

PERSONAL INFORMATION

Claudio Pacati



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 PCT CLD 63H24 G478L

Date of birth 24 June 1963 | Nationality Italian

WORK EXPERIENCE

Nov. 2001 – present

Full professor

Sector SECS-S/06 Mathematical methods for economics, actuarial sciences, and finance.

University of Siena, Department of economic and statistics (formerly Department of political economics), p.zza San Francesco 7, I-53100 Siena, Italy

- Dean of the School of Economics and Management (Nov. 2015 – Oct. 2022).
- Director of the MSc. in Finance (Nov. 2011 – Nov. 2015 and Oct. 2019 – present).

Oct. 1998 – Oct. 2001

Associate professor

Sector SECS-S/06 Mathematical methods for economics, actuarial sciences, and finance (formerly, S04B Financial mathematics and actuarial sciences).

University of Siena, Italy, Department of political economics.

Feb. 1992 – Sep. 1998

Assistant professor

Sector S04B Financial mathematics and actuarial sciences (formerly P/05 Mathematics for economic and financial choices).

University of Perugia, Italy, Faculty of Economics, Institute of general and financial mathematics.

Jan. 1987 – Apr. 1988

Lieutenant

Commander of alpine infantry platoon .

Italian Army, AUC battalion, Alpine military school, and Command and transmission department, Alpine brigade Tridentina.

EDUCATION AND TRAINING

1988 – 1996

Short courses

EQF 8

- Summer school C.I.M.E. *Financial Mathematics*, Bressanone-Brixen, Italy (Summer 1996).
- Course *Il controllo del rischio di tasso di interesse (The control of interest rate risk)*, Scuola normale superiore di Pisa, Italy (1992).
- Topology Summer schools, various locations (Summer 1989, 1990, 1991), with scholarship.
- Mathematics Summer school, Scuola matematica interuniversitaria, Perugia, Italy (Summer 1988, 1989).

1990 – 1995

PhD courses in mathematics

EQF 8

University of Milan, Italy, Department of mathematics “Federgio Enriques”, with scholarship.

| | | |
|--------------|---|-------|
| a.y. 1988–89 | Postgraduate courses in mathematics Istituto nazionale di alta matematica (Roma, Italy), with scholarship | EQF 8 |
| 1988 | Degree (“laurea”) in mathematics University of Perugia, Italy, 110/110 cum laude. | EQF 7 |
| 1982 | Classical high school diploma Classical Lyceum “Dante Alighieri” (Bressanone-Brixen, Italy), 58/60. | EQF 5 |

PERSONAL SKILLS

Mother tongue Italian and German.

Other languages

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C2 | C2 | C1 | C2 | C2 |

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Digital competences

| | SELF-ASSESSMENT | | | | |
|--|------------------------|-----------------|------------------|-----------------|-----------------|
| | Information Processing | Communication | Content creation | Safety | Problem solving |
| | Proficient user | Proficient user | Proficient user | Proficient user | Proficient user |

[Digital competences - Self-assessment grid](#)

- Computer skills**
- Programming languages: proficient user in Fortran, C, C++, Pascal, SQL, Visual Basic, Visual Basic for Applications.
 - Scientific computing environments: proficient user in SAS, Matlab, Mathematica; independent user in R e Python.
 - Markup languages: proficient user in $\text{T}_\text{E}\text{X}$, $\text{L}\text{A}\text{T}_\text{E}\text{X}$; independent user in HTML.
 - Database: proficient user in Oracle, Microsoft Access.
 - Office productivity and automation: proficient user in Microsoft Office, Libre Office.

ADDITIONAL INFORMATION

Undergraduate teaching

EQF 6

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|----------------|---|
| 1998 – present | <u>Matematica finanziaria (Financial mathematics)</u> , University of Siena, Italy |
| 2002 | <u>Modelli dei mercati finanziari (Financial modelling)</u> , University of Siena, Italy |
| 1996 – 1998 | <u>Elaborazione automatica dei dati per le decisioni economiche e finanziaria (Automatic data processing for economic and financial decisions)</u> , University of Perugia, Italy |
| 1992 – 1998 | <u>Matematica finanziaria (Financial mathematics)</u> , University of Perugia, Italy |

Graduate (MSc) teaching

EQF 7

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|----------------|---|
| 2021 – present | <u>Computational Finance (taught in English)</u> , University of Siena, Italy. |
| 2009 – present | <u>Financial Modeling I (taught in English)</u> , University of Siena, Italy. |
| 2010 – 2020 | <u>Financial Engineering (taught in English)</u> , University of Siena, Italy. |
| 2005 – 2012 | <u>(Istituzioni di) Matematica attuariale delle assicurazioni sulla vita (Life insurance mathematics)</u> , University of Siena, Italy. |

Graduate (PhD) teaching

EQF 8

| | |
|----------------|--|
| 1988 – present | Various courses at the universities of Siena, Rome “La Sapienza”, Perugia. |
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Teaching in masters and postgraduate training courses

EQF 7,8

- 1992 – present Various courses in masters and postgraduate training courses for Associazione degli amici della Scuola normale superiore di Pisa, Camera di commercio di Perugia, Cassa depositi e prestiti, Consorzio Pavese per studi post-universitari, Groupe consultatif actuariel europeen, NEMETRIA s.r.l., SDA Bocconi, University of Milan “La Bicocca”, University of Siena.

Consulting and training activities

- 1995 – present Consulting and training activities to financial and insurance institutions in cooperation with Alef s.r.l..

Research

- 1992 – present Research in the field of mathematical finance, with particular reference to the theory of the term structure of interest rates, the valuation of derivatives and the control and management of financial and actuarial risk in insurance business.
- 1988 – 1994 Research in the field of geometric, algebraic and categorical topology.

Publications

1. Pacati, C., Pompa, G., Renò, R. (2018). Smiling twice: The Heston++ model. *Journal of Banking and Finance*, 96, 185–206, doi: [10.1016/j.jbankfin.2018.08.010](https://doi.org/10.1016/j.jbankfin.2018.08.010).
2. Pacati C., Renò R., Santilli M. (2014). Heston model: shifting on the volatility surface. *Risk* (November), p. 54–59, ISSN: 0952-8776.
3. Marmi S., Pacati C., Renò R., Risso W.A. (2013). A quantitative approach to Faber’s tactical asset allocation. *International Journal of Computational Economics and Econometrics*, vol. 3, p. 91–101, ISSN: 1757-1170, doi: [10.1504/IJCEE.2013.056268](https://doi.org/10.1504/IJCEE.2013.056268).
4. Castellani G., De Felice M., Moriconi F., Pacati C. (2007). Pricing formulae for financial options and guarantees embedded in profit sharing life insurance policies. *Unpublished*.
5. Pacati C. (2006). Matematica attuariale delle polizze vita “tradizionali” italiane. In: Gruppo di ricerca su “Imprese di assicurazione e fondi pensione. Modelli per la valutazione, per la gestione e per il controllo”, Working paper n. 13.
6. Pacati C. (2006). The t/n Profit-Sharing Rule. In: Gruppo di ricerca su “Imprese di assicurazione e fondi pensione. Modelli per la valutazione, per la gestione e per il controllo”, Working paper n. 12.
7. Castellani G., De Felice M., Moriconi F., Pacati C. (2005). Embedded Value in Life Insurance. In: Research Group on “Insurance Companies and Pension Funds. Valuation Models and Asset-Liability Management”, Working paper n. 7. Available at SSRN: doi: [10.2139/ssrn.2761395](https://doi.org/10.2139/ssrn.2761395).
8. Pacati C. (2005). Interest Rate Sensitive Contracts with Log-Affine Payoff. In: Research Group on “Insurance Companies and Pension Funds. Valuation Models and Asset-Liability Management”, Working paper n. 9.
9. Lucheroni C., Pacati C. (2004). Credit Risk Analysis of Mortgage Rates in the Italian Market. *Unpublished*.
10. Pacati C. (2003). Financial Valuation of a New Generation Participating Life-Insurance Contract. In: Proceedings of the 6th Spanish-Italian Meeting on Financial Mathematics (invited conference), Trieste, 3–5 July 2003.
11. Pacati C. (2000). La valutazione dei Constant maturity bond. *Quaderni del Dipartimento di economia politica*, vol. 310, p. 1–16, ISSN: 1720-9668.
12. Pacati C. (2000). Alcune considerazioni sulla valutazione di polizze unit linked con e senza minimi garantiti. In: Research Group on “Models for Mathematical Finance”. Working Paper n. 39, p. 1–32.
13. Pacati C. (2000). Strutture per scadenza dei tassi lordi e strutture per scadenza dei tassi netti. *Quaderni del Dipartimento di economia politica*, vol. 309, p. 1–16, ISSN: 1720-9668.
14. Pacati C. (2000). Valutazione di portafogli di polizze vita con rivalutazione agli ennesimi. In: Gruppo di ricerca “Modelli per la finanza matematica”. Working Paper n. 38, p. 7–30.

15. Pacati C. (1999). Estimating the Euro Term Structure of Interest Rates. In: Research Group on “Models for Mathematical Finance”. Working Paper n. 32, p. 7–20.
16. Pacati C. (1998). Una stima di massima verosimiglianza del modello di Cox, Ingersoll e Ross univariato. In: Research Group on “Models for Mathematical Finance”. Working Paper n. 30, p. 7–16.
17. Pacati C., Pavesic P., Piccinini R. (1998). On the classification of \mathcal{F} -fibrations. *Topology and its Applications*, vol. 87, p. 213–227, ISSN: 0166-8641, doi: [10.1016/S0166-8641\(97\)00171-5](https://doi.org/10.1016/S0166-8641(97)00171-5).
18. Castellani G., De Felice M., Moriconi F., Mottura M., Pacati C. (1997). La gestione finanziaria dei fondi pensione – Soluzione tecnologica. *Esercizi*. p. 1–100, Pias, Associazione Amici della Scuola Normale Superiore.
19. Pacati C., Pavesic P., Piccinini R. (1995). The Dold-Lashof-Fuchs construction revisited. *Rendiconti del seminario matematico e fisico di Milano*, vol. 65, p. 35–52, ISSN: 0370-7377, doi: [10.1007/BF02925251](https://doi.org/10.1007/BF02925251).
20. Pacati C. (1995). Strutture per scadenza agent dependent. In: Research Group on “Models of the Term Structure of Interest Rates”, Working Paper n. 18, p. 7–21.
21. Pacati C. (1995). Approssimazione polinomiale della struttura dei prezzi di titoli obbligazionari. In: XIX Convegno AMASES. p. 500–507, 25–28 settembre 1995.
22. De Felice M., Moriconi F., Mottura M., Pacati C. (1995). Il controllo del rischio finanziario nell’attività assicurativa. *Procedure di calcolo – Esercizi*. p. 107, Pisa, Associazione Amici della Scuola Normale Superiore.
23. Mari C., Pacati C. (1994). Due metodologie alternative per la stima della struttura per scadenza dei tassi di interesse: un confronto empirico sui dati italiani. In: XVIII Convegno A.M.A.S.E.S.. p. 409–419, 5–7 settembre 1994.
24. Matrigali P., Pacati C. (1993). Strutture per scadenza dei tassi di interesse come soluzioni duali di problemi di copertura. In: Atti del XVII Convegno A.M.A.S.E.S.. p. 625–647, 8–11 settembre 1993.
25. Pacati C. (1992). Compactness defined by an epireflector. *Rendiconti del Circolo matematico di Palermo*, vol. 29, p. 575–585, ISSN: 0009-725X.