

Milano, 6 / 3 / 2024

Curriculum Vitae Giuseppe METERE

personal: Born in Milano, 16 February 1970, Italian citizen.

contacts:

Office Dipartimento di Scienze per gli Alimenti, la
Nutrizione e l'Ambiente (DEFENS)
Università degli Studi di Milano Statale,
via Celoria 2, 20133 Milano, ITALY.

Email giuseppe.metere@unimi.it

Web <https://gmetere.github.io/>



current position: 1/1/2024 – now: **Associate Professor of Algebra (MAT/02)**,
at the Dipartimento di Scienze per gli Alimenti, la Nutrizione e l'Ambiente (DEFENS),
Università degli Studi di Milano Statale.

past positions:

2019 – 2024: Associate Professor of Algebra (MAT/02), at the Dipartimento di Matematica e
Informatica of the University of Palermo.

2016 – 2019: Ricercatore RTD(B) (Assistant Professor) in Algebra, at the Dipartimento di
Matematica e Informatica of the Università degli Studi di Palermo.

2013 – 2015: Ricercatore RTD(A) (Assistant Professor) in Algebra, at the Dipartimento di
Matematica e Informatica of the Università degli Studi di Palermo.

2010 – 2012: postdoc grant at the Università degli Studi di Milano under the supervision of prof.
Sandra Mantovani.

2008: postdoc grant for a research stage at the Dipartimento di Matematica – Politecnico di
Milano, supervised by prof. Renato Betti.

abilitazione scientifica nazionale:

I have been awarded the Italian qualification as full professor (abilitazione per professore di prima fascia):

- settore concorsuale: 01/A1 Logica matematica e mat. Complementari, from 8/11/2020 to 8/11/2030
- settore concorsuale: 01/A2 Geometria e Algebra, from 11/11/2020 to 11/11/2030

education: **2008**, 1 February: PhD in Mathematics at the Università degli Studi di Milano, supervised by
Stefano Kasangian (Univ. of Milan) and Enrico M. Vitale (UCLouvain), with a thesis on “Exact
Sequences of n -Groupoids”.

2003, 3 November: bachelor degree in Mathematics (Laurea in Matematica, vecchio
ordinamento, graded 110/110), Università degli Studi di Milano, with a thesis on “Semidirect
product of Categorical Groups”, supervisor prof. Stefano Kasangian.

languages: Italian (native), English (fluent).

Teaching

- 2013/2024:** “Algebra 2”, 48 hours, 6 CFU, S.S.D. MAT/02, S.C. 01/A2, in Italian, Corso di Laurea in Matematica.
- 2017/2024:** “Matematica Discreta”, 48 hours, 6 CFU, S.S.D. MAT/02, S.C. 01/A2, in Italian, Corso di Laurea in Informatica.
- 2016/17:** “Matematiche Elementari dal Punto di Vista Superiore”, 48 hours, 6 CFU, S.S.D. MAT/04, S.C. 01/A1, in Italian, Corso di Laurea in Matematica.
- 2016/2017:** “Algebra 3”, 48 hours, 6 CFU, S.S.D. MAT/02, S.C. 01/A2, in Italian, Corso di Laurea in Matematica.
- 2013/2014:** “Matematica Discreta” (Teoria delle Specie Combinatorie), 48 hours, 6 CFU, S.S.D. MAT/02, S.C. 01/A2, in Italian, Corso di Laurea in Matematica.
- 2008 – 2012:** Teaching Assistant for Mathematics for Economical Sciences (in English), Università L. Bocconi, Milano.
- 2009 – 2010:** Teaching Assistant for Analysis and Geometry II, prof. A. Di Libero, Faculty of Engineering, Politecnico di Milano.
- 2007 – 2010:** Teaching Assistant for Analysis and Geometry I & II, prof. F. Colombo, Faculty of Engineering, Politecnico di Milano.
- 2009 – 2010:** “Istituzioni di matematiche con elementi di statistica”, Faculty of Farmacia, Università degli Studi di Milano.
- 2009 – 2010:** “Matematica”, Faculty of Agraria, Università degli Studi of Milan.
- 2008 – 2010:** “Complementi di Matematica I” (Finite fields)– Laurea magistrale in Informatica, Università dell’Insubria, Varese
- 2009:** Teaching Assistant for Algebra 2, prof. V. Zambelli, Università degli Studi of Milan
- 2003 – 2008:** Teaching Assistant for Theoretical Computer Science (“Fondamenti di Informatica”) – prof S. Kasangian, Università degli Studi di Milano.
- 2005 – 2006:** Teaching Assistant Algebra 1 and 2 - prof. V. Zambelli, Università degli Studi di Milano.
- 2006:** “Aritmetica I” and “Aritmetica II” – SILSIS Milano - 59/A.
- 2005 – 2006:** Teaching Assistant for Mathematics for Economical Sciences (“Matematica”) - prof. M. Mauri, Università di Milano Bicocca.

theses supervised: In the time-span 2012-2023 I have supervised a dozen theses for bachelor degrees (“laurea”) in Mathematics or Informatics, and 5 theses for master degrees (“laurea magistrale”) in Mathematics or Informatics.

I supervised Manuel Mancini PhD thesis. Details: XXXVI ciclo “Dottorato in Matematica e Scienze Computazionali” Università degli Studi di Palermo, S.S.D. MAT/02, subject: “Derivations of Leibniz Algebras and weak representability of actions for categories of non associative algebras”.

I was a jury member of the PhD of Andrea Cappelletti and Francesca Guffanti (2023 – Milano), Guillermo Andrés Lopez Cafaggi (2022 – Université catholique de Louvain), Corentin Drugmand (2016 – Université catholique de Louvain), Linda Pizzamiglio (2013 – Milano Bicocca).

institutional activities and other:

I am member of the “Collegio Docenti” of the “Dottorato in Matematica e Scienze Computazionali” for the XXXVI ciclo, XXXVII ciclo and XXXVIII ciclo, consorzio Università di Palermo, Messina e Catania.

I was member of the Unit “Commissione di Gestione AQ della Ricerca e Terza Missione Dipartimentale” of the Dipartimento di Matematica e Informatica dell’Università degli Studi di Palermo since 2020.

I organized the Palermo two editions of World Logic Day (UNESCO): January 2023 and January 2024.

I presented of the “CdL in Mathematics” for the Università di Palermo Welcome Week, Edition 2022.

I served as Academic Tutor (“tutor accademico”) for the CdL in Matematica (Università degli Studi di Palermo) since 2014.

research:

2019 – now: ItaCa. Co-founder and member of the steering committee of the **Italian Community of Category Theorists “ItaCa”**, which runs a series of online seminars (ItaCa Fest 2020, 2021, 2022), an annual meeting (Milano 2020, Genova 2021, Pisa 2022), online courses and other scientific activities. More details on the website:
<https://progetto-itaca.github.io/>

2018: FFABR grant (Fondo Finanziamento annuale individuale delle Attività di Base di Ricerca).

2007 – now: GNSAGA. Member of the National Research Group *Strutture algebriche e geometria combinatoria*, INDAM.

2012 – 2015: PRIN. Member of the PRIN (Italian national research project) research project: “Metodi logici per il trattamento dell’informazione”.

2010 – 2012: postdoc grant at Università degli Studi di Milano under the supervision of prof. Sandra Mantovani.

2007 – 2009: member of **Progetto Finvali – INVALSI** – research project for the evaluation of core-skills in primary and secondary schools. Title of the project: “Obiettivi cognitivi, saperi minimi e linguaggi nelle Prove nazionali di fine ciclo: l’area umanistica, l’area matematica e l’area delle scienze sperimentali”.

organization of international meetings:

18 – 19 December 2023 – programme committee for the **4th ItaCa Workshop**, Torino, Italy.

15 – 17 September 2023 – organizing and scientific committee for the **105th Peripatetic Seminar on Sheaves and Logic**, Terrasini (Palermo), Italy.

26 – 30 April 2022 – organizing committee for the international meeting “**CatAlg2022: Workshop in Categorical Algebra**” – Gargnano del Garda, Italy.

30 August – 4 September 2021 – organizing committee for the **CT20→21 Category Theory conference**, Genova, Italy.

17- 19 May 2019 – organizing and scientific committee for the **105th Peripatetic Seminar on Sheaves and Logic**, Palermo, Italy.

28 May – 1 June 2018 – scientific committee for the international meeting “**CatAlg2018: Workshop in Categorical Algebra**” – Gargnano del Garda, Italy.

26 – 30 April 2015 – organizing committee for the international meeting “**CatAlg2015: Workshop in Categorical Algebra**” – Gargnano del Garda, Italy.

11 – 12 October 2014 – organizing and scientific committee for the **96th Peripatetic Seminar on Sheaves and Logic**, Palermo, Italy.

24 – 26 June 2013 – organizing and scientific committee for the conference “**In memory of Aurelio Carboni**”, Milan, Italy.

27 September – 1 October 2011: organizing committee for the international meeting “**CatAlg2011: Workshop in Categorical Algebra**” – Gargnano del Garda, Italy

26 – 28 October 2006 – organizing and scientific committee for the international meeting “**CatAlg2006: Workshop in Categorical Algebra**”, Milan, Italy.

referee for the following academic journals (and institutions):

- Journal of Algebra and its Applications,
- Theory and application of Categories,
- Cahiers de topologie et géométrie différentielle catégoriques,
- Applied categorical structures
- Journal of Homotopy and Related structures
- referee for F.R.S.-FNRS (Belgium)

participation to conferences and talks:

18-19 December 2023, participation at the “4rd ItaCa Workshop”, Pisa, Italy.

15 – 17 September 2023 – participation at the “105th Peripatetic Seminar on Sheaves and Logic”, Terrasini (Palermo), Italy.

2–8 July 2023, participation at “Category Theory 2023”, Louvain-la-Neuve, Belgium.

15–16 June 2023, talk: “*Cohomology 2-groups: an invitation to higher dimensional categorical algebra*”, at the conference: “GTG: Groups and Topological groups”, Milano, Italy.

29 May–1 June 2023, participation at the “Workshop on Doctrines & Fibrations”, Padova, Italy.

5 May 2023, invited talk at “Incontro in memoria di Bill Lawvere”, Firenze, Italy.

31 March – 1 April 2023, talk: “*Groupal pseudofunctors and cohomology 2-groups*”, at the “107th Peripatetic Seminar on Sheaves and Logic”, Athens, Greece.

17 March 2023, participation at “Genoese recollections on Lawvere's work and ideas”, Genova, Italy.

27-28 January 2023, participation at “Categories, Rings and Modules, a conference in honor of Alberto Facchini”, Padova, Italy.

21-22 December 2022, participation at the “3rd ItaCa Workshop”, Pisa, Italy.

30 November 2022, invited talk: “*The wise old scientist: a commentary on ethics, old age and science*”, at the conference: “Personalised services for the Elders. Discussing design options in an interdisciplinary and intercultural way”. Villa Vigoni - 28th November - 2nd December 2022.

7 September 2022, talk: “*Groupal pseudofunctors*”, at the conference: “New Trends in Hopf Algebras and Monoidal Categories”, Università di Torino 6-9 September 2022.

14–18 June 2022, participation at TACL 2021-23 summer school, Praia de Mira, Portugal.

8 June 2022, invited talk: “*Un invito all'algebra categoriale*”, Seminario di Dipartimento, Università degli Studi di Palermo.

26–30 April 2022, participation at “CatAlg2022: Workshop in Categorical Algebra” – Gargnano del Garda, Italy.

20-21 December 2021, participation at the “2nd ItaCa Workshop”, Genova, Italy.

- 30 August – 4 September 2021, participation at the “CT20→21 Category Theory” conference, Genova, Italy.
- 20 February 2020, invited talk: “*Some fibrational properties of normal monomorphisms*”, TAC seminar, Università di Genova.
- 4 November 2019, invited talk: “*Algorithms and diagrammatic reasoning*”, at the international workshop: “Autonomous and Algorithmic Cultures: Responsibility in the Knowledge Production and its Applications”. Villa Vigoni (Como) - 4-8 November 2019.
- 17- 19 May 2019, participation at the “105th Peripatetic Seminar on Sheaves and Logic”, Palermo, Italy.
- 22 March 2019, participation at the “Seminaire Itinerant de Categories”, Louvain-la-Neuve, Belgium.
- 25 February 2019, participation to “Categorical day in Turin”, Turin.
- 8–14 July 2018, participation at the International “Category Theory Conference, CT 2018”, University of Azores, Ponta Delgada, S. Miguel, Azores, Portugal.
- 24–29 July 2018, participation at the conference “Topos in Como”, Como, Italy.
- 28 May–1 June 2018, participation at “CatAlg2018: Workshop in Categorical Algebra” – Gargnano del Garda, Italy.
- 7 April 2018, talk: “Fibred and internal aspects of distributors composition”, at the “103rd Peripatetic Seminar on Sheaves and Logic”, 6-8 April 2018, Masaryk University, Brno, Czech Republic.
- 13–14 January 2018, participation at the “102nd Peripatetic Seminar on Sheaves and Logic”, Universidade de Santiago de Compostela, Spain.
- 1–3 June 2017, talk: “Some thoughts on Yoneda's “regular spans” and related notions” at the “5th Workshop on Categorical Methods in Non-Abelian Algebra”, UCL, Louvain-la-Neuve, Belgium.
- 13–15 February 2017, participation at the “Conference for Young researchers in homotopy theory and categorical structures”, Max Planck Institute for Mathematics, Bonn, Germany.
- 13 March 2016, talk: “*Comprehensive factorization and internal crossed profunctor composition*”, at the “99th Peripatetic Seminar on Sheaves and Logic”, Braunschweig, Germany.
- 1 March 2016, talk: “*Composizione di distributori e fattorizzazione comprensiva*”, Seminario di Teoria delle Categorie, Università degli Studi di Milano.
- 17 February 2016, talk: “*Comprehensive factorization and composition of distributors*”, UCL-VUB Category seminar, UCL.- Louvain-la-Neuve, Belgium.
- 9–10 January 2016, participation at the “98th Peripatetic Seminar on Sheaves and Logic”, Doorn (Utrecht), The Netherlands.
- 31 October 2015, talk: “*Normal monomorphisms in Mal'tsev regular categories*”, at the “Seminaire Itinerant de Categories” - UCL - Louvain-la-Neuve, Belgium.
- 10–12 September 2015, participation at “Workshop in Category Theory and Algebraic Topology”, UCL Louvain-la-Neuve, Belgium.
- 14 June 2015, talk: “*Aspects of strong protomodularity, actions and quotients*”, at the Category Theory Conference, “CT 2015”, Aveiro, Portugal, 14 - 19 June 2015.

26 – 30 April 2015, participation at “CatAlg2015: Workshop in Categorical Algebra” – Gargnano del Garda, Italy.

1 February 2015, talk: “*Extension theory and the calculus of butterflies*”, at the “97th Peripatetic Seminar on Sheaves and Logic”, Louvain-la-Neuve, 31 January – 1 February 2015, Belgium.

11–12 October 2014, participation at the “96th Peripatetic Seminar on Sheaves and Logic”, Palermo, Italy.

1 July 2014, talk: “*Peiffer Commutator and Peiffer Product of Pre-Crossed B-Modules in the Semi-Abelian Context*”, at the “International Category Theory Conference, CT 2014”, 29th June – 5th July 2014, Cambridge, UK.

17 May 2014, talk: “*How to get a snail from a butterfly*”, at the “Seminaire Itinerant de Categories” - Louvain-la-Neuve, Belgium.

16 November 2013, participation at the “Seminaire Itinerant de Categories” - Paris

24–26 June 2013, participation at the conference “In memory of Aurelio Carboni”, Milan, Italy.

6 June 2013, participation at the “Giornata INDAM” - Palermo.

24–31 May 2013, participation at the “Seminaire Itinerant de Categories” - Louvain-la-Neuve, Belgium. + one week visiting professor (with grant from UCL).

25–26 January 2013, participation at “Gruppen und Topologische Gruppen”, Milano, Italy.

7–9 February 2013, participation at the Workshop “Categorical Methods in non-Abelian Algebra”, Coimbra, Portugal.

9–13 July 2012, talk: “*A push forward construction and the comprehensive factorization for internal crossed modules*”, at the “Workshop on Category Theory, in honour of George Janelidze”, on the occasion of his sixtieth birthday, Coimbra, Portugal

19 May 2012: participation at the “Seminaire Itinerant de Categories” - Louvain-la-Neuve, Belgium. + one week visiting professor (grant).

9–10 December 2011, talk: “*Braiding for internal groupoids and crossed modules*”, at Gruppen und Topologische Gruppen, Wuerzburg, Germany

October–December 2011, Cycle of seminars: “*Diverse interpretations of low dimensional group cohomology*”, University of Milan, Italy.

27 September –1 October 2011, invited talk: “*Braided and symmetric internal groupoids*”, “CatAlg2011 – Workshop in categorical algebra”, Gargnano del Garda, Italy

17–23 July 2011, participation at the “International Category Theory Conference, CT 2007”, Vancouver, Canada.

17 December 2010, talk: “*Aspects of Butterflies in semi-abelian contexts*”, “Workshop in Algebraic Geometry”, Milano, Italy.

27–28 November 2010, talk “*Butterflies in semi-abelian categories*”, at the “Peripatetic Seminar on Sheaves and Logic”, Amsterdam, The Netherlands.

23 February 2009, talk “*Actions in action: Peiffer pre-crossed modules vs *-multiplicative graphs*”, UCL-VUB Category seminar, Brussel.

30 June–5 July 2008, participation at the “HOCAT 2008”, Barcelona, Spain.

- 22–28 June 2008, talk: “*Weak inverses for strict n -categories*” at the “International Category Theory Conference, CT 2008”, Calais, France.
- 4–14 February 2008, participation with grant at the “Advanced Course on Simplicial Methods in Higher Categories”, Barcelona, Spain.
- 18 January 2008, talk “*Exact sequences of strict n -Groupoids: topological aspects*”, University of Bologna, Italy.
- 17–23 June 2007, participation at the International “Category Theory Conference, CT 2007”, Carvoeiro, Algarve, Portugal.
- 3–10 June 2007, talk “*Exact sequences of strict n -Groupoids*”, at the “Summer School on Contemporary Categorical Methods in Algebra and Topology”, Haute-Bodeux Ardennes, Belgium.
- 24–5 March 2007, talk “*The Ziqqurath of exact sequences of n -Groupoids*”, 85th Peripatetic Seminar on Sheaves and Logic, Université de Nice Sophia-Antipolis, Nice, France.
- 25 June–1 July 2006 participation at the International Category Theory Conference, “CT 2006” White Point, Nova Scotia, Canada.
- 10 February 2006, talk “*Split extensions, semidirect product and holomorph of categorical groups, II*”, “Séminaire de théorie des catégories”, UCL, Louvain-la-Neuve, BELGIUM.
- 26–28 October 2006, participation at the “Workshop in Categorical Algebra”, Milan, Italy.
- 7–9 October 2005, participation at the “Colloque International Charles Ehresmann: 100 ans”, Amiens, France.
- 8–10 September 2005, talk “*Split extensions, semidirect product and the holomorph of categorical groups*” at “SECA3: III Seminar on Categories and Applications”, Santiago de C.la, Spain.
- 28 January–21 February 2005, visiting student in Louvain-la-Neuve.
- 17–18 September 2004, participation at “SECA2: II Seminar on Categories and Applications”, Granada, Spain.

preprints: (a selection is available on the author’s webpage)

1. A. S. Cigoli, M. Mancini, G. Metere, **On the representability of actions of Leibniz algebras and Poisson algebras**, submitted (2023).
2. S. Lapenta, G. Metere, L. Spada, **Relative ideals in homological categories, with an application to MV-algebras**, submitted (2022).
3. S. Kasangian, G. Metere and E. M. Vitale, **Weak inverses for strict n -categories**, unpublished, 2010.
4. G. Metere, **Homotopy pullbacks for n -categories**, unpublished, 2009.

publications (all in peer reviewed international journals):

1. A. S. Cigoli, S. Mantovani, G. Metere, **The third cohomology 2-group**, Milan J. Math. (2023).
2. A. S. Cigoli, S. Mantovani, G. Metere, **On pseudofunctors sending groups to 2-groups**, Mediterr. J. Math. 20, 17 (2023).
3. A. S. Cigoli, S. Mantovani, G. Metere, E. M. Vitale, **Fibred-categorical obstruction theory**, Journal of Algebra 593 (2022).

4. D. Bourn, G. Metere, **A note on the categorical notions of normal subobject and of equivalence class**, Theory and Applications of Categories Vol. 36 No. 3 (2021).
5. A. S. Cigoli, S. Mantovani, G. Metere, **Discrete and Conservative Factorizations in $\text{Fib}(\mathbf{B})$** , Applied Categorical Structures 29 (2020).
6. A. S. Cigoli, S. Mantovani, G. Metere and E. M. Vitale, **Fibered aspects of Yoneda's regular span**, Advances in Mathematics, 360 (2020).
7. P.-A. Jacqmin, S. Mantovani, G. Metere and E. M. Vitale, **Bipulbacks of fractions and the snail lemma**, Journal of Pure and Applied Algebra, 223 no. 12 (2019), 5147–5162.
8. S. Mantovani, G. Metere and E. M. Vitale **The Snail lemma for internal groupoids**, Journal of Algebra 535 (2019), 1–34.
9. G. Metere, **Distributors and the comprehensive factorization system for internal groupoids**, Theory and Applications of Categories, Vol. 34 no. 1 (2019).
10. P.-A. Jacqmin, S. Mantovani, G. Metere and E. M. Vitale, **On fibrations between internal groupoids and their normalization**, Applied Categorical Structures 26 (5), 1015–1039 (2018).
11. A. S. Cigoli, S. Mantovani and G. Metere, **Peiffer product and Peiffer commutator for internal pre-crossed modules**, Homotopy Homology and applications, 19 (2017) 181–207.
12. G. Metere, **Bourn-normal monomorphisms in regular Mal'tsev categories**, Theory and Applications of Categories, Vol. 32 no. 5 (2017).
13. G. Metere, **A note on strong protomodularity, actions and quotients**, Journal of Pure and Applied Algebra 221 (2017) 75–88.
14. A. S. Cigoli, and G. Metere, **Extension theory and the calculus of butterflies**, Journal of Algebra 458 (2016), 87–119.
15. A. S. Cigoli, S. Mantovani and G. Metere, **A push forward construction and the comprehensive factorization for internal crossed modules**, Applied Categorical Structures (2014), Volume 22, Issue 5-6, 931–960.
16. A. S. Cigoli, G. Metere and A. Montoli, **Obstruction theory in action accessible categories**, Journal of Algebra, 385 (2013) 27-46.
17. S. Mantovani, G. Metere and E. M. Vitale, **Profunctors in Mal'cev categories and fractions of functors**, Journal of Pure and Applied Algebra, 217 (2013) 1173–1186.
18. O. Abbad, S. Mantovani, G. Metere and E. M. Vitale, **Butterflies in a semi-abelian context**, Advances in Mathematics, 238 (2013), 140–183.
19. S. Kasangian, G. Metere and E. M. Vitale, **The ziqqurath of exact sequences of n -groupoids**, Cahiers de Topologie et Géométrie Différentielle Catégoriques, Volume LII-1 (2011).
20. S. Mantovani, G. Metere, **Normalities and commutators**. J. Algebra 324 (2010), no. 9, 2568–2588.
21. S. Mantovani, G. Metere, **Internal crossed modules and Peiffer condition**, Theory and Applications of Categories, Vol. 23, No. 6 (2010), 113–135.
22. G. Metere and A. Montoli, **Semidirect product of internal groupoids**, Journal of Pure and Applied Algebra, Vol. 214, Issue 10, October 2010, 1854–1861.
23. S. Kasangian, S. Mantovani, G. Metere, E. M. Vitale, **External Derivations of internal groupoids**, Journal of Pure and Applied Algebra, Volume 212, Issue 1, January 2008, 175–192.
24. S. Kasangian, G. Metere and E. M. Vitale, **Split extensions, semidirect product and the holomorph of categorical groups**, Homology, Homotopy Appl. 8 (2006) no. 1, 145–167.