ELENCO DELLE PUBBLICAZIONI E DELLA TESI DI DOTTORATO

Di seguito si riporta l'elenco delle pubblicazioni scientifiche e la tesi di dottorato del candidato dott. Mario Marino, C.F. MRNMRA91M30L103H, allegato alla domanda di partecipazione di cui alla procedura pubblica di selezione a n° 1 posto di ricercatore universitario a tempo determinato, ai sensi dell'Art. 24, c. 3 lettera a) della L. 240/2010, bandito ai sensi del D.M. MUR n. 737/2021, da assumere con contratto di lavoro subordinato, per la durata di tre anni per il settore concorsuale 13/D4, S.S.D. SECS-S/06 presso il Dipartimento di Economia dell'Università degli studi Roma Tre.

A. Articoli scientifici pubblicati in peer-reviewed journals: 8 contributi, di cui 3 collocati in riviste di classe A secondo la classificazione di cui all'Abilitazione Scientifica Nazionale 2021-2023:

- Marino M., Levantesi S., Nigri A. (2022). A neural approach to improve the Lee-Carter mortality density forecasts. *North American Actuarial Journal.* https://doi.org/10.1080/10920277.2022.2050260
- De Angelis P., De Marchis R., Marino M., Martire A. L., Oliva I. (2021). Evaluating ruin probabilities: a streamlined approach. *Applied Mathematics E-Notes*, 21, 634-642. ISSN 1607-2510.
- De Angelis P., De Marchis R., Marino M., Martire A. L., Oliva I. (2021). Betting on Bitcoin: a profitable trading between directional strategies and shielding policies. *Decisions in Economics and Finance*, 44, 883–903. https://doi.org/10.1007/s10203-021-00324-z
- Nigri A., Levantesi S., Marino M. (2021). Forecasting life expectancy and lifespan disparity: a long short-Term Memory approach. *Scandinavian Actuarial Journal*, 2, 110-133. https://doi.org/10.1080/03461238.2020.1814855
- Nigri A., Levantesi S., Marino M., Scognamiglio S., Perla F. (2019). A deep learning integrated Lee-Carter model. *Risks*, 7(1), 33. https://doi.org/10.3390/risks7010033
- De Marchis R., Marino M. (2017). La decisione ottima nel contratto riassicurativo. *Annali del dipartimento MEMOTEF*, 37-45. ISSN 2385-0825.
- Bruno M.G., Grande A., Marino M., Modica E. (2016). Valutazione e copertura del rischio di mortalità. *Annali del dipartimento MEMOTEF*, 88-94. ISSN 2385-0825.
- De Marchis R., Marino M. (2015). Questioni valutative sul danno biologico. *Annali del dipartimento MEMOTEF*, 79-92. ISSN 2385-0825.

B. Contributi scientifici in volumi peer-reviewed: 1 contributo

- Marino M., Levantesi S. (2021). Forecasting Neural Network Lee-Carter model with parameter uncertainty: the case of Italy. *In: Corazza M., Gilli M., Perna C., Pizzi C., Sibillo M. (eds), Mathematical and Statistical Methods for Actuarial Sciences and Finance*. Springer, Cham. https://doi.org/10.1007/978-3-030-78965-7_49

C. Tesi di dottorato:

- Marino M. (2021). Mortality neural forecasting. *Ph.D. Thesis*, School of Statistical Sciences, Sapienza University of Rome.

Luogo e data Roma, 24/05/2021

Elenco Pubblicazioni

Pubblicazioni Scientifiche

1. G. D'Acquisto, A. Mazzoccoli, M. Naldi "Hiding Alice in Wonderland: a case for the use of signal processing techniques in differential privacy", in Annual Privacy Forum 2018, Barcelona, 13-14 June 2018.
2. A. Mazzoccoli and M. Naldi, "Computation of the insurance premium for cloud services based on fourth-order statistics", in 12th European Modelling Symposium on Mathematical Modelling and Computer Simulation 2018, Madrid, 25-26 October, 2018.
3. G. Gentile, A. Mazzoccoli and F. Vaia, "Forced quasi-periodic oscillations in strongly Dissipative Systems of any Finite Dimension", Communications in Contemporary Mathematics, 2019.
4. L. Mastroeni, A. Mazzoccoli, M. Naldi, "Service Level Agreement Violation in Cloud Storage: Insurance and Compensation Sustainability", Future Internet, 11(7), 142, 2019.
5. G. D'Acquisto, A. Mazzoccoli, F. Ciminelli, & M. Naldi. "Privacy through Data Recolouring". In Annual Privacy Forum (pp. 61-72). Springer, Cham, 2020, June.
6. A. Mazzoccoli and M. Naldi, "Robustness of optimal investment decisions in mixed insurance/investment cyber risk management", Risk Analysis, 40 (3), 550-564, 2020.
7. A. Mazzoccoli and M. Naldi, "The Expected Utility Insurance Premium Principle with Fourth-Order Statistics: Does It Make a Difference?", Algorithms, 2020.
8. A. Mazzoccoli, M. Naldi. Optimal Investment in Cyber-Security under Cyber Insurance for a Multi-Branch Firm. Risks, 9(1), 24, 2021.
9. L. Mastroeni, A. Mazzoccoli, G. Quaresima, P. Vellucci "Decoupling and recoupling in crude oil benchmarks: an investigation of similarity patterns". Energy Economics, 94, 2021.
10. L. Mastroeni, A. Mazzoccoli, G. Quaresima, P. Vellucci "Wavelet Analysis and Energy-Based Measures for Oil-Food Price Relationship as a Footprint of Financialisation Effect", Energy Policy, 2022 (Accepted).

Libri

- L.Mastroeni and A. Mazzoccoli, "Matematica per le applicazioni economiche", Pearson.

Mario Marino

Curriculum Vitae

Education and titles

Nov. 2017 – March 2021 **PhD in Actuarial Sciences (XXXIII cycle)**, *School of Statistical Sciences, Sapienza University of Rome*, *grade: Excellent cum laude*

Jan. 2019 - current **Cultore della Materia**, Sapienza University - Faculty of Economics, Rome
Subject Expert in *Financial Mathematics*.

Jun. 2017 **Fully qualified actuary**
Registered to Italian national Order of Actuaries, ID 1775

Oct. 2013 – Jun. 2016 **Master degree in Finance and Insurance**, *Sapienza University of Rome*, *grade: 110/110 cum laude*

Current academic position

Sept. 2021 – current **Postdoctoral Researcher**, *MEMOTEF Department*, Sapienza University of Rome

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Publications

Articles in peer-reviewed journals

Marino M., Levantesi S., Nigri A. (2022). A neural approach to improve the Lee-Carter mortality density forecasts. *North American Actuarial Journal*. https://doi.org/10.1080/10920277.2022.2050260

De Angelis P., De Marchis R., Marino M., Martire A. L., Oliva I. (2021). Evaluating ruin probabilities: a streamlined approach. *Applied Mathematics E-Notes*, 21, 634-642. ISSN 1607-2510.

De Angelis P., De Marchis R., Marino M., Martire A. L., Oliva I. (2021). Betting on Bitcoin: a profitable trading between directional strategies and shielding policies. *Decisions in Economics and Finance*, 44, 883–903. https://doi.org/10.1007/s10203-021-00324-z

Nigri A., Levantesi S., Marino M. (2021). Forecasting life expectancy and lifespan disparity: a long short-Term Memory approach. *Scandinavian Actuarial Journal*, 2, 110-133. https://doi.org/10.1080/03461238.2020.1814855

Nigri A., Levantesi S., Marino M., Scognamiglio S., Perla F. (2019). A deep learning integrated Lee-Carter model. *Risks*, 7(1), 33. https://doi.org/10.3390/risks7010033

De Marchis R., Marino M. (2017). La decisione ottima nel contratto riassicurativo. *Annali del dipartimento MEMOTEF*, 37-45. ISSN 2385-0825.

Bruno M.G., Grande A., Marino M., Modica E. (2016). Valutazione e copertura del rischio di mortalità. *Annali del dipartimento MEMOTEF*, 88-94. ISSN 2385-0825.

De Marchis R., Marino M. (2015). Questioni valutative sul danno biologico. *Annali del dipartimento MEMOTEF*, 79-92. ISSN 2385-0825.

Peer-reviewed contributes in volume

Marino M., Levantesi S. (2021). Forecasting Neural Network Lee-Carter model with parameter uncertainty: the case of Italy. In: Corazza M., Gilli M., Perna C., Pizzi C., Sibillo M. (eds), *Mathematical and Statistical Methods for Actuarial Sciences and Finance. Springer, Cham*. https://doi.org/10.1007/978-3-030-78965-7_49

Ph.D. Thesis

Marino M. (2021). Mortality neural forecasting. *Ph.D. Thesis*, School of Statistical Sciences, Sapienza University of Rome.

Books

De Angelis P., De Marchis R., Marino M., Martire A.L. (2021). *Lezioni di Matematica Finanziaria.* 2^{nd} *edition*. Editor Giappichelli, Torino. ISBN-13:9788892120747.

De Angelis P., De Marchis R., Marino M., Martire A.L. (2019). *Lezioni di Matematica Finanziaria.* 1^{st} *edition*. Editor Giappichelli, Torino. ISBN-13:9788892120747.

Conferences, schools and seminars

Invited talk

MAT Symposium 2021, hosted by Hungarian Actuarial Society, May 29^{th}, 2021.

Actuarial Virtual Colloquium - International Actuarial Asscociation, Life Insurance section, live session talk, jointly with prof. Steven Haberman and Dr. Alexandre Boumezoued, May 4^{th}, 2020.

Contributed talk

23^{th} workshop on Quantitative Finance, hosted by Tor Vergata University of Rome, April 1^{st}, 2022.

16^{th} *International Longevity Risk and Capital Markets Solutions Conference*, jointly hosted by Copenaghen Business School (Pension Research Center) and Pension Institute Center (University of London), August 14^{th}, 2021.

24^{th} *International congress on Insurance: Mathematics and economics*, jointly hosted by University of: Illinois, Pennsylvania, Ulm and Sydney, July 5^{th}, 2021.

3^{rd} *Insurance Data Science Conference*, hosted by The Business School of London, June 18^{th}, 2021.

OICA - Online International Conference in Actuarial Sciences, data science and finance, April 28^{th}, 2020.

21^{th} *workshop on Quantitative Finance*, hosted by Parthenope University, 29-31 January 2020. Contributed talk and Insurance session chair.

15^{th} *International Longevity Risk and Capital Markets Conference*, Washington DC, hosted by Pension Institute Center (University of London) and Cass Business School, 12-13 September 2019.

Attended Summer Schools

3^{rd} *International School on Deep Learning*, Varsavia, 21-26 July 2019.

SIDE International School in "Machine Learning Alghoritm for Econometricians", Bertinoro, 15-20 July 2019.

International school in Actuarial Mathematics, Paestum, 17-21 september 2018.

Invited seminars

"Statistical Learning: concepts, models and actuarial applications", Sapienza University, June 2020. Seminar held as lecturer for the PhD school in Statistical Sciences, Sapienza University of Rome.

Research projects

Participation to research project *Facing emerging risks: an actuarial perspective*. (Sapienza funding, 2021). Principal Investigator: Prof. Oliva (Sapienza Univeristy of Rome - MEMOTEF Department)

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Participation to research project *Actuarial and financial risk management solutions in a pandemic mortality framework*. (Sapienza funding, 2020). Principal investigator: Prof. Oliva (Sapienza Univeristy of Rome - MEMOTEF Department).

Participation to research project *Life market: a renewal boost for quantitative management of longevity and lapse risks*. (Sapienza funding, 2019). Principal investigator: Prof. Stabile (Sapienza Univeristy of Rome - MEMOTEF Department).

Teaching activities

Ac. year 2021/2022 — **Lecturer**, Sapienza University of Rome - Faculty of Economics, Rome
Owner teacher for the course *Risk management and capital requirements* (6 CFU, taught in english).

Ac. year 2020/2021 — **Lecturer**, Mercatorum Telematic University, Rome
Owner teacher for the course *Big Data elaboration for firms* (6 CFU, taught in italian).

Ac. year 2020/2021 — **Lecturer**, Sapienza University of Rome - Faculty of Economics, Rome
Owner teacher for the course *Models for risks and forecasting* (6 CFU, taught in english).

Ac. year 2020/2021 **Lecturer**, LUISS University- Faculty of Economics, Rome
Owner teacher for the course *Advanced Financial Mathematics* (8 CFU, taught in italian).

Mar. 2020 - Dec. 2020 **Tutoring and integrative teaching activity for disciplinar sector SECS-S/06**, Sapienza University - Faculty of Economics, Rome
Winner of the comparative procedure 80/2020 to perform additional teaching activities and tutoring for courses falling within the disciplinary scientific sector SECS-S/06 *Mathematical methods of economics and actuarial and financial sciences*.

Ac. year 2019/2020 **Integrative lecturer**, LUISS University- Faculty of Economics, Rome
Teaching assistant for the course *Advanced Financial Mathematics* (taught in italian), owner teacher Paola Fersini.

Ac. year 2019/2020 **Integrative lecturer**, LUISS University - Faculty of Economics, Rome
Teaching assistant for the course *Quantitative methods for company* (taught in italian), owner teacher Alessandro Calvia.

Jan. 2019 - Dec. 2019 **Tutoring and integrative teaching activity for disciplinar sector SECS-S/06**, Sapienza University - Faculty of Economics, Rome
Winner of the comparative procedure 1924/2018 to perform additional teaching activities and tutoring for courses falling within the disciplinary scientific sector SECS-S/06 *Mathematical methods of economics and actuarial and financial sciences*.

Feb. 2018 – Feb. 2020 **Lecturer**, Niccolò Cusano University - Faculcty of Economics,, Rome
Lecturer for a post bachelor course *Solvency II - La gestione del rischio assicurativo*. (taught in italian)

Ac. year 2018/2019 **Integrative lecturer**, LUISS University - Faculty of Economics, Rome
Teaching assistant for the course *Quantitative methods for company* (taught in italian), owner teacher Sara Biagini.

Professional experiences

Sept. 2016 – Oct. 2018 **Actuarial and risk management consultant**, Crenca e Associati, Rome

Consultant for non-life insurance companies within Solvency II framework: BEL calculation, SCR calculation, ORSA evaluation, Risk Appetite Framework and capital allocation analysis, Key Risk Indicators elaboration, support to Actuarial Function assessments.

I declare, being aware of the provisions of the law in case of false declarations, that any information in this CV is correct and truthful.

Alessandro Mazzoccoli

Curriculum Vitae

Formazione

• Laurea Magistrale in Matematica, conseguita nell' Universitá degli Studi di Roma Tre.
Votazione: 110/110 e Lode.
Tesi: "Quasi periodic motions in strongly dissipative forced systems".

• Dottorato di ricerca in Computer Science Control and Geo-information, Universitá degli studi di Roma Tor Vergata.
Votazione: Eccellente
Tesi: "Cyber Risk Management: Risk transfer and mitigation strategies to manage cyber risks".

Esperienze lavorative in ambito accademico

Docenza corsi universitari

• Matematica generale, SECS-S/06 (A.A. 2021/2022), Università della Tuscia, Polo Universitario di Civitavecchia;
• Metodi matematici per l'economia e la finanza, SECS-S/06 (A.A. 2021/2022), Università della Tuscia, sede di Viterbo;
• Progetto di Internazionalizzazione del corso Metodi matematici per l'economia e la finanza in lingua inglese, SECS-S/06 (A.A. 2021/2022), Università della Tuscia, sede di Viterbo

Supporto alla Didattica

• Intelligenza Artificiale, ING-INF/05 (A.A. 2020/2021), Universitá LUISS;
• Matematica generale, SECS-S/06 (A.A. 2016/2017), Universitá Roma Tre;
• Matematica generale, SECS-S/06 (A.A. 2015/2016), Universitá Roma Tre;
• Fisica Matematica 1, Mat/07 (A.A. 2015/2016), Universitá Roma Tre;
• Analisi Matematica 1, Mat/05 (A.A. 2015/2016), Universitá Roma Tre;
• Geometria 1, Mat/03 (A.A.2015/2016), Universitá Roma Tre;
• Analisi Matematica 2, Mat/05 (A.A. 2014/2015), Universitá Roma Tre;
• Analisi Matematica 3, Mat/05 (A.A. 2014/2015), Universitá Roma Tre;
• Analisi Matematica 1, Mat/05 (A.A. 2014/2015), Universitá Roma Tre;
• Analisi Matematica 1, Mat/05 (A.A. 2013/2014, 2014/2015, 2015/2016), Universitá Roma Tre;

Cultore della materia

• Cultore della materia Matematica per le applicazioni economiche, SECS-S/06 (Universitá Roma Tre)
• Cultore della materia Intelligenza Artificiale ING-INF/05 (Universitá LUISS)
• Cultore della materia Matematica generale, SECS-S/06 (Universitá Roma Tre)

Libri di Didattica Universitari

• L.Mastroeni and A. Mazzoccoli, "Matematica per le applicazioni economiche", Pearson.

Summer and Winter School

• Stochastic Processes for Actuarial Sciences, (2018) Trento;

- Data Science Summer School, (2019) Pisa.

Pubblicazioni Scientifiche

- G. D'Acquisto, A. Mazzoccoli, M. Naldi "Hiding Alice in Wonderland: a case for the use of signal processing techniques in differential privacy", in Annual Privacy Forum 2018, Barcelona, 13-14 June 2018.

- A. Mazzoccoli and M. Naldi, "Computation of the insurance premium for cloud services based on fourth-order statistics", in 12th European Modelling Symposium on Mathematical Modelling and Computer Simulation 2018, Madrid, 25-26 October, 2018.

- G. Gentile, A. Mazzoccoli and F. Vaia, "Forced quasi-periodic oscillations in strongly Dissipative Systems of any Finite Dimension", Communications in Contemporary Mathematics, 2019.

- L. Mastroeni, A. Mazzoccoli, M. Naldi, "Service Level Agreement Violation in Cloud Storage: Insurance and Compensation Sustainability", Future Internet, 11(7), 142, 2019.

- G. D'Acquisto, A. Mazzoccoli, F. Ciminelli, & M. Naldi. "Privacy through Data Recolouring". In Annual Privacy Forum (pp. 61-72). Springer, Cham, 2020, June.

- A. Mazzoccoli and M. Naldi, "Robustness of optimal investment decisions in mixed insurance/investment cyber risk management", Risk Analysis, 40 (3), 550-564, 2020.

- A. Mazzoccoli and M. Naldi, "The Expected Utility Insurance Premium Principle with Fourth-Order Statistics: Does It Make a Difference?", Algorithms, 2020.

- A. Mazzoccoli, M. Naldi. Optimal Investment in Cyber-Security under Cyber Insurance for a Multi-Branch Firm. Risks, 9(1), 24, 2021.

- L. Mastroeni, A. Mazzoccoli, G. Quaresima, P. Vellucci "Decoupling and recoupling in crude oil benchmarks: an investigation of similarity patterns". Energy Economics, 94, 2021.

- L. Mastroeni, A. Mazzoccoli, G. Quaresima, P. Vellucci "Wavelet Analysis and Energy-Based Measures for Oil-Food Price Relationship as a Footprint of Financialisation Effect", Energy Policy, 2022 (Accepted).

- A. Mazzoccoli, M. Naldi "An overview of cyber security breach probability models", (Under review).

- A. Mazzoccoli, M. Naldi "Optimizing Cyber Security Investments over Time", (Under review).

Partecipazione a Convegni

- International conference on statistical analysis of textual data (JADT), (2018) CNR Roma.
- ESPOO EURO 2022 Finland 3-6 July

Conoscenza lingue straniere

- Inglese: Certificazione di Inglese livello C1

- Francese: conoscenza base della lingua per comprensione testi scientifici.

Conoscenze linguaggi di programmazione informatici

- R: ottima;
- Matlab: buona;
- Wolfram Mathematica: buona;