Moreno I. Coco

CONTACT
INFORMATION

Department of Psychology
Sapienza, University of Rome
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KEYWORDS

human cognitive neuroscience, visual cognition, psycholinguistics, memory, healthy and pathological cognitive ageing, statistics and data analysis for complex data, software developing, computational modelling, eye-tracking, electro-physiology.

EDUCATION

Italian Academic Qualification as Associate Professor in Psychological Sciences (ASN 2020, 11/E1)

Fellow of the Higher Education Academy (awarded with distinction), **Pedagogy** (2018-2019)
Centre for Excellence in Learning and Teaching, CELT, University of East London, London, UK

Ph.D., **Informatics** (2007-2011)
School of Informatics, ILCC, University of Edinburgh, Edinburgh, UK
Thesis: *Coordination of Vision and Language in Cross-Modal Referential Processing*
Supervised by Prof. Frank Keller (*computational cognitive science*)
and Prof. John M. Henderson (*visual cognition*)

M.Sc., **Linguistics** (2004-2007)
Universita' degli studi di Siena, Italy, and Utrecht Universiteit, Holland
Thesis (*Magna cum Laude*): *Spatial Preposition Selection. A formal perceptual Optimality Theory model.*
Supervised by Prof. Luigi Rizzi (*formal linguistics*)
and Dr. Joost Zwarts (*cognitive linguistics*)

B.S., **Communication Sciences** (2001-2004)
Universita' degli studi di Siena, Italy
Thesis (*Magna cum Laude*): *Can recurrent neural networks learn the distinction between active and passive syntactic structures?* (in Italian)
Supervised by Prof. Luigi Rizzi (*formal linguistics*)
and Dr. Cristano Chesi (*computational linguistics*)

POSITIONS

Academic Appointment

- Associate Professor (tenure-RTDb) in **Psychological Sciences**, Department of Psychology, Sapienza, University of Rome, **January 2022 - onwards**
- Senior Lecturer in **Psychological Sciences**, School of Psychology, University of East London, **September 2018 - December 2021**
- Associate Investigator, Center for Research in Psychological Science, Universidade de Lisboa, **July 2018 - onwards**

Independent Research Fellow

- Leverhulme Trust, School of Philosophy, Psychology and Language Sciences, University of Edinburgh, **May 2015 - May 2018**
- Fundação para a Ciência e Tecnologia, Faculdade de Psicologia, Universidade de Lisboa, **April 2013 - April 2015**

Research Associate

- European Resarch Council (PI Prof. Frank Keller), School of Informatics, The University of Edinburgh, **January 2011 - February 2013**

Visiting and Honorary Researcher

- Department of Psychologyhttps://www.charlotte.edu/University of North Carolina at Charlotte, **Summer 2023**
- Baycrest Centre, **June 2022**
- Institute for Language, Cognition and Computation, University Of Edinburgh, **March 2013 - May 2018**
- Centro de Linguistica, Universidade de Lisboa, **December 2013 - onward**
- Institut fur Psychologie, Humboldt Universitat zu Berlin, **January 2017 - April 2017**
- Department of Psychology, UC San Diego, **May 2017 - June 2017**
- Institute for Systems and Robotics, Instituto Superior Tecnico, **July 2016 - December 2016**
- Department of Cognitive and Information Sciences, University of California at Merced, **February 2012 - April 2012**

RESEARCH INTERESTS

My current research focuses on the role that attention plays on the formation and maintenance of memory traces. Previously, I examined the cross-modal integration of linguistic and visual processing. My empirical approach combines behavioural (e.g., eye-tracking, computer-mouse tracking) and imaging methods (e.g., electro-physiology) as isolated signals, or in co-registration (e.g., fixation-related potentials), to explore the cognitive mechanisms at work in healthy and neuro-pathological populations, and utilize computational modelling to obtain finer-grained quantitative explanations of human cognition.

I use the following classification schema to describe the areas of contribution of my publications:

Aging(**A**); Coordination dynamics and Cross-modal processing (**CC**); Computational Modelling (**CM**); Eye-Tracking (**ET**); Electro-physiology (**EEG**); Interaction (**I**; Human-human, human-robot) Memory Processes (**MP**); Motor-action Tracking (**MT**); Neurodiversity, neuropsychology and pathological cognition (**NP**); PsychoLinguistics (**PL**); Visual Cognition (**VC**)

Impact: 828 citations; h-index = 15; i10-index = 21 (Google Scholar as of: 01.06.2022)

27. G. D'Innocenzo*, S. Della Sala and **M.I. Coco**. Similar mechanisms of temporary bindings for identity and location of objects in healthy ageing: An eye-tracking study with naturalistic scenes (2022). *Scientific Reports*, in press, (**VC/ET/NP/A**)
(SJR, 1.01: Q1 in Multidisciplinary)

26. **M.I. Coco**, D. Mønster, G. Leonardi, R. Dale and S. Wallot. Unidimensional and multidimensional methods for recurrence quantification analysis with crqa (2021). *The R-Journal*, 13(1), 145-163. DOI = 10.32614/RJ-2021-062, (**CM**)
(SJR, 2.57: Q1 in Statistics and Probability)

25. **M. I. Coco**, G. Merendino, G. Zappala and S. Della Sala (2021). Semantic interference mechanisms on long-term visual memory and their eye-movement signatures in Mild Cognitive Impairment. *Neuropsychology*, 35(5), 498-513, DOI: 10.1037/neu0000734 (**VC/ET/NP/MP/A**)
(SJR, 1.1: Q1 in Neuropsychology and Physiological Psychology)

24. F. Cimminella*, G. D'Innocenzo*, S. Della Sala, A. Iavarone, C. Musella, and **M.I. Coco**. Preserved extra-foveal processing of object semantics in Alzheimer's disease (2021). *Journal of Geriatric Psychiatry and Neurology*, DOI: 10.1177/08919887211016056, (**VC/ET/NP/A**)
(SJR, 0.9: Q2 in Geriatrics and Gerontology)

23. A. Mikhailova*, A. Raposo, S. Della Sala and **M. I. Coco** (2021). Eye-movements reveal semantic interference effects during the encoding of naturalistic scenes in long-term memory. *Psychonomic Bulletin & Review*. DOI: 10.3758/s13423-021-01920-1 (**VC/ET/MP**)
(SJR, 2.04: Q1 in Experimental and Cognitive Psychology)

22. M. Pagnotta*, K. Laland and **M.I. Coco** (2020) Attentional coordination in demonstrator-observer dyads facilitates learning and predicts performance in a novel manual task. *Cognition* 201(104314). DOI:10.1016/j.cognition.2020.104314, (**VC/PL/ET/I/CM**)
(SJR, 2.7: Q1 in Cognitive Neuroscience)

21. **M.I. Coco**, A. Nuthmann and O. Dimigen (2020) Fixation-related brain potential during semantic integration of object-scene information. *Journal of Cognitive Neuroscience* 32(4), 571-589. DOI:10.1162/jocn_a_01504, (**VC/ET/EEG/CM**)
(SJR, 2.13: Q1 in Cognitive Neuroscience)

20. F. Cimminella*, S. Della Sala and **M.I. Coco** (2020) Extra-foveal processing of object semantics guides early overt attention during visual search. *Attention, Perception & Psychophysics*, 82, 655-670. DOI: 10.3758/s13414-019-01906-1, (**VC/ET**)
(SJR, 1.49: Q1 in Experimental and Cognitive Psychology)

19. *M.T. Borges, *E.G, Fernandes and **M.I. Coco** (2020) Age-related differences during visual search: the role of contextual expectations and top-down control mechanisms. *Aging, Neuropsychology and Cognition*, 27(4), 489-516 DOI: 110.1080/13825585.2019.1632256, (**A/VC/NP**)
(SJR, 0.87: Q2 in Experimental and Cognitive Psychology)

18. *E.G., Fernandes, **M.I. Coco** and H.P. Branigan (2019) When Eye Fixation might not reflect Online Ambiguity Resolution: A study on Structural Priming using the Visual-World Paradigm in Portuguese. *Journal of Cultural Cognitive Science*, DOI: 10.1007/s41809-019-00021-9, (**PL/ET**)

17. **M.I. Coco**, T. Brady, G. Merendino, G. Zappala', A. Baddeley, and S. Della Sala, (2018), Forgetting in normal and pathological ageing as a function of semantic interference, *Alzheimer's and Dementia*, 14(7), 915-916, DOI: 10.1016/j.jalz.2018.06.1179 (**A/MP/NP**)
(SJR, 4.66: Q1 in Psychiatry and Mental Health)

16. *N.F., Duarte, J., Tasevski, M.,Rakovic, **M.I. Coco**, A. Billard and J. Santos-Victor, (2018) Action Reading: Anticipating the Intentions of Humans and Robots. *IEEE Robotics and Automation Letters*, 3(4), 2377-3766, DOI:10.1109/LRA.2018.2861569, (**ET/MT/I/CM**)
(SJR, 1.03: Q1 in Electrical and Electronic Engineering)

15. M., Garraffa, **M.I. Coco** and H.P. Branigan (2018) Impaired implicit learning of syntactic structure in children with developmental language disorder: Evidence from syntactic priming. *Autism & Developmental Language Impairments*, DOI: 10.1177/2396941518779939 (**NP/PL**)

14. **M.I. Coco**, R. Dale and F. Keller (2018) Performance in a Collaborative Search Task: the Role of Feedback and Cognitive Alignment. *Topics in Cognitive Science*, DOI: 10.1111/tops.12300 (**CC/ET/I/PL/CM**)
(SJR, 1.03: Q1 in Language and Linguistics)

13. **M.I. Coco**, S. Araújo, and K.M. Petersson (2017) Disentangling Stimulus Plausibility and Contextual Congruency: Electro-Physiological Evidence for Differential Cognitive Dynamics. *Neuropsychologia.*, 96, 50-163, DOI: 10.1016/j.neuropsychologia.2016.12.008 (**CC/EEG/PL/VC**)
(SJR, 1.94: Q1 in Cognitive Neuroscience)

12. C. Souza, **M.I. Coco**, S. Pinho, C.N. Filipe and J.C. Carmo (2016) Contextual effects on visual short-term memory in High Functioning Autism Spectrum Disorder. *Research in Autism Spectrum Disorder.*, 32, 64-69, DOI: 10.1016/j.rasd.2016.09.003 (**NP/VC**)
(SJR, 0.84: Q2 in Clinical Psychology)

11. **M. I. Coco**, L. Badino, P. Cipresso, A. Chirico, E, Ferrari, G. Riva, A. Gaggioli, A. D'Ausilio (2016) Multiscale behavioral synchronization in a joint tower-building task, *IEEE: Transactions on Cognitive and Developmental Systems*, 99, DOI: 10.1109/TCDS.2016.2545739 (**CC/I/MT/CM**)
(SJR, 0.68: Q2 in Artificial Intelligence)

10. **M.I. Coco**, N. Duran (2016). When Expectancies Collide: Action Dynamics reveal the Interaction of Plausibility and Congruency, *Psychonomic Bulletin and Review*, 23(6), 1920-1931. DOI: 10.3758/s13423-016-1022-9 (**CC/MT/PL**)
(SJR, 2.04: Q1 in Experimental and Cognitive Psychology)

9. **M.I. Coco**, F. Keller, G.L. Malcolm (2016) Anticipation in Real-world Scenes: The Role of Visual Context and Visual Memory, *Cognitive Science*, 40,1995-2024, DOI: 10.1111/cogs.12313 (**ET/PL**)
(SJR, 1.79: Q1 in Experimental and Cognitive Psychology)

8. **M.I. Coco** and F. Keller (2015) Integrating Mechanisms of Visual Guidance in Naturalistic Language Production, *Cognitive Processing*, 16(2), 131-150. DOI: 10.1007/s10339-014-0642-0.(**ET/PL**)
(SJR, 0.6: Q2 in Artificial Intelligence)

7. M. Garraffa, **M.I. Coco** and H.P. Branigan (2015) Effects of Immediate and Cumulative Syntactic Experience in Language Impairment: Evidence from Priming of Subject

Relatives in Children with SLI,*Language Learning and Development*, 11(1), 18-40. DOI: 10.1080/15475441.2013.876277 (**NP/PL**)
(SJR, 1.38: Q1 in Language and Linguistics)

6. **M.I. Coco** and F. Keller (2015) The Interaction of Visual and Linguistic Saliency during Syntactic Ambiguity Resolution, *Quarterly Journal of Experimental Psychology*, 68(1), 46-74. DOI: 10.1080/17470218.2014.936475 (**CC/ET/PL/VC**)
(SJR, 1.32: Q1 in Psychology (miscellaneous))

5. **M.I. Coco** and R. Dale (2014) Cross-Recurrence Quantification Analysis of Categorical and Continuous Time-Series: an R-Package. *Frontiers in Psychology*, Quantitative Psychology and Measurement, 5:510. DOI: 10.3389/fpsyg.2014.00510 (**CM**)
(SJR, 1.27: Q1 in Psychology (miscellaneous))

4. **M.I. Coco** and F. Keller (2014) Classification of Visual and Linguistic Tasks using Eye-Movement Features. *Journal of Vision*, 14(3):11. DOI: 10.1167/14.3.11 (**CM/VC**)
(SJR, 1.36: Q1 in Ophthalmology)

3. **M.I. Coco**, G.L. Malcolm and F. Keller (2014) The Interplay of Bottom-Up and Top-Down Mechanisms in Visual Guidance during Object Naming, The *Quarterly Journal of Experimental Psychology*, 67(6):1096-1120. DOI: 10.1080/17470218.2013.844843 (**ET/PL/VC**)
(SJR, 1.32: Q1 in Psychology (miscellaneous))

2. A.D.F. Clarke, **M.I. Coco** and F. Keller (2013). The Impact of Attentional, Linguistic and Visual Features during Object Naming, *Frontiers in Psychology*, 4:927. DOI: 10.3389/fpsyg.2013.00927 (**ET/CM/PL/VC**)
(SJR, 1.27: Q1 in Psychology (miscellaneous))

1. **M.I. Coco** and F. Keller, (2012) Scan Patterns Predict Sentence Production in the Cross-Modal Processing of Visual Scenes. *Cognitive Science*, 36(7), 1204-1223. DOI: 10.1111/j.1551-6709.2012.01246.x (**ET//CM/PL/VC**)
(SJR, 1.79: Q1 in Experimental and Cognitive Psychology)

SJR quartile = SCImago Journal Rank (Q1 is the highest). Measure of scientific influence accounting for number of citations received by a journal and the prestige of journals where citations originated.

* indicates post-docs and post-graduate students under my direct supervision or co-supervised

CONFERENCE
PROCEEDINGS

These proceedings (6 pages) are peer-reviewed and within the Cognitive Science community a widely used form of dissemination.

14. A., Mikhailova, J. Santos-Victor and **M.I. Coco** (2022) Contribution of low, mid and high-level image features of indoor scenes in predicting human similarity judgements *ibPRIA 2022: 10th Iberian Conference on Pattern Recognition and Image Analysis*, Aveiro, Portugal

13. M., Borges and **M.I. Coco** (2015). Access and Use of Contextual Expectations in Visual Search during Aging in *Proceedings of the EuroAsianPacific Joint Conference in Cognitive Science* (EAP CogSci 2015), Torino, Italy.

12. E.G., Fernandes, M.A. Costa and **M.I. Coco** (2015). Bridging Mechanisms of Reading, Viewing and Working Memory during Attachment Resolution of Ambiguous Relative Clauses in *Proceedings of the EuroAsianPacific Joint Conference in Cognitive Science* (EAP CogSci 2015), Torino, Italy.

11. **M.I. Coco** and R. Dale (2015). Quantifying the Dynamics of Interpersonal Interaction: A Primer on Cross-Recurrence Quantification Analysis using R in *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (CogSci 2015), Pasadena, USA.

10. **M.I. Coco** and N.D. Duran (2015). Incidental Memory for Naturalistic Scenes: Exposure, Semantics, and Encoding in *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (CogSci 2015), Pasadena, USA.

9. R. Dale, C. Yu, Y. Nagai, **M.I. Coco** and S. Kopp, (2013). Embodied Approaches to Interpersonal Coordination: Infants, Adults, Robots, and Agents. Workshop in *Proceedings of the 35rd Annual Conference of the Cognitive Science Society* (CogSci 2013), Berlin, Germany, 24-25.

8. **M.I. Coco**, M. Garraffa and H.P. Branigan, (2012). Subject Relative Production in SLI Children during Syntactic Priming and Sentence Repetition. In *Proceedings of the 34rd Annual Conference of the Cognitive Science Society* (CogSci 2012), 228–233, Sapporo, Japan.

7. B. Allison, F. Keller and **M.I. Coco**, (2012). A Bayesian Model of the Effect of Object Context on Visual Attention. In *Proceedings of the 34rd Annual Conference of the Cognitive Science Society* (CogSci 2012), 1278-1283, Sapporo, Japan.

6. **M.I. Coco** and F. Keller, (2011). Temporal Dynamics of Scan Patterns in Comprehension and Production. In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (CogSci 2011), 2302-2307, Boston, USA.

5. M. Dziemianko F. Keller and **M.I. Coco**, (2011). Incremental Learning of Target Locations in Visual Search. In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (CogSci 2011), 1729-1734, Boston, USA.

4. **M.I. Coco** and F. Keller, (2010). Scan Pattern in Visual Scenes predict Sentence Production. In *Proceedings of the 32th Annual Conference of the Cognitive Science Society* (CogSci 2010), 1934-1939, Oregon, USA.

3. **M.I.Coco** and F.Keller (2010). Sentence Production in Naturalistic Scenes with Referential Ambiguity. In *Proceedings of the 32th Annual Conference of the Cognitive Science Society* (CogSci 2010), 1070-1075, Oregon, USA.

2. **M.I.Coco** and F.Keller (2009). The Impact of Visual Information on Reference Assignment in Sentence Production. In *Proceedings of the 31th Annual Conference of the Cognitive Science Society* (CogSci 2009), 274-279, Amsterdam, The Netherlands, 2009.

1. **M.I.Coco** (2009). The Statistical Challenge of Scan-path Analysis. In *2nd conference of Human System Interactions*, (HSI 2009) Catania, Italy, May, 2009

CONFERENCE
PRESENTATIONS

43. D'Innocenzo, G., Shoshina, E., Raposo, A. and **Coco, M.I.** Semantic relatedness differentially mediates overt attention when searching for pictures versus words: An online webcam-based eye tracking study. International Conference of Cognitive Neuroscience (ICON), 2022. **Poster**

42. Delhaye, E.,**Coco, M.I.**, Bahri, M.A., Raposo, A. Neural similarity between encoding and retrieval as a function of item typicality. International Conference of Cognitive Neuroscience (ICON), 2022. **Poster**

41. Galati, A., Avilar, C., Dale, R., and **Coco, M.I.**, Task Goals Modulate the Alignment of Eye-Movements and Linguistic Strategies. Annual meeting of the society for text and discourse (ST&D), 2021. **Talk**

40. D'Innocenzo, G., Mikhailova, A., and **Coco, M.I.**, Visual working memory for objects in scenes in younger and older adults: Insights from pupillometry presented at the Vision Science Society (VSS), virtual event, 2021. **Poster**

39. Galati, A., Avilar, C., Dale, R., and **Coco, M.I.**, Task Goals Constrain Interpersonal Coordination: Evidence from the Alignment of Eye-Movements presented at the Virtual Psychonomics (61st Annual Meeting), online, 2020. **Talk**

38. Cimminella, F., D'Innocenzo, G., Della Sala, S., Iavarone, A., Musella, C. and **Coco M. I.**, Object Semantics Can Be Accessed by Alzheimer's Disease Patients in Peripheral Vision presented at the Virtual Psychonomics (61st Annual Meeting), online, 2020. **Poster**

37. D'Innocenzo, G., Della Sala, S., and **Coco M. I.**, Detection of changes to objects in complex scenes - the role of object identity and location presented at OPAM (28th Annual Meeting), online, 2020. **Poster**

36. **Coco, M.I.**, Nuthmann, A. and Dimigen, O. Foveal vs. extrafoveal processing of object semantics during scene viewing: fixation-related N400 effects, presented at the European Conference on Eye-Movement (ECEM), Alicante, August, Spain, 2019. **Talk**.

35. Mikhailova, A., Raposo, A., Della Sala, S. and **Coco, M.I.**, The signature of semantic interference on eye-movement in a long-term visual memory task, presented at the European Conference on Eye-Movement (ECEM), Alicante, August, Spain, 2019. **Poster**.

34. **Coco, M.I.**, Nuthmann, A. and Dimigen, O. The fixation-related N400 during natural scene viewing: Investigating the foveal vs. extrafoveal processing of object semantics, presented at Vision Sciences Society, (VSS), St. Pete Beach, Florida, May, USA, 2019. **Poster**.

33. **Coco, M.I.**, Brady, T., Merendino, G., Zappala', G., Baddeley, A. and Della Sala, S., Forgetting in normal and pathological ageing as a function of semantic interference, presented at the Alzheimer's Association International Conference, Chicago, July, USA, 2018. **Poster**

32. **Coco, M.I.**, Maruta, C., Carvalho, M., Campos, C., Santos-Victor, J., Pavao Martins, I., and Della Sala S. Attentional responses while looking for changes: effect of pathological ageing presented at Vision Sciences Society, (VSS), St. Pete Beach, Florida, May, USA, 2018. **Poster**

31. **Coco, M.I.**, Nuthmann, A. and Dimigen, O. Fixation-related brain activity during processing of object-scene inconsistency, presented at the 6th Scientific Conference of the Federation of European Societies of Neuropsychology, (FESN), Maastricht, September, The Netherlands, 2017. **Talk**

30. **Coco, M.I.**, Calcagni, A., Lombardi, L. and Duran, N.D. Formation of memory traces for visual scenes: an action-dynamics approach. presented at the 20th Conference of the European Society for Cognitive Psychology (ESCoP), Postdam, September, Germany, 2017. **Talk**

29. **Coco, M.I.**, Nuthmann, A. and Della Sala, S. The role of visual attention and high-level object information on short-term visual working memory in a change detection task, presented at Vision Sciences Society, (VSS), St. Pete Beach, May, USA, 2017. **Poster**

28. Borges, M.T. and **Coco, M.I.** Access and Use of Contextual Expectations in Visual Search during Aging presented at the EuroAsianPacific Joint Conference in Cognitive Science (EAP CogSci 2015), Torino, Italy, 2015. **Talk**

27. Fernandes,E.G., Costa M.A. and **Coco, M.I.**. Bridging Mechanisms of Reading, Viewing and Working Memory during Attachment Resolution of Ambiguous Relative Clauses in Proceedings of the EuroAsianPacific Joint Conference in Cognitive Science (EAP CogSci 2015), Torino, Italy, 2015. **Talk**

26. **Coco, M.I.** and Dale R.Quantifying the Dynamics of Interpersonal Interaction: A Primer on Cross-Recurrence Quantification Analysis using R in Proceedings of the 37th Annual Conference of the Cognitive Science Society (CogSci 2015), Pasadena, USA, 2015. **Talk**

25. **Coco, M.I.**, Dale, R. and Keller, F. Performance in a Collaborative Search Task, presented at Society for Complex Systems in Cognitive Science, Pasadena, July, USA, 2015. **Talk**

24. **Coco, M.I.** and Dale, R. CRQA: Cross-Recurrence Quantification Analysis using R, presented at Society for Complex Systems in Cognitive Science, Pasadena, July, USA, 2015. **Talk**

23. Fernandes, E.G. **Coco, M.I.** and Branigan, H.P. Saturating the Anticipatory Mechanisms of Syntactic Priming during Situated Language Understanding, presented at Architectures and Mechanisms for Language Processing (AMLaP), Edinburgh, September, UK, 2014. **Poster**

22. **Coco, M.I.**, Dale, R. and Keller, F. The Role of Interactivity on Cognitive Alignment and Decision-Making during Dialogue. presented at CUNY, Columbus, March, SC, USA, 2013. **Talk**

21. **Coco, M.I.**, Dale, R. and Keller, F. Cognitive Dynamics of Alignment in Dialogue Games presented at Architectures and Mechanisms for Language Processing (AMLaP), Riva Del Garda, September, Italy, 2012 **Talk**

20. **Coco,M.I**, Garraffa M. and Branigan,H.P. Subject Relative Production in SLI Children during Syntactic Priming and Sentence Repetition presented at the 34rd Annual Conference of the Cognitive Science Society (CogSci 2012),Sapporo, Japan, 2012, **Talk**

19. Allison, B., Keller F. and **Coco,M.I.** A Bayesian Model of the Effect of Object Context on Visual Attention presented at the 34rd Annual Conference of the Cognitive Science Society (CogSci 2012), Sapporo, Japan, 2012.

18. Garraffa,M. **Coco M.I.**, Branigan,P.H.: Processing of Subject Relatives in SLI Children during Structural Priming and Sentence Repetition presented at CUNY, 2012, New-York, USA, March, 2012. **Poster**.

17. **Coco M.I.**, Malcolm,L.G. and Keller F.: Anticipation in Real-world Scenes: The Role of Visual Context and Visual Memory, presented at CUNY, 2012, New-York, USA, March, 2012 **Poster**

16. **Coco M.I.**, Clarke, A.D. and Keller F.: Modeling the Visual and Linguistic Importance of Objects, presented at the Christmas meeting of the Applied Vision Association (AVA), York, UK, December, 2011. **Poster**

15. **Coco M.I.** and Keller, F. Temporal Dynamics of Scan Patterns in Comprehension and Production, presented at the 33rd Annual Conference of the Cognitive Science Society (CogSci 2011), Boston, USA. **Poster**

14. Dziemianko M., Keller F. and **Coco,M.I.** Incremental Learning of Target Locations in Visual Search presented at the 33rd Annual Conference of the Cognitive Science Society (CogSci 2011), Boston, USA, 2011. **Talk**

13. **Coco M.I.**, Malcolm G.L. and Keller F.: The Interplay of Bottom-Up and Top-Down Mechanisms in Visual Guidance during Object Naming, presented at V&L Net Workshop on Vision and Language. Endorsed by EACL (the European Chapter of the Association for Computational Linguistics) and BMVA (the British Machine Vision Association), Brighton, UK, September, 2011 **Talk**

12. **Coco M.I.**, Malcolm G.L. and Keller F.: The Influence of Task Complexity on Visual Attention, presented at the 16th European Conference on Eye Movement (ECEM 2011), Marseille, France, August, 2011. **Poster**

11. **Coco M.I.** and Keller F.: Recurrence and Similarity in Scan Patterns during Comprehension and Production, presented at CUNY 2011, Stanford, USA, March, 2011. **Poster**

10. **Coco M.I.** and Keller F.: The Influence of Task on Visual Attention: A Comparison of Visual Search, Object Naming, and Scene Description, presented at CUNY 2011, Stanford, USA, March, 2011. **Poster**

9. **Coco M.I.** and Keller F.: Scan Pattern in Visual Scenes predict Sentence Production, presented at the 32th Annual Conference of the Cognitive Science Society (CogSci 2010), Oregon, USA, August, 2010. **Poster**

8. **Coco M.I.** and Keller F.: Sentence Production in Naturalistic Scenes with Referential Ambiguity, presented at the 32th Annual Conference of the Cognitive Science Society (CogSci 2010), Oregon, USA, August, 2010. **Talk**

7. **Coco M.I.** and Keller F.: Scan-Path in Visual Scenes predict Sentence Production, presented at the CUNY 2010, New York, USA, March, 2010. **Poster**

6. **Coco M.I.** and Keller F.: Visual Search during cued Language Production presented at AMLAP 2009, Barcelona, Spain, September, 2009. **Poster**

5. **Coco M.I.** and F.Keller.: The Impact of Visual Information on Reference Assignment in Sentence Production, presented at the 31th Annual Conference of the Cognitive Science Society (CogSci 2009), Amsterdam, The Netherlands, July, 2009. **Talk**

4. **Coco M.I.**: The statistical challenge of scan-path analysis, presented at IEEE Human System Interaction, 2009, Catania, Italy, May, 2009. **Talk**

3. **Coco M.I.** and Keller F.: The competition of linguistic and visual cues on ambiguity resolution presented at CUNY 2009, Davis, USA, March, 2009. **Poster**

2. **Coco M.I.** and Keller F.: Competition between visual and linguistic resources presented at AMLAP 2008, Cambridge, UK, September, 2009. **Poster**

1. **Coco M.I.** and Keller F.: Effects of intonational breaks on disambiguation of syntactically ambiguous structure presented at the Scottish Vision Group, Pitlochry, UK, March, 2008. **Talk**

TEACHING AND
ACADEMIC
CITIZENSHIP

Academic Staff: Lecturer, Labs, Seminars, Marker:

For the lectures, seminars, and labs: I have re-arranged or re-used pre-existing material, formatively assessed students during the course of the semester, followed their practical learning with exercises in SPSS and Excel (Research Methods only), and marked all their assignments throughout. I was nominated in 2018 for the Teaching Award at the University of Edinburgh.

Module leader at UEL:
- Researching with larger samples. Level 4 core module (200 students)
- Research skills in Cognitive Neuroscience. Level 5 optional module (20 students).

Practical leader, ad-hoc lecturer and marker at UEL:
- Cognitive Psychology and Psychobiology (Msc, Level 7)
- Employability and Developing your Graduate Pathway (BSc, Level 6)
- Research Method (MSc and BSc, Level 4,5, 7)
- Topics in Cognitive and Developmental Psychology (BSc, Level 5)

Invited Lecturer and Teaching Assistant:

For the invited lectures at undergraduate and post-graduate level: I have created the slides and delivered the lectures, and as teaching assistant helped the module leader to write (and mark) formative assessments delivered during the semester.

- Cognitive Neuroscience: Attention
- Cognitive Neuroscience: Memory
- Cognitive Psychology: Psycholinguistics Methods
- Informatics: Cognitive Science
- Informatics: Data Analysis
- Informatics: Formal and Natural Language Processing
- Informatics: Computational Foundation of Cognitive Science
- Informatics: Human Communication

Consultant: Workshops and Tutorials:

For the workshops and tutorials: I created slides, delivered lectures, provided exercises in R, and assessed students by asking them to replicate what learned on novel datasets.

In 2018, I was nominated for the Teaching Award at the University of Edinburgh.

- *Co-registration of Eye-movement and Electrophysiology*:
  - with Dr. Olaf Dimigen, University of Lisbon (c 30 participants).

- *Introduction to the R programming language*:
  - University of East London, London (c. 30 participants)

- *Cross-recurrence quantification analysis*:
  - with Dr. Alexander Demos, University of Gent, Belgium (c. 30 participants);
  - with Prof. Rick Dale, University of Edinburgh, UK (c. 30 participants);
  - with Prof. Rick Dale, at 37th Annual Conference of the Cognitive Science Society.
  - 35th Annual Conference of the Cognitive Science Society, Berlin, Germany, (symposium)

- *Theories and methods in eye-tracking research*:
  - with Dr. Tom Foulsham, University of Stuttgart, Germany,(c. 20 participants);
  - Department of Informatics, University of Catania, Catania, (c. 20 participants)
  - Centre for Molecular and Structural Biomedicine, Universidade de Algarve, Faro, (c. 30 participants);
  - Faculty of Letters, University of Lisbon, Lisboa, (c. 40 participants);

Academic Citizenship:

- PhD Deputy Programme Leader
- Internal Ethics Reviewer
- Post-graduate Admission Decision Maker
- In-vigilator
- Offer Holder Days (Community Engagement events); 16/03/2019; 06/04/2019; 23/11/2019; 29/02/2020

Postdocs:
- Dr. Emma Delhaye (September 2020 - ongoing) in Human Cognitive Neuroscience
- Dr. Giorgia D'Innocenzo (2019 - ongoing) in Human Cognitive Neuroscience

PhD:
- Anastasiia Mikhailova (Supervisor, 2019-ongoing) in Human Cognitive Neuroscience: *Long-term visual memory in healthy and pathological aging.*
- Nuno Duarte (External advisor, 2017-ongoing, at Instituto Superior Tecnico) in Computer Science: *Action anticipation: reading the intentions of humans and robots*
- Francesco Cimminella (Supervisor, 2016-2020) in Human Cognitive Neuroscience: *The role of bottom-up and top-down knowledge in short-term memory and attention during cognitive aging.*
- Murillo Pagnotta (External advisor, 2015-2018, at University of St. Andrews) in Biology: *Living and learning together: Integrating developmental systems theory, radical embodied cognitive science, and relational thinking in the study of social learning.*
- Eunice Gomes Fernandes (Supervisor, 2012-2015), in Cognitive Science, completed with distinction *Syntactic priming as a window into the representational and experiential basis of syntactic processing in comprehension*

Samples of Master and Research Assistants:
- Fiorenzo Colarusso (Erasmus trainee, 2020) in Cognitive Science
- Rita Domenica Chirico (Erasmus trainee, 2019) in Cognitive Science
- Lisa Eaton (Supervisor, 2019) in Cognitive Psychology
- Nancy Quilliam (Supervisor, 2019) in Cognitive Psychology
- Mingyue Wang (Supervisor, 2019) in Cognitive Psychology
- Mario Carvalho (Supervisor, 2017-2019) in Cognitive Science: *Shared mechanisms in situated language production: a cross-linguistic comparison between Portuguese and English*
- Angeliki Davourli (Co-supervisor, 2017) in Informatics: *Modeling Dialogue Alignment with Encoder-decoder Networks.*
- Lucy Olsen (Supervisor, 2016) in Human Cognitive Neuroscience: *A Sense of Belonging: Object Location and Congruency in Visual Working Memory*
- Cristiane da Anunciação Sousa (Co-supervisor, 2013-2015) in Cognitive Science: *Contextual effects on visual working memory in High Functioning Autism*
- Miguel Borgues (Supervisor, 2013-2015) in Psychology: *Adaptation of visual memory to contextual expectancy during aging: priming effects on attentional responses.*

GRANTS

Since 2002, I received over $\approx 500,000$ \$, , from national and institutional funding bodies, including undergraduate support funds, Erasmus programme and PhD scholarship.

- **POR Lisboa, FEDER: Grant, PI** Fundação para a Ciência e Tecnologia and European Union, Portugal (2018): info, PTDC/PSI-ESP/30958/2017 *In search of lost memory: Experimental Evidences and Computational Models of Visual Memory in Healthy and Neuro-Degenerate Ageing* ($\approx = 230,000$ €)
- **Post-Doctoral Fellowship** Fundação para a Ciência e Tecnologia, SFRH/BPD/109375/2015, Portugal (2015, 2nd time): *Tracking Visual Memory in Aging: Theories, Models and Diagnostic Tools* (acceptance rate: $\approx 23\%$, $\approx = 59,000$ €, **declined**)
- **Early Career Fellowship**; Leverhulme Trust UK (2014), ECF-014-205: *Formation maintenance and use of top-down knowledge in Alzheimer Dementia* (acceptance rate $\approx 10\%$, $\approx = 150,000$ £)
- Fundação Amedeu Diaz (2013): (PI, M.I. Coco; RA, M. Borges, **student support funding,** $\approx = 4,000$ €)
- **Post-Doctoral Fellowship**, Fundação para a Ciência e Tecnologia, SFRH/BPD/88374/2012, Portugal (2012): *Neural Correlates of Context Violation during Synchronous Visual and Linguistic Processing.* (acceptance rate $\approx 23\%$, $\approx = 108,000$ €)

- **Student volunteer**, Cognitive Science Society: CogSci 2010, Portland, USA ($\approx= 1,000$ \$)
- Student **Travel Award**, Human Sentence Processing, CUNY 2010, New York, USA ($\approx= 1,000$ \$)
- **PhD scholarship** jointly funded by the College of Science and Engineering, and the School of Informatics. University of Edinburgh. ($\approx= 55,000$ £)
- **Erasmus** 12-months scholarship ($\approx= 5000$ €).
- **Fondazione ENASARCO** from 2002 till 2007, excellent student support funding ($\approx= 20000$ €).

OUTREACH
ACTIVITIES AND
ENGAGEMENT
WITH MEDIA

- Faculti, Interview (09/02/2021).
- Big Bang Festival (Newham College, London), July 2019: Show-case psychology experiments and lecture about ideas in psychology to college students and their parents.
- London Science Museum, April 2016: Demonstration of an eye-tracking experiment (5 minutes) on scene perception. In collaboration with Silvia Primativo (UCL)
- BBC Mundo, Interview, public dissemination (29/07/2012)
- New Scientist, Interview, public dissemination (23/07/2012)

INVITED TALKS

- **Coco, M.I**. The processing of object semantics in extra-foveal vision. Evidence from healthy and neuro-pathological populations; University of Aberdeen (Ben Tatler), University of Birmingham (Ole Jenses), October, 2019, July, 2020, Aberdeen, Birmingham, UK.
- **Coco, M.I**. Aging: the role of contextual information for attention and memory. (Alan Baddeley), University of York, 8th of February, York, UK, 2017.
- **Coco, M.I**. Behavioral and neural signatures of stimulus and context expectancy during cross-modal verification. (George Malcolm), University of East Anglia, 6th of February, Norwich, UK, 2017.
- **Coco, M.I** The role of visual attention and high-level object information on short-term visual working memory in a change detection task. (Olaf Dimigen), Humboldtz University of Berlin, 11th of January, Berlin, Germany, 2017.
- **Coco, M.I** Top-down Mediation of Attentional and Memory Processes. Computational Linguistics and Phonetics, Saarland University (Vera Demberg), 1st of June, Saarbrucken, Germany, 2016.
- **Coco, M.I** Performance in Communicative Tasks: The Interaction of Feedback and Alignment. School of Biology, University of St. Andrews (Dhanraj Vishwanath), April, St. Andrews; UK, 2016.
- **Coco, M.I** Coordinative Dynamics of Cognitive Mechanisms during Cross-Modal Information Processing. Institute for Systems and Robotics, Instituto Superior Tecnico, (Jose Santos Victor), 10th of February and 3th of March, Lisbon; Portugal, 2015.
- **Coco, M.I** Performance in Communicative Tasks: The Interaction of Feedback and Alignment. Italian Institute of Technology (Alessandro D'Ausilio), December, Genova; Italy, 2014.
- **Coco, M.I** The Role of Interactivity on Cognitive Alignment and Decision Making during Dialogue. Institute for Biomedical Imaging and Life Sciences (Miguel Castel Branco), Insituto de Medicina Molecular (Federico Herrera), Champalimaud Center of Unknown (Rui Costa) and MIT, Brain and Cognitive Science, (Edward Gibson); April/June; Coimbra, Lisbon, Boston; Portugal, USA; 2013.
- **Coco M.I**: Coordination in the Human Brain. Presented at: Cognitive and Brain Unit (CBU-MRC) (Nikolaus Kriegeskorte), Cambridge (UK); June, 2012
- **Coco M.I**: Cross-Modal Mechanisms in Situated Language Processing. Champalimaud Center of Unknown (Zach Mainen), UCSD (Roger Levy), UCM (Rick Dale), UC Berkeley (Jack Gallant), Stanford (Michael C. Frank), Harvard (Jesse Snedeker); in Lisbon (Portugal), San Diego, Merced, Berkeley, Palo Alto, Boston (USA); March/April, 2012
- **Coco M.I**: Scan Pattern Dynamics in Comprehension and Production Symposium on Scanpath Representation and Comparison. 16th European Conference on Eye Movement (ECEM 2011), Marseille, France, August, 2011

I regularly serve as reviewer and editor for international peer-reviewed journals and international conferences.

Editor:

- Associate Editor: Cognitive Processing (Springer), curating the section on Computational Cognitive Science (September 2020 - ongoing)

Journals:

- Applied Psycholinguistics; BMC Medical Research Methodology; Behavior Research Method; Chaos, Solitons and Fractals; Cognition; Cognitive Processing; Cognitive Research: Principles and Implications; Cognitive Science; Discourse Processes; Environment International; Experimental Brain Research; Infant Behavior and Development; Frontiers in Language Sciences; Language and Cognition; Language, Cognition and Neuroscience; Neuroimage; Multivariate Behavioral Research; Plos ONE; Psychology and Aging; Quarterly Journal of Experimental Psychology; Psychonomic Bulletin and Review; Psychological Research; TopiCS in Cognitive Science; Scientific Reports; Journal of Experimental Psychology: Learning, Memory and Cognition; Journal of Experimental Psychology: Human Perception and Performance; Journal of Memory and Language; Journal of Vision; Journal of Visualised Experiments; IEEE Transactions on Cognitive and Developmental Systems; Trends in Cognitive Sciences; Waves in Random and Complex Media.

Conferences:

- Architecture and Mechanisms of Language Processing: 2012, Annual Conference of the Cognitive Science Society: 2010/2011/2014/2015/2016/2017/2018/2019; Euro-Asian-Pacific CogSci Conference: 2015; International Conference on Cognitive Modeling: 2013; Cognitive Modeling and Computational Linguistics (Association of Computational Linguistics): 2015; Language and Vision (Association of Computational Linguistics): 2015; Computational Psycholinguistics track for Empirical Methods in Natural Language Processing: 2015; International Conference on Computational Linguistics: 2016; Cognitive Modeling and Psycholinguistics for Association of Computational Linguistics: 2016; Computational Psycholinguistics (Association of Computational Linguistics): 2017 Computational Psycholinguistics (COLING): 2018

Memberships:

- Fellow of the Psychonomics Society
- Cognitive Science Society, British Neuropsychological Society, Vision Science Society

- `crqanlp`(0.1): Dynamic Natural Language processing with Recurrence Quantification Analysis (`R-Package`); Dale R, and **Coco M.I.**
- `crqa`(2.0.1): Cross Recurrence Quantification Analysis for Categorical and Continuous Time-Series (`R-Package`); **Coco M.I.**, Mønster D., Leonardi G., Dale R. and Wallot S., with contributions of Dixon J. and Nash, J.
- `mousetrack`(1.0.0): Mouse-Tracking Measures from Trajectory Data (`R-Package`); **Coco M.I.** and Duran N. D. with contributions of Dale R., O'Hora D. and Spivey, M.

Referees

- Prof. Frank Keller (Uni. Edinburgh): keller@inf.ed.ac.uk
- Prof. Sergio Della Sala (Uni. Edinburgh): sergio@staffmail.ed.ac.uk
- Prof. Holly P. Branigan (Uni. Edinburgh): holly@staffmail.ed.ac.uk
- Prof. Volker Thoma (Uni. East London): v.thoma@uel.ac.uk
- Prof. Rick Dale (Uni. California, Los Angeles, USA): rdale@ucla.edu
- Dr. Karl-Magnus Petersson (Uni. Algarve): kmpetersson@ualg.pt

Collaborators

- Prof. Antje Nuthmann (Uni. of Kiel): nuthmann@psychologie.uni-kiel.de
- Prof. Jose-Santos Victor (Instituto Superior Tecnico): jasv@isr.tecnico.ulisboa.pt
- Prof. Isabel Pavao Martins (Uni. Lisboa): ipavaomartins@gmail.com
- Dr. Olaf Dimigen (Humboldt Univeristy at Berlin): olaf.dimigen@hu-berlin.de
- Dr. Ana Luisa Raposo (Uni. Lisbon): alraposo@psicologia.ulisboa.pt
- Dr. Nicholas D. Duran (Uni. Arizona): nicholas.duran@asu.edu
- Dr. George L. Malcolm (Uni. of East Anglia, UK): g.malcolm@uea.ac.uk
- Dr. Timothy Brady (Uni. California, San Diego, USA): timbrady@ucsd.edu
- Dr. Maria Armanda Costa (Uni. Lisbon): armandacosta@letras.ulisboa.pt