europass Curriculum vitae

PERSONAL INFORMATION Andrea ASPRI

EDUCATION AND TRAINING

01/01/2022 – present

Junior Assistant Professor (RTDa)

Junior Assistant Professor at Mathematics Department “F. Enriques” of Università degli Studi di Milano, under the support of the project FSE - REACT EU “RICERCA E INNOVAZIONE 2014-2020” (Research and Innovation 2014-2020).

01/11/2020 – 31/12/2021

Postdoctoral Researcher

Postdoc position at Mathematics Department “F. Casorati” of Università degli Studi di Pavia, under the supervision of Prof. Elisabetta Rocca.

Title of the research project: Problemi di controllo e di dinamiche a lungo termine per sistemi di equazioni alle derivate parziali non lineari;
Financial resources (period November 2020 - October 2021): FRG5 – Fondo Ricerca & Giovani 2019 and Progetto ECCELL2018_CSADSM56 - Eccellenza 2018-2022.
Financial resources (period November 2021 - present): FRG6 – Fondo Ricerca & Giovani 2020 and Progetto ECCELL2018_CSADSM56 - Eccellenza 2018-2022.

01/10/2017 – 31/10/2020

Postdoctoral Research Scientist

Research Scientist at RICAM (Johann Radon Institute for Computational and Applied Mathematics), in the group "Inverse Problems and Mathematical Imaging", under the supervision of Prof. Otmar Scherzer, Linz, Austria.

01/11/2013 – 31/10/2016

PhD in Mathematics

EQF 8

Mathematics Department "Guido Castelnuovo", Sapienza Università di Roma
Piazzale Aldo Moro 5, 00185 Roma (Italy)

Thesis Title: *Analysis of a linear elastic model relative to a small pressurized cavity embedded in the half-space.*
Advisors: Prof. Elena Beretta (Mathematics Department, Politecnico di Milano), Prof. Corrado Mascia (Mathematics Department, Sapienza Università di Roma).
Referees report: Ammari Habib, Scherzer Otmar.
Date of Defense: January 13, 2017.
Committee: *Ammari Habib, Francini Elisa, Gianni Roberto*.
Classification: excellent.

01/10/2010 – 25/03/2013

Master’s Degree in Applied Mathematics

EQF 7

Mathematics Department "Guido Castelnuovo", Sapienza Università di Roma
Piazzale Aldo Moro 5, 00185 Roma (Italy)

Thesis Title: *Deformazioni elastiche e variazioni gravitazionali generate da intrusioni ellissoidali con applicazioni alla vulcanologia* (Elastic deformations and gravity anomalies due to ellipsoidal intrusions with applications in volcanology).
Final grade: 110/110 cum laude.
Supervisors: Prof. Corrado Mascia (Mathematics Department, Sapienza Università di Roma), Prof. Maurizio Battaglia (Department of the Earth Sciences).

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SCIENTIFIC ACTIVITY

Scientific Interests

I'm currently working on inverse problems both from the mathematical analysis and numerical analysis perspective. In the following, a list of the topics of my interest:

Inverse problems for PDEs with particular interest for mathematical models coming from the applications: uniqueness and stability issues.
Partial differential equations of elliptic type.
Shape optimization and phase field methods (with possible applications to 3D printing).
Regularization methods for ill-posed problems: Data driven regularization and reconstruction methods.

Collaborators

E. Beretta (*Mathematics Department of Politecnico di Milano & NYU Abu Dhabi*)
C. Cavaterra (*Mathematics Department of Università degli Studi di Milano*)
M. de Hoop (*Department of Computational and Applied Mathematics and Department of Earth, Environmental, and Planetary Sciences, Rice University*)
E. Francini (*Mathematics Department of Università degli Studi di Firenze*)
L. Frischauf (*Mathematics Department of University of Vienna*)
A. Gandolfi (*Mathematics Department of NYU Abu Dhabi*)
Y. Korolev (*Mathematics Department of University of Cambridge*)
C. Mascia (*Mathematics Department of Sapienza Università di Roma*)
A. Mazzucato (*Mathematics Department of Penn State University*)
E. Rocca (*Mathematics Department of Università degli Studi di Pavia*)
E. Rosset (*Mathematics and Geoscience Department of Università degli Studi di Trieste*)
O. Scherzer (*Mathematics Department of University of Vienna*)
M. Verani (*MOX, Mathematics Department of Politecnico di Milano*)
S. Vessella (*Mathematics Department of Università degli Studi di Firenze*)

1. PAPERS AND BOOKS

Book

A. Aspri, **An Elastic Model for Volcanology**, published in "Lecture Notes in Geosystems Mathematics and Computing", Birkhäuser, Springer Nature Switzerland, December 2019. https://www.springer.com/gp/book/9783030314743.

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List of Publications

1. A. Aspri, E. Beretta, C. Mascia, **Asymptotic Expansion for Harmonic Functions in the Half-Space with a Pressurized Cavity**, Mathematical Methods in the Applied Sciences, Volume 39, Issue 10, July 2016, 2415–2430.
2. A. Aspri, E. Beretta, C. Mascia, **Analysis of a Mogi-type model describing surface deformations induced by a magma chamber embedded in an elastic half-space**, Journal de l'École polytechnique — Mathématiques, Volume 4, January 2017, 223-255.
3. A. Aspri, E. Beretta, E. Rosset, **On an elastic model arising from volcanology: an analysis of the direct and inverse problem**, Journal of Differential Equations, Volume 265, Issue 12, December 2018, 6400–6423.
4. A. Aspri, E. Beretta, A. L. Mazzucato, M. de Hoop, **Analysis of a model of elastic dislocations in geophysics**, Archive for Rational Mechanics and Analysis (online first November 2019), Volume 236, Issue 1, April 2020, 71–111.
5. A. Aspri, S. Banert, O. Öktem, O. Scherzer, **A data-driven iteratively regularized Landweber iteration**, Numerical Functional Analysis and Optimization, (online first March 2020), Volume 41, Issue 10, 2020, 1190-1227.
6. A. Aspri, E. Beretta, O. Scherzer, M. Muszkieta, **Asymptotic expansions for higher order elliptic equations with an application to quantitative photoacoustic tomography**, SIAM Journal on Imaging Sciences, Volume 13, No. 4, pp. 1781–1833.
7. A. Aspri, Y. Korolev, O. Scherzer, **Data driven regularization by projection**, Inverse Problems, Volume 36, No. 12, pp. 125009 (2020).
8. A. Aspri, E. Beretta, A. Gandolfi, E. Wasmer, **Mortality containment vs. Economics opening: Optimal Policies in a SEIARD model**, Journal of Mathematical Economics, Volume 93 (2021), pp. 102490.
9. A. Aspri, E. Beretta, M. V. de Hoop, A. L. Mazzucato, **Detection of dislocations in a 2D anisotropic elastic medium**, Rendiconti di Matematica e delle sue Applicazioni Volume 42, pp. 183-195, for a special issue entitled "Nonlinear Diffusion Problems" dedicated to Maria Assunta Pozio.
10. A. Aspri, L. Frischauf, Y. Korolev, O. Scherzer, **Data driven reconstruction using frames and Riesz bases**. February 2021. Contribution in the volume (see Chapter 13) entitled "Deterministic and Stochastic Optimal Control and Inverse Problems" edited by B. Jadamba, A. Khan, M. Sama, S. Migorski, CRC Press.
11. A. Aspri, E. Beretta, A. L. Mazzucato, **Dislocations in a layered elastic medium with applications to fault detection**, Journal of the European Mathematical Society, Online first, May 2022, DOI 10.4171/JEMS/1243.
12. A. Gandolfi, A. Aspri, E. Beretta, K. Jamshad, M. Jiang, **The effect of opening schools on the course of a pandemic: a mathematical study**, Scientific Reports, Article Number 3012(2022), Volume 12.
13. A. Aspri, E. Beretta, C. Cavaterra, E. Rocca, M. Verani, **Identification of cavities and inclusions in a linear elastic medium using a phase field approach**, accepted for publication in "Applied Mathematics and Optimization", June 2022, DOI:10.1007/s00245-022-09897-6.
14. A. Aspri, **A phase-field approach for detecting cavities via a Kohn-Vogelius type functional**, accepted for publication in "Inverse Problems" for the special issue "Emerging Talents 2021" (see, in the sequel, the section titled "Awards" for further explanations), July 2022, DOI:10.1088/1361-6420/ac82e4.
15. A. Aspri, E. Beretta, E. Francini, S. Vessella, **Lipschitz stable determination of polyhedral conductivity inclusions from local boundary measurements**, accepted for publication in "SIAM Journal on Mathematical Analysis", July 2022.

Preprints & Works in progress

P. Antonietti, A. Aspri, E. Beretta, A. L. Mazzucato, **A shape optimization approach for detection of elastic dislocations**.

A. Aspri, A. Benfenati, P. Causin, C. Cavaterra, G. Naldi, **Mathematical and numerical challenges in regularizing the inverse Diffuse Optical Tomography problem**, review article to submit to Inverse Problems.

A. Aspri, E. Rocca, **A Γ-convergence result for a phase-field approach with a Kohn-Vogelius type functional**.

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2. RESEARCH PROJECTS

Member of the projects

Member of the project titled “Problemi Inversi per le Equazioni alle Derivate Parziali” (English translation: Inverse Problems for Partial Differential Equations) and financed by GNAMPA (Gruppo Nazionale per l’Analisi Matematica, la Probabilità e le loro Applicazioni) of INdAM (Istituto Nazionale di Alta Matematica). Total sum granted 3,500 Euro.

Member of PRIN (“Progetti di Rilevante Interesse Nazionale”) titled “Mathematics for Industry 4.0 (Math4I4)” in the local unity of the Mathematics Department of Università degli Studi di Pavia, coordinated by Prof. Elisabetta Rocca. Total sum granted 483,800 Euro.

Member of the project financed by the State of Upper Austria with the title *“Förderung des Johann Radon Institute for Computational and Applied Mathematics (RICAM) der Österreichischen Akademie der Wissenschaften (ÖAW)”* (English translation: “Grant for Johann Radon Institute for Computational and Applied Mathematics (RICAM) of the Austrian Academy of Sciences”), from January 2018 to October 2020. Annual total sum granted 250,000 Euro per year. The project had the purpose of supporting mathematical research with potential applications in the life sciences and medicine.
In September 2020, the Scientific Assistant of RICAM (Dr Peter Kritzer) applied for an extension of this grant, for other three years, submitting a research project divided into three subprojects. I wrote and edited one of the three subprojects, entitled "Data driven regularizations". The institute received the grant in December 2020.

Associate member of the SFB project “Tomography across the scales” (https://tomography.univie.ac.at/). Principal investigators: Otmar Scherzer (University of Vienna - Mathematics Department), Ronny Ramlau (RICAM Linz), Wolfgang Drexler (Center for Medical Physics and Biomedical Engineering), Peter Elbau (University of Vienna - Mathematics Department), Monika Ritsch-Marte (Medical University of Innsbruck), Gerhard Schütz (TU Wien - Institute of Applied Physics).

"Mathematical modeling for the identification of magma reservoirs from gravitation and deformation data", Sapienza Università di Roma, 2013. Principal investigator: Mascia Corrado.

"Modelli Differenziali Non Lineari: Analisi, Approssimazione ed Applicazioni", Sapienza Università di Roma, 2015. Principal investigator: Falcone Maurizio.

"Modelli Differenziali Non Lineari: Analisi, Approssimazione ed Applicazioni", Sapienza Università di Roma, 2016. Principal investigator: Finzi Vita Stefano.

3. AWARDS, RESEARCH VISITS AND MISCELLANEA

Awards

August 2015 – December 2016 **Research Project**: Principal Investigator of the project "Avvio alla Ricerca 2015" for young researchers financed by Sapienza Università di Roma, 1K euro.

Project’s Title: *Problemi inversi e algoritmi di ricostruzione relativi a cavità pressurizzate in semispazi con applicazioni alla vulcanologia (Inverse problems and reconstruction algorithms for pressurized cavities in the half-space with applications in volcanology).*

December 2020 **Selected for “Emerging Talents 2021”**: nominated by the editorial board of the journal “Inverse Problems" to submit a paper for a special issue in 2021 reserved to the most talented young scientists working on inverse problems.

Research visits

14 - 20 December 2019 Mathematics Department “Renato Caccioppoli” of University of Naples “Federico II”. Invitation received by Salvatore Cuomo and Francesco Calabrò.

24 February– 10 March 2020
15 – 23 February 2019
3 – 12 March 2017
13 – 21 February 2016
Mathematics Department of New York University Abu Dhabi. Invitation received by Elena Beretta.

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Referee Activity

Referee for the following international journals.

Applicable Analysis;
Applied Mathematics and Computation;
Boundary Value Problems;
Computational Methods in Applied Mathematics;
Economic Analysis and Policy;
International Journal on Geomathematics (GEM);
Inverse Problems;
Inverse Problems and Imaging;
Inverse Problems in Science & Engineering;
Journal of Computational and Applied Mathematics;
Journal of Inverse and Ill-Posed Problems;
Journal of Mathematical Imaging and Vision;
Journal of Mathematics in Industry;
Mathematics and Computers in Simulation;
Multiscale Modeling and Simulation: A SIAM Interdisciplinary Journal.
Numerical Functional Analysis and Optimization;
SIAM Journal on Mathematical Analysis;
SIAM Journal on Imaging Sciences;

Popularization contribution

30 November 2020 — Interviewed by Markus Kessler of the Austrian Academy of Sciences to speak about the paper "Mortality containment vs. Economics opening: Optimal Policies in a SEIARD model", see previous section "List of Publications" for details on the paper. Title of the interview: "Optimale COVID-Strategie: Der Wert eines Menschenlebens". The interview is on the website of the Austrian Academy of Sciences https://www.oeaw.ac.at/detail/news/zu-fruehe-oeffnung-kann-zu-naechstem-lockdown-fuehren

4. CONFERENCES, WORKSHOPS AND SEMINARS

Organization of Workshops/Minisymposia

5 June – 9 June 2023 — Co-organizer with Alberti S. G., Bubba T., Ratti L., and Santacesaria M. of the INdAM workshop "*Learning for Inverse Problems*", to be held in Rome, 5 June – 9 June, 2023.

19 December – 22 December 2022 — Co-organizer with Beretta E., Cakoni F., Francini E., and Scherzer O. of the Workshop "*Inverse Problems in the Desert*", to be held in the New York University Abu Dhabi , 19 December – 22 December, 2022.

22 May – 28 May 2022 — Co-organizer with Beretta E., Ilmavirta J., Mazzucato A., and Volkov D. of the Mini-symposium "*Inverse Problems in Geomathematics and Seismology* ", to the 10th InternationalConference "Inverse Problems: Modelling and Simulation", held in Malta, 22 May – 28 May, 2022.

21 March – 25 March 2022 — Co-organizer with Alberti G.S., Frischauf L., and Scherzer O. of the Mini-symposium "*Data-Driven Methods in Inverse Problems and Imaging*", to the SIAM Conference on Imaging Science, held virtually, 21 March – 25 March, 2022.

30 August – 3 September 2021 — Co-organizer with Mindrinos L. of the Mini-symposium "*New trends in tomography: From microscopy to astronomy* ", to the National Congress SIMAI 2020, held in Parma (Italy), 30 August – 3 September, 2021.

8 July – 12 July 2019 — Co-organizer with Beretta E. and Mazzucato A. of the Mini-symposium "*Inverse Problems in Elastic Media*" to Applied Inverse Problems (AIP) conference, held in Grenoble, 8 – 12 July, 2019.

28 May – 1 June 2018 — Co-organizer with Beretta E., de Hoop M., Francini E., and Scherzer O. of the INdAM workshop "*Reconstruction Methods for Inverse Problems*" held in Rome 28 May – 1 June, 2018.

Upcoming conferences and seminars

May 2023 — Participant at the Workshop titled "Leveraging model- and data-driven methods in medical imaging", Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Canada, 7-12 May 2023. (invited)

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December 2022 Speaker at the Workshop titled “Inverse Problems on Large Scales” within the Special Semester on Tomography across the Scales at RICAM (Johann Radon Institute for Computational and Applied Mathematics), Linz, November 29 - December 3, 2022. (invited talk)

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Conference/Workshop Invited Talks

24 May 2022 **Data driven regularization**, 10th International Conference “Inverse Problems: Modeling and Simulation”, Minisymposium M14 “Mathematical Methods in Tomography Across the Scales”, Malta, 23-27 May 2022 (invited talk).

23 May 2022 **Phase-field approaches in elastic inverse problems**, Workshop titled “PHAse-field Methods in applied sciences – PHAME2022”, INDAM, Rome - May 23-27, 2022. (invited talk)

12 May 2022 **Phase-field approaches for reconstruction of elastic cavities**, Workshop titled “Inverse Problems for Anomalous Diffusion Processes”, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Canada, 8-13 May 2022. (invited talk)

22 March 2022 **Asymptotic expansions for higher order elliptic equations with applications in Quantitative Photoacoustic**, SIAM Conference on Imaging Science, Berlin, Minisymposium “Mathematical Imaging at the Small Scale: Modeling, Analysis and Applications”, 22-25 March 2022 (invited talk).

10 November 2021 **Data-driven regularization for linear inverse problems**, The 3rd International Conference on Machine Learning and Intelligent Systems (MLIS 2021), Xiamen (China), 8-11 November 2021 (invited talk).

13 October 2021 **Data-driven regularization by projections**, PRIMO (Post graduate Researchers in Inverse problems, Machine learning and Optimization) workshop, Department of Mathematics of the University of Bologna , 11-13 October 2021.

1 September 2021 **Data driven regularization by projection**, Contributed talk in IFIP TC7 Conference on System Modelling and Optimization, Quito (Ecuador), 30 August - 3 September 2021.

4 March 2021 **Data driven regularization by projection**, SIAM Conference on Computational Science and Engineering (CSE21), Minisymposium “Using data to drive iterative methods: subspace recycling and other techniques”, Fort Worth, Texas (U.S.), 1–5 March 2021.

25 January 2021 **Topological derivative for higher order elliptic equations with applications in Quantitative Photoacoustic**, Computational and Applied Mathematics Colloquium, Department of Mathematics, Penn State University

2 September 2020 **Updates on data driven regularization by projection**, 4rd SFB workshop “Tomography Across the Scales”, online meeting, 1-2 September 2020.

15 January 2020 **A data-driven iteratively regularized Landweber iteration**, American Mathematical Society (AMS) Special Session on “Interactions of Inverse Problems, Computational Harmonic Analysis, and Imaging”, Denver, Colorado, 15-18 January 2020.

2 December 2019 **Data driven regularization by projection**, 3rd SFB workshop “Tomography Across the Scales”, Obergurgl (Austria), 1-5 December 2019.

25 June 2019 **Analysis of a model of elastic dislocations in geophysics**, Reconstruction Methods for Inverse Problems, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Canada, 24-28 June 2019.

4 December 2018 **A data-driven iteratively regularized Landweber iteration**, 2nd SFB workshop "Tomography Across the Scales", Obergurgl (Austria), 3 – 6 December 2018.

23 May 2018 **On the inverse problem of determining a pressurized cavity in a half-space**, Minisymposium M10 of the 9th International Conference "Inverse Problems: Modeling and Simulation", Malta, 21 – 25 May 2018.

22 March 2018 **On an elastic model arising from volcanology: an analysis of the direct and inverse problem**, workshop "Inverse Problems in the Alps II", Obergurgl (Austria), 21 – 23 March 2018.

27 March 2017 **A linear elastic model to detect magma chamber**, conference "100 Years of the Radon Transform", RICAM – Linz, 27 – 31 March 2017.

Seminars

4 May 2022 *Phase-field approaches in elastic inverse problems*, Department of Mathematics “F. Enriques”, Università degli Studi di Milano, 4 May 2022.

11 March 2022 *Phase field methods in Inverse Problems*, Internal Meeting on PRIN “Mathematics for Industry 4.0” 2020F3NCPX, Mathematics Department “F. Casorati”, Università degli Studi di Pavia, 11 March 2022.

2 February 2021 *Elastic dislocations with applications to fault detection*, Mathematics Department “F. Casorati”, Università degli Studi di Pavia, 2 February 2021.

16 December 2020 *Analysis of a model of elastic dislocations in geophysics*, Virtual Inverse Days Workshop 2020, organized by the Finnish Meteorological Institute and University of Helsinki, Helsinki, 14-18 December 2020.

15 December 2020 *Data driven regularization*, Malga seminar Analysis and Learning, Department of Mathematics, Università degli Studi di Genova, Genoa, 15 December 2020.

10 June 2020 *Data Driven regularization by projection*. Selected as speaker by the director of RICAM (Prof. Ronny Ramlau) for the first of the joint seminars between RICAM (Linz) and Fudan University (Shanghai), 10 June 2020.

7 January 2020 *Data Driven regularization*, Department of Mathematics “Guido Castelnuovo”, Sapienza University of Rome, Seminars of Numerical Differential Modeling, 7 January 2020.

16 December 2019 *Topological higher order derivatives with applications in quantitative photoacoustic tomography*, Mathematics Department “Renato Caccioppoli”, University Federico II of Naples, Naples, Italy.

23 May 2019 *Inverse Problems and Mathematical Imaging*, ÖAW Betriebsausflug, RICAM (Johann Radon Institute for Computational and Applied Mathematics), Linz.

4 July 2018 *A modified Landweber driven by expert knowledge*, First SFB Internal Meeting, Computational Science Center, Vienna.

20 July 2017 *On the direct and inverse problem of a linear elastic model coming from volcanology*, RICAM - Inverse Problems and Mathematical Imaging Group, Linz.

8 May 2017 *Analysis of a linear elastic model relative to a small pressurized cavity in the half-space*, A.MA.CA. (Analisi MAtematica al CAstelnuovo) Mathematics Department "Guido Castelnuovo", Sapienza Università di Roma.

31 May 2016 *A linear elastic model to detect magma chamber*, Mathematics Department "Guido Castelnuovo", Sapienza Università di Roma, Seminars of Numerical Differential Modeling, 31 May 2016.

5 May 2015 *Harmonic functions in the half-space with a pressurized cavity*, Mathematics Department "Guido Castelnuovo", Sapienza Università di Roma, Seminars of Numerical Differential Modeling, 5 May 2015.

Poster Presentations

25 – 29 May 2015 **Asymptotic expansion of the solution of a Neumann problem for harmonic functions in the half-space with a small cavity**, conference "Applied Inverse Problems (AIP 2015)", Helsinki.

26 – 28 August 2014 **On detecting a magma chamber from deformation and gravity measurements on the boundary of the half-space**, conference "Inverse problems - from theory to application (IPTA 2014)", Institute of Physics, Bristol.

19 – 23 May 2014 **On detecting a magma chamber from deformation and gravity measurements on the boundary of the half-space**, conference "Recent progess in mathematical and numerical analysis of inverse problems", CIRM, Luminy, Marseille.

TEACHING EXPERIENCE

1. THESIS SUPERVISIONS

Second advisor for Master Thesis

Candidate: Frischauf Leon (Mathematics Department, University of Vienna);
First advisor: Scherzer Otmar (University of Vienna);
Title: Regularization by orthogonalization and frames;
Defence date: August 21, 2020.
Present position: Ph.D. student at Department of Mathematics, University of Vienna.

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TEACHING

Legend for Departments (and related Universities) which appear in sections below.

University Unitelma Sapienza: CS-Unitelma-Sapienza = Computer Science dept. Unitelma-Sapienza;

Sapienza, University of Rome: CS = Computer Science dept.; EE = Energy Engineering dept.; AE = Aerospace Engineering dept.; CE = Chemistry Enginerring dept.

University of Pavia: DIEI = Department of Industrial Engineering and Information, DCEE= Department of Civil and Enviromental Engineering; DDS = Department of Drug Sciences; DC = Department of Chemistry.

2. GIVEN COURSES

01.10.2021 17.02.2022 Mathematics with Elements of Statistics (DDS, Pavia), instructor together with Stefano Lisini, 24 hours of 48 hours.

29.09.2020 27.09.2021 Differential Calculus (CS, Sapienza), telematic course.

24.02.2020 21.02.2021 Integral Calculus (CS, Sapienza), telematic course

23.09.2019 28.09.2020 Differential Calculus (CS, Sapienza), telematic course.

25.02.2019 23.02.2020 Integral Calculus (CS, Sapienza), telematic course

24.09.2018 22.09.2019 Differential Calculus (CS, Sapienza), telematic course.

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3. TUTORING

01.10.2021 31/12/2021 Two classes on Ordinary Differential Equations. Title of the course “Advanced Mathematical Methods for Engineers” (DIEI, Pavia - Master Program in Electronic Engineering), 4 hours;

01.10.2021 31.12.2021 Mathematical Analysis I (DCEE, Pavia), 6 hours;

27.09.2021 31.12.2021 Advances Mathematical Methods for Engineers (DIEI, Pavia - Master Program in Electronic Engineering), 24 hours;

1.03.2021 28.02.2022 Integral Calculus (CS-Unitelma-Sapienza);

1.10.2020 31.09.2021 Differential Calculus (CS-Unitelma-Sapienza);

1.03.2021 16.06.2021 Five classes on topics of mathematical analysis. Title of the course “Complementi di Matematica per le Scienze Chimiche” (DC, Pavia), 10 hours;

1.11.2020 22.12.2020 Two classes on Ordinary Differential Equations. Title of the course “Advanced Mathematical Methods for Engineers” (DIEI, Pavia - Master Program in Electronic Engineering), 4 hours;

1.03.2020 28.02.2021 Integral Calculus (CS-Unitelma-Sapienza);

1.10.2019 30.09.2020 Differential Calculus (CS-Unitelma-Sapienza);

1.03.2019 29.02.2020 Integral Calculus (CS-Unitelma-Sapienza);

1.10.2018 23.09.2019 Differential Calculus (CS-Unitelma-Sapienza);

1.10.2017 30.09.2018 Differential Calculus (CS-Unitelma-Sapienza);

2.10.2016 10.02.2017 Mathematical Analysis 1 (EE);

1.10.2016 30.09.2017 Differential Calculus (CS-Unitelma-Sapienza);

04.2016 09.2016 Mathematical Analysis 2 (EE);

10.2015 07.2016 Mathematical Analysis 1 (EE 50 hours, AE 50 hours, CE 50 hours);

1.02.2015 31.01.2016 Integral Calculus (CS-Unitelma-Sapienza);

1.10.2015 30.09.2016 Differential Calculus (CS-Unitelma-Sapienza);

1.10.2014 30.09.2015 Differential Calculus (CS-Unitelma-Sapienza);

4. PRECALCULUS COURSES

22.09.2014 31.12.2014 Faculty of Mathematics, Physics and Natural Sciences (Sapienza University of Rome).

8.09.2014 19.09.2014 Faculty of Information Engineering, Informatics and Statistics (Sapienza University of Rome).

5. HIGH SCHOOL

20.06.2017 07.07.2017 Examiner of Mathematics and Physics and vice-president of the X committee - RMLI01010 - Classics high school "A. Mancinelli", Velletri (Rome).

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PERSONAL SKILLS

Mother tongue: Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	C1
German	A1	A2	A1	A1	A2

Levels: A1/A2: Basic user – B1/B2: Independent user – C1/C2: Proficient user
Common European Framework of Reference (CEF) level

Computer skills: Competent with most Microsoft Office programmes.
Very good knowledge of Matlab;
Good knowledge of Bocop, C++, Mathematica and Fortran90.
Good knowledge of Cisco WebEx platform.

ADDITIONAL INFORMATION

Memberships: Partner of UMI “Unione Matematica Italiana” since 2021.
Partner of SIMAI "Società Italiana di Matematica Applicata e Industriale" from 23-12-2013.
Member of GNAMPA "Gruppo Nazionale per l’Analisi Matematica, la Probabilità e le loro Applicazioni" from January 2014.

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