CURRICULUM VITAE

Name	Giuseppe MELFI
Nationality	Swiss and Italian
Status	Married, 2 children
Date and place of birth	June 11, 1967, Uznach (Canton of Sankt Gallen, Switzerland)
Address	Grenzstrasse 30
	CH-2560 Nidau (Switzerland)
Office	IMI, Université de Neuchâtel
	Rue A-L. Breguet, 2, CH-2002 Neuchâtel, Switzerland
Telephone	+41 (0)32 7181572 (Office)
	+41 (0)32 7257622 (Private)
	+41 (0)78 8058177 (Mobile)
e-mail	Giuseppe.Melfi@unine.ch

Education

Degree of "Laurea in Matematica" at the University of Pisa (Italy) obtained in July 8, 1993, with the score of 110/110 *cum laude*.

Ph.D. in Mathematics of the University of Pisa; advisor: prof. Carlo Viola. Title of the Ph.D. Thesis: *"Some Problems in Elementary Number Theory and Modular Forms"* defended in Rome, in July 9, 1998, with the appreciation *"Ottimo"* (first rate).

Master in Statistics at the University of Neuchâtel in 2001.

Certificate of Advanced Studies (CAS) at the University of Geneva in Methodology and Training, 2015.

Academic path

Scientific Collaborator at the Institute of Mathematics of the University of Lausanne (Switzerland) for academic year 1997/98.

Premier Assistant at the Institute of Mathematics of the University of Lausanne for academic years 1998/99 and 1999/2000.

Lecturer ("Maître Assistant", "Chargé de cours" and "Chargé d'enseignement) at the Institute of Statistics of University of Neuchâtel from September 2000 to January 2015 and from February 2017 to 2021. "Titular professor" from 2021 to date.

Professor at the University of Teacher Education BEJUNE, Biel/Bienne, from 2009/10 to 2017/18. Scientific collaborator since 2018/19.

Lecturer at the University of Applied Sciences of Wester Switzerland, HES-SO, HE-Arc, Neuchâtel, since September 2011.

Languages

French, English, Italian (mother tongue).
Good knowledge of German and Spanish.

Computer skills

All usual standard applications: Word, Powerpoint, Excell, Outlook, Acrobat.
All usual statistical packages: R, Splus, SAS, Minitab, SPSS.
All usual mathematical packages: Mathematica, Matlab, PARI.
All usual scientific editors: LaTeX, Emacs, WinEdit, ScientificWord.
Operation systems: Windows, Unix, Linux, MacOS.
All usual browsers and web editors. Knowledge of HTML, Frontpage.

Fellowships and Grants

1. SNS (Scuola Normale Superiore), grant for a fellowship in mathematics, 1987–1988.

2. Univesity of Pisa (Italy), student grant, 1988–1993.

3. University of Pisa (Italy), grant for a fellowship as Graduate Student in Mathematics 1993–1997.

4. Université de Lausanne 1997/98, 9 months grant: This grant has been assigned as "Bourse d'échange" with the co-operation of the Italian *Ministero degli Affari Esteri.*

5. CNR (Italian National Fundation for the Science): 9 months grant for researches at the University of Lausanne, 1998–1999 (grant no. 204 4774.041937).

6. FNS (Swiss National Fundation for the Science): 1 year grant for the project "Dictionary of Statistical Terms" (grant no. 21-65147.01), 2001–2002.

7. CUS (Council of University of Switzerland): 3 year grant for the program "Relève académique" (grant no. CUS 411), 2001–2004.

8. EPFL (Ecole Polytechnique Fédérale de Lausanne): Visiting Researcher at the Centre Interfacultaire Bernoulli, February - June 2009

Papers

1. G. MELFI AND G. MORELLI, *"Alcune notevoli identità per le somme dei divisori di certi numeri",* Archimede **47** (1995), 20–23.

2. G. MELFI, *"A survey on practical numbers",* Rend. Sem. Mat. Pol. Torino **53** (1995), 347–359.

3. G. MELFI, *"On two conjectures about practical numbers",* Journal of Number Theory **56** (1996), 205–210.

4. G. MELFI, *"On some modular identities",* in Number Theory, Diophantine, Computational and Algebraic Aspects: Proceedings of the International Conference held in Eger, Hungary. Walter de Gruyter & Co. (1998), 371–382.

5. J-M. Deshouillers, P. Erdős and G. Melfi, *"On a question about sum-free sequences"*, Discrete Mathematics **200** (1999), 49–54.

6. G. Melfi, *"On 5-tuples of twin practical numbers"*, Boll. Un. Mat. It. B (8) **2B** (1999), 723–734.

7. G. Melfi, *"Alcuni problemi di teoria elementare dei numeri e forme modulari"*, Boll. Un. Mat. It. B (8) **2A** (1999), 115–118.

8. G. Melfi, *"An additive problem about powers of certain integers"*, Rend. Circ. Mat. Pal. Serie II **50** (2001), 239–246.

9. Y. Dodge and G. Melfi, *"A more rational ranking system in Olympic games"*, Data and Statistics **4**, (2002), 149–154.

10. Y. Dodge and G. Melfi, *"On the reliability of random number generators"*, Proceedings of the ESM2002 Conference, Darmstadt, (2002), 142–144.

11. G. Melfi, *"A note on twin practical numbers"*, Le Matematiche **57** (2002), 111–117.

12. G. Melfi and G. Schoier, *" Clusters d'ensembles de données larges dans le Web Log Mining"*, in Méthodes et Perspectives en Classification, Presses Académiques de Neuchâtel (2003), 161–164.

13. Y. Dodge and G. Melfi, *"Random number generators ans rare events in the continued fraction of π"*, Journal of Statistical Computation and Simulation **75** (2005), 189–197.

14. G. Melfi and G. Schoier, *"A different approach for the analysis of web access logs"*, in New Developments in Classification and Data Analysis, M. Vichi, P. Monari, S. Mignani, A. Montanari Eds., Springer Verlag (2004), 211–216.

15. S. Ferreira de Sà Faria and G. Melfi *"Détection non-paramétrique robuste d'observations aberrantes et à effet de levier"*, in Actes des XXXVIèmes Journées de Statistique, Montpellier, Edition SFDS (2004), CD-Rom.

16. G. Melfi and G. Schoier, *"Simulation of random distributions on surfaces"*, in Atti della XLII Riunione della Società Italiana di Statistica, CLEUP (2004), 173–176.

17. G. Melfi, *"On simultaneous binary expansions of n and n^2"*, Journal of Number Theory, **111** (2005), 248–256.

18. G. Melfi, *"On certain positive integer sequences"*, Riv. Mat. Univ. Parma **7** (3*) (2004), 253–260.

19. G. Melfi, G. Borruso, G. Schoier and A. Zacchigna, *"Algorithms for simulating random phenomena on surfaces: theory and applications"*, in Classification and Data Analysis 2005, Book of Short Papers (S. Zani and A. Cerioli Eds.), Monte Università Parma Editore (2005), 433–436.

20. S. Ferreira de Sà Faria and G. Melfi *"LAD regression and non parametric methods for detecting outliers and leverage points"*, Student **5**, (2006), 265–272.

21. Y. Dodge and G. Melfi, *"On stability problems of multiple LAD regression"*, International Journal of Statistical Sciences **6** Special Issue, (2007), 231–238.

22. E. Cambria and G. Melfi, *"Semantic Outlier Detection for Affective Common-Sense Reasoning and Concept-Level Sentiment Analysis"*, Proceedings of the Twenty-Eighth International Florida Artificial Intelligence Research Society Conference (2015), 276–281.

23. G. Melfi, *"On the conditional infiniteness of primitive weird numbers"*, Journal of Number Theory **147** (2015), 508–514.

24. Amato, G.; Hasler, M.F.; Melfi,G. and Parton, M. *"Primitive weird numbers having more than three distinct prime factors"*, Riv. Mat. Univ. Parma, **7** (1),(2016), 153-163.

25. Arcidiacono, F., Iannaccone, A., Melfi, G., Padiglia, S. and Pirchio, S. *Le développement identitaire des enseignants débutants par le partage verbal de pratiques professionnelles*, Journal of Applied Psycholinguistics **18** (2018), 79–96.

26. Buser, M. and Melfi, G. *Facteurs déterminants pour la capacité à utiliser la langue partenaire à des fins communicatives dans une école immersive réciproque* Language Education and Multilingualism – The Langscape Journal **2** (2019), 70–84.

27. Amato, G.; Hasler, M.F.; Melfi,G. and Parton, M. *"Primitive abundant and weird numbers with many prime factors"*, Journal of Number Theory **201** (2019), 436-459.

28. Gremion, F. Melfi, G. Padiglia, S., Arcidiacono, F. and Iannaccone A. *Le focus group comme innovation pour le soutien du stage en emploi*, Revue des HEP et institutions assimilées de Suisse romande et du Tessin. Hors-série **4** (2020), 13–27.

29. Buser, M. and Melfi, G. *Oral proficiency development of K-4 learners of the Swiss two-way immersion program FiBi (Filière Bilingue) in a highly multicultural context*, International Journal of Bilingual Education and Bilingualism, ahead of print, 1-14.

30. Ben Uri, I., Melfi, G., Arcidiacono, F., and Bova, A. (2021). *Work-family conflict and facilitation among teachers in Israel and Switzerland*, European Journal of Psychology of Education, ahead of print, 1-16.

Books

1. Y. Dodge and G. Melfi, *"Premiers pas en simulation"* (2008); Springer Verlag, Paris, Heidelberg, New York.

2. M. Giglio; M-P. Matthey and G. Melfi, *"Réactions des formateurs d'enseignants à un nouveau curriculum scolaire"* (2014); HEP-BEJUNE, Biel/Bienne.

Reports

1. Wentzel, B., Riat, C. and Melfi, G. (2014). Étude sociodémographique sur la profession enseignante dans l'espace BEJUNE. Bienne: Editions HEP-BEJUNE.

2. MELFI, G., GONZÀLEZ MARTÍNEZ, E. AND MISEREZ CAPEROS C. (2020). Étude sociodémographique sur la profession enseignante dans l'espace BEJUNE 2018. Bienne: Editions HEP-BEJUNE.

Proceedings

1. Y. DODGE (ED.) AND G. MELFI (TECHN. ASSIST.), *"Statistical Data Analysis Based on the L_1-Norm and Related Methods"*, Birkhäuser (2002); Basel, Boston, Berlin.

2. Y. DODGE AND G. MELFI (EDS.), *"Méthodes et Perspectives en Classification"* (2003); Presses Académiques Neuchâtel.

3. PASCHE GOSSIN, F. AND MELFI, G. (EDS.) *"Synergies entre recherche, formation et enseignement"*. Editions HEP BEJUNE (2017); Bienne.

Contributions in books

1. Y. DODGE (ED.); *"The Oxford Dictionary of Statistical Terms"* (2003); Oxford University Press.

2. M. GIGLIO AND S. BOECHAT-HEER (EDS.). (2012). *"Entre innovations et réformes éducatives dans la formation des enseignants"*. Actes de la recherche de la HEP-BEJUNE. Bienne : Ed. HEP-BEJUNE.

3. J.-C. KALUBI AND L. GREMION (EDS.), *"Intégration / inclusion scolaire et nouveaux défis dans la formation des enseignants"* (2015). Éditions Nouvelles, Montréal.

4. CHATELAIN, N. MISEREZ-CAPEROS, C. AND STEFFEN, G. (EDS.) *Intéragir dans la diversité à l'école* (2020), Éditions HEP-BEJUNE, Bienne.

Communications and talks

1. *"Sui numeri pratici"* - Rome (Italy) - Incontro Italiano di Teoria dei Numeri; January 3–5, 1995.

2. *"On some modular identities"* - Eger (Hungary) - Number Theory Conference; July 29–August 2, 1996.

3. *"Practical numbers"* - Luminy (France) - Meeting of Analytical Number Theory; September 8–12, 1997.

4. *"On some Ramanujan identities involving sum-of-divisors functions"* - Lausanne (Switzerland) - Institute of Mathematics; November 14, 1997.

5. *"Sur les nombres pratiques"* - Lausanne (Switzerland) - Institute of Mathematics; January 30, 1998.

6. *"Quelques problèmes et conjectures sur les nombres pratiques"* - Metz (France) - I.U.T.; May 26, 1998.

7. *"Sur quelques problèmes de théorie des nombres"* - Berne (Switzerland) - Institute for Exacte Sciences; January 18, 1999.

8. *"Formes modulaires et identités arithmétiques"* - Neuchâtel (Switzerland) - Institute of Mathematics; November 23, 1999.

9. *"On Fourier coefficients of certain modular forms"* - Basel (Switzerland) - Department of Mathematics; April 18, 2000.

10. *"On twin practical numbers"* - Luminy (France) - Théorie analytique des nombres; September 4, 2000.

11. *"Quelques problèmes et conjectures sur les nombres pratiques"* - Lyon (France) - October 26, 2000.

12. *"Evénements rares dans la fraction continue de π"* - Neuchâtel; May 4, 2001.

13. *"Sur quelques problèmes d'Erdős"* - Nancy (Francia); May 17, 2001.

14. *"Quelques problèmes de théorie additive des nombres"* - Lausanne - EPFL; September 27, 2002.

15. *"On a family of positive integer sequences"* - Graz (Autriche) - Journées Arithmétiques; July 10 2003.

16. *"Simulation of random distribution on surfaces"* - Montreux (Suisse) - Journées Suisses de Statistique; October 30, 2003.

17. *"Su alcune successioni di interi"* - Parma (Italie) - 2º Incontro Italiano di Teoria dei Numeri; November 15, 2003.

18. *"Simulation of random distribution on surfaces"* - Trieste (Italy) - March 22, 2004.

19. *"Détection non-paramétrique robuste d'observations aberrantes et à effet de levier"* - Montpellier (France) - XXXVI Journées de Statistique; May 26, 2004.

20. *"On certain positive integer sequences"* - Neuchâtel - Institute of Mathematics; May 3, 2005.

21. *"Practical numbers and products of consecutive positive integers"* - Marseille (France) - XXIV Journées Arithmétiques; July 5, 2005.

22. *"Distributions aléatoires de points sur des surfaces"* - Lausanne - EPFL, June 2, 2006.

23. *"On some questions about weird numbers"* - Pisa - Scuola Normale Superiore, September 23, 2015.

24. *"On weird numbers"* - Ottawa - Carleton University, May 4, 2016.

25. *"Primitive weird numbers with several distinct prime factors"* - Caen, July 4, 2016.

26. *"Problemi e congetture sui numeri strani primitivi"* - Torino, June 26, 2018.

27. *"Résultats, problèmes et conjectures sur les nombres étranges* - Lausanne - November 29, 2018.

28. *"Results and conjectures about primitive weird numbers"* - Basel, May 23, 2019.

Organization of Conferences

1. Fourth International Conference on Statistical Data Analysis based on L_1-norm and related methods, Neuchâtel, (in collaboration with Y. Dodge, Y. Vardi and R. Liu; 81 participants), August 4-9, 2002.

2. 10èmes Rencontres de la Société Francophone de Classification, Neuchâtel, (in collaboration with Y. Dodge), September 10-12, 2003.

3. Celebrating Statistics: International conference in honour of Sir David Cox on the occasion of his 80th birthday, (in collaboration with A. Davison and Y. Dodge) July 14–18, 2004.

Attended conferences

1° Incontro Italiano di Teoria dei numeri (Rome, January 3-5, 1995).

19^{mes} Journées arithmétiques (Barcellona, July 16-20, 1995).

Number Theory Conference (Eger, Hungary, July 29 -August 2, 1996).

Seminario di Teoria dei Numeri (Venezia, September 18-19, 1996).

Arithmetic Theory of Elliptic Curves (Cetraro, Italy, July 12-19, 1997).

Meeting of Analitic Number Theory (Luminy, September 8-12, 1997).

Workshop of Number Theory (Pisa, June 22- July 9, 1999).

21^{mes} Journées arithmétiques (Roma, July 12-16, 1999).

Diophantine Approximation (Cetraro, June 28-July 6, 2000)

Théorie analytique des nombres (Luminy, September 4-8, 2000).

Analitic number theory (Cetraro, Italy, July 11-19, 2002).

$3^{ème}$ Cycle Romand de Statistique (Les Diablerets, Suisse, February 23-25, 2003).

$23^{èmes}$ Journées Arithmétiques (Graz, Austria, July 6-12, 2003).

10èmes Rencontres de la Société Francophone de Classification, (Neuchâtel, Switzerland, September 9-11, 2003).

$3^{ème}$ Cycle Romand de Statistique et Mathématiques (Vaumarcus, Switzerland, October 3, 2003).

Journées Suisses de Statistique (Montreux, Switzerland, October 29-31, 2003).

2° Incontro Italiano di Teoria dei Numeri (Parma, Italy, November 13-15, 2003).

XXXVI Journées de Statistique (Montpellier, France, May 24-28, 2004).

24$^{\text{èmes}}$ Journées Arithmétiques (Marseille, France, July 4-8, 2005).

3$^{\text{o}}$ Incontro Italiano di Teoria dei Numeri (Pisa, Italy, September 21-24, 2015).

30$^{\text{èmes}}$ Journées Arithmétiques (Caen, France, July 3-7, 2016).

First Biennial JNT Conference (Cetraro, Italy, July 22–26, 2019).

List of students

1. Mélanie LAUTENSCHLAGER, Degree in Economics and Statistics, University of Neuchâtel, 2002. Former Assistant at the University of Neuchâtel.

2. Marica ROSSI, Degree in Statistics, University of Trieste, 2003.

3. Lisa DIMATTEO, Degree in Statistics, University of Trieste, 2003. Scientific collaborator at the University of Trieste.

4. Alessandra ZACCHIGNA, Degree in Statistics, University of Trieste, 2004. Scientific collaborator at the University of Trieste.

5. Mst Monira Moni SULTANA, Master in Statistics, Universtiy of Neuchâtel, 2005, Former Assistant at the University of Neuchâtel.

6. Sandro PETRILLO, Master in Statistics, University of Neuchâtel, 2005. Assistant at the Università della Svizzera Italiana.

7. Omar OLIVOTTO, Master in Statistics, University of Neuchâtel, 2006/07.

8. Severine VANCOLEN, PhD in Statistics, University of Neuchâtel, former assistant at the University of Neuchâtel, 2007/2008.

9. Francesco MACRÌ, Master in Mathematics, University of Bari, 2019/2020.

Educational and learning activities

Assistant for the course of *Algebra and Geometry* at the Faculty of Engeenering of the University of Pisa for academic year 1995/96.

First Assistant for the course of *Mathématiques Générales* and for the cours *Pi* (π) at the Faculty of Science of the University of Lausanne for academic year 1998/99.

First Assistant for the course of *Mathématiques Générales* at the Faculty of Science of the University of Lausanne and for the EPFL for academic year 1999/2000.

First Assistant for the course of *Mathématiques* at the Faculty of Economics of the University of Neuchâtel for academic year 2000/2001.

Teacher of *Simulation* at the Economics Faculty of the University of Neuchâtel in 2002/03.

Teacher of *"Simulation"*, *"Optimisation"* and *"Seminaire de Statistique Appliquée"* at the Economics Faculty of the University of Neuchâtel in 2003/04.

Teacher of *"Statistique inférentielle"* at the Economics Faculty of the University of Neuchâtel in 2004/05 and 2005/06.

Teacher of *"Modèles de files d'attente"* at the Master Course in Statistics at the University of Neuchâtel in 2004/05 and 2005/06.

Teacher of *"Simulation models in surfaces"*, at the First Level University Master Course in Geographic Information for Economic and Spatial Decisions at the University of Trieste in 2004/05.

Teacher of *"Analyse des données"*, at the Master of Science in International Business Development at the University of Neuchâtel for 2005/06.

Teacher of *"Méthodologie de la recherche en gestion"*, at the Master of Science in International Business Development at the University of Neuchâtel from 2006/07 to 2010/11.

Teacher of *"Méthodologie de la recherche en management"*, at the Master of Science in International Business Development at the University of Neuchâtel from 2011/12 to 2014/15.

Teacher of *"Mathématiques I"*, *"Mathématiques II"* and *"Mathématiques III"* at the University of Applied Sciences of Western Switzerland, HEG-Arc, Neucâtel, since September 2011.

Teacher of *"Mathématiques appliquées I"* at the Economics faculty of the University of Neuchâtel since 2017/18.

Teacher of *"Mathématiques appliquées II"* at the Economics faculty of the University of Neuchâtel since 2016/17.

Teacher of the statistics course *"Hands on"* at the Faculty of Humanities of the University of Neuchâtel from 2017/18 to 2018/19.

Other scientific activities

Reviewer for *Mathematical Reviews*.

Referee for *Annali della Scuola Normale Superiore di Pisa*.

Referee for *INTEGER Journal*.

Referee for the *London Mathematical Society*.

Referee for *Mathematica Scandinavica*.

Referee for *Ramanujan Journal*.

Referee for *Rendiconti di Matematica e delle sue applicazioni*.

Referee for *Revue des Nouvelles Technologies de l'Information*.

Managing Editor of *Student* (ISSN 1420-1011).

Managing Editor of *Data & Statistics* (ISSN 1420-3308).

Editorial Board Member of *Cognitive Computation* (ISSN 1866-9956)

Director/Codirector of Diploma/Master works at the Universities of Neuchâtel.

Partner of the Project PRIN entitled "Web usage mining methodologies".

Participant at the project GIMPS (Great Internet Mersenne Prime Search) since 2001.

Member of the Swiss Statistical Society since 2003 to 2010.

Member of the Swiss Mathematical Society since 2003.

Member of the Swiss Society for the Research in Education since 2011.

Administrative academic tasks

1. Responsible of an ERASMUS partnership between the Economics Faculties of the Universities of Neuchâtel and Trieste from 2005 to 2015.

2. Elected Member of the Faculty Council of the Economics Faculty of the University of Neuchâtel from 2003 to 2006.

3. Co-Responsible of the Master Program in Statistics of the University of Neuchâtel from 2004 to 2006.

4. Member of the Library Commission of the Economics Faculty of the University of Neuchâtel from 2001 to 2006.

Interests

Pures Mathematics:

1. Modular forms with special interest in Fourier coefficients.

2. Diophantine approximation with special interest in Irrationality measure.

3. Elementary number theory, with special interests in:

   (a) practical numbers;
   (b) sum-free sequences;
   (c) (k, l, m)-sequences;
   (d) weird numbers;
   (e) Erdős problems.

Applied mathematics:

1. Theory of Probability.

2. Simulations and Monte Carlo methods.

3. Regression L_1 and robust methods in data analysis.

4. Data Mining with special interests in Web Log Mining.

5. Random and pseudo-random number generators.

Education:

1. Multilingualism.

2. ITC in Education

3. Psychology of Education.

4. Sociology of Education.

Hobbies
Astronomy, Opera, Photography, Books, Skiing, Travels, Sailing, Skating, Cycling, Playing Clarinet.