Computers and Mathematics with Applications
IMA Journal of Applied Mathematics
- SN Partial Differential Equations and Applications
Engineering Optimization
Journal of Algorithms and Optimization
International Journal on Geomathematics
Communications in Computational Physics
SIAM Journal on Applied Mathematics
SIAM Journal on Numerical Analysis
Advances in Computational Mathematics
IMA Journal of Numerical Analysis
IEEE Transactions on Antennas and Propagation
Int. Journal for Numerical Methods in Engineering
Progress in Electromagnetic Research (PIERS)
Journal of Applied Mechanics
Nature Communications

Organization of Scientific Events

- *Wave-Ned 2026: Conference on Analysis, Modeling and Numerics of Waves*. Member of the Organizing Committee (with V. Dolean, A. Geyer, J. Koellermeier, V. Nikolić, L. Scarabosio, and C. Urzúa-Torres), TU Delft, Delft, The Netherlands, August 26–28, 2026.
- *Summer School on Waves: Modeling, Analysis, and Numerics*. Mini-course: "Linear Waves: From Physics to Numerics." Lecturer and Co-Organizer (with main organizers Vanja Nikolić and Laura Scarabosio), Radboud University, Nijmegen, The Netherlands, August 25–29, 2025.
- Kick-off Workshop of the 4TU.AMI Strategic Research Initiative: *WAVES NL: Advancing Mathematical Methods for Wave Phenomena*. Organizer, University of Twente, The Netherlands, September 20, 2024.
- *Recent Advances on Integral Equation and Spectral Methods for Inhomogeneous Problems* (with Thomas G. Anderson, Rice University). Minisymposium, SIAM CSE 2023, March 2023.
- *Time-Evolution and Frequency-Domain Methods for Partial Differential Equations* (with David Shirokoff, NJIT). Minisymposium, WONAPDE 2019, January 2019.
- Seminar of the Institute for Mathematical and Computational Engineering. Weekly research seminar for graduate and undergraduate students in applied mathematics. Organizer, Pontificia Universidad Católica de Chile, 2020 academic year.
- Numerical Methods for Partial Differential Equations Seminar. Co-organizer together with Manuel A. Sánchez, Pontificia Universidad Católica de Chile, 2nd Semester 2018.

Session Chair

- The 16$^{\text{th}}$ International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2024), Berlin, Germany, June 30– July 4, 2024.
- The 15$^{\text{th}}$ International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2022), Palaiseau, France, July 25–29, 2022.

Department Service

- Faculty Member, Applied Mathematics Programme Committee, Department of Applied Mathematics, University of Twente (Sep 2023 – Apr 2025).
- Module Coordinator, Department of Applied Mathematics, University of Twente (3$^{\text{rd}}$ term, 2025).

Participation in PhD Committees

- Elena Giammatteo, PhD in Applied Mathematics, University of Twente.
- Erli Wind-Andersen, PhD in Mathematical Sciences, New Jersey Institute of Technology.
- Ruben Ailwyn. PhD in Electrical Engineering, PUC Chile.

Participation in MSc Committees

- Lavinia Lanting, MSc in Applied Mathematics, University of Twente.
- Bert Oudsten, MSc in Applied Mathematics, University of Twente.
- Reinout Nonhebel, MSc in Applied Physics, University of Twente.
- Genaro Laymuns, MSc in Mathematical and Computational Engineering, PUC.
- Pedro Izquiero, MSc in Mathematical and Computational Engineering, PUC.

Research Supervision

Current PhD Students

- Juan Burbano Gallegos: University of Twente (Sep 2024 – Present)

Former MSc Students

- Vicente Hojas: PUC Chile (now PhD student, Applied and Computational Mathematics, Caltech)
- Thomas Strauszer: PUC Chile (now PhD student, Applied Mathematics, University College London)
- Rodrigo Arrieta: PUC Chile (now PhD student, Applied Mathematics, MIT)
- Ignacio Labarca: PUC Chile (now PhD in Applied Mathematics, ETH Zürich)

Former Undergraduate Students and Interns

- Jeroen Schrader, BSc thesis (Applied Mathematics & Applied Physics), University of Twente
- Mücahit Özdilekler: Summer Research Intern, Istanbul Technical University
- Robert-Jan Nijhuis: BSc thesis (Applied Mathematics & Computer Science), University of Twente
- Mayank Thakur: BSc thesis (Applied Mathematics), University of Twente
- Gernt Hanskamp: BSc thesis (Applied Mathematics & Applied Physics), University of Twente
- Jelle Boon: BSc thesis (Applied Mathematics), University of Twente
- Guilhem Penet: Summer Research Intern, ENSTA Paris, France
- Vicente Gomez: BSc student, PUC Chile (now PhD in Applied Mathematics, NYU Courant Institute)