CURRICULUM VITAE

June 2021

Francisco Barceló Galindo

Personal Data

Date of birth: 1965
Ed. Beatriu de Pinós #12 (office)
University of the Balearic Islands
Ctra. Valldemossa km 7.5
07122 Palma, Mallorca (Spain)

Nationality: Spanish
(0034) 971-172750 (office)
barcelo.paco@gmail.com (email1)
f.barcelo@uib.es (email2)
Web: www.mcst.es

Researcher ID: B-3629-2011
ORCID: 0000-0001-6012-7116

Scopus ID: 7006624654

Degrees and Education

1998, 2000	Post-doctoral research training in the laboratory of Dr. Robert T. Knight, Helen Wills Neuroscience Institute, U. C. Berkeley, USA
1989-1993	PhD. in Psychology, University of Southampton, England, UK. Dissertation advisor: Professor Anthony Gale.
1983-1988	BSc. 1st Honours in Psychology, University of Murcia, Spain.

Appointments

2010-present	Full Professor of Neuropsychology (tenured; "*Catedrático de Universidad*"), Department of Psychology, University of the Balearic Islands, Spain.
2002-2009	Associate Professor (tenured; "*Profesor Titular de Universidad*") of Neuropsychology, Department of Psychology, University of the Balearic Islands, Spain.
2000-2002	Associate Professor of Biological Psychology, Department of Psychology, University of the Balearic Islands, Spain.
1995-2000	Assistant Professor of Biological Psychology, Department of Psychobiology, Complutense University of Madrid, Spain.
1994-1995	Post-doctoral Research Fellow, Brain Mapping Unit, Pluridisciplinar Institute, Complutense University of Madrid, Spain.
1991-1992	Teaching Assistant, University of Southampton, England.

Awards and Fellowships

2004	*Special Research Action: Cognitive Neuroscience and Aging* (Spanish Ministry of Science, BSO2002-12318-E)
2004	Direcció General d'Universitat, Govern de les Illes Balears
1998, 2000	Research Fellowship for post-doctoral education at UC Berkeley, *Jaime del Amo Foundation*, Complutense University, Spain.
1991	Award for post-graduate education from the *Committee of Advanced Studies*, University of Southampton, England.
1989	*British Council* award for post-graduate education in the United Kingdom

Extramural Research Support
Only as Principal Investigator and funding over 20.000 €

2020-2024	Spanish Ministry of Science, Innovation and Universities (ref. PID2019-106045GB-I00). Title: *Quantifying contextual information for cognitive control: modeling of behavioral and electrophysiological evidence*. Total amount: 108.900 €
2014-2017	Spanish Ministry of Economy, Innovation and Competitiveness (ref. PSI2013-44760-R). Title: *Novel assessment of disexecutive deficits in patients with frontal lobe lesions*. Total amount: 83.490 €
2010-2014	Fundació La Marató de TV3 (ref. 112710). Title: *Novel neuropsychological assessment of frontal lobe lesions based on dynamic neuroplasticity and compensation*. Total amount: 199.065 €
2012-2014	Research Council, Government of the Balearic Islands (PCTIB-2005GC2-08). Title: *Clinical neuropsychology*. Total amount: 24.000 €
2011-2013	Spanish Ministry of Science and Technology (ref. PSI2010-17419). Title: *Probabilistic models of cognitive control*. Total amount: 125.840 €
2009-2011	Spanish Ministry of Science and Technology (ref. PTA2008-1339-P). Title: *Support for technical research assistant*. Total amount: 54.000 €
2009-2011	Research Council, Government of Balearic Islands. Title: *Support for technical research assistant*. Total amount: 33.600 €
2009-2011	Spanish Ministry of Science and Technology (ref. PSI2009-07854-E/PSIC). Title: *XI International Conference on Cognitive Neuroscience*. Total amount: 28.000 €
2007-2010	Spanish Ministry of Science and Technology (ref. SEJ2007-61728). Title: *Cognitive flexibility and aging: a computational model of prefrontal function*. Total amount: 157.905 €
2006-2008	Research Council, Government of the Balearic Islands (PRDIB-2005GC1-3). Title: *Clinical neuropsychology*. Total amount: 24.000 €

2004-2006 Research Council, Government of the Balearic Islands (PRIB-2004-10136). Title: *Assessment of mild cognitive impairment in normal and pathological aging*. Total amount: 25.000 €

2003-2006 Spanish Ministry of Science and Technology (ref. BSO2003-03885). *Aging and cognitive flexibility: neuropsychological and electrophysiological parameters in healthy population.* Total amount: 25.000 €

1999-2000 Research Council, Government of the Community of Madrid (08.5/0012/98). Title: *Assessment of attentional deficits in frontal lobe patients using event-related potentials*. Total amount: 30.000 €

Organization of International Conferences:
President of the organizing committee (OC); member of the scientific committee (SC):

2017 (SC) *International Conference on Cognitive Neuroscience* (ICON XIII), Amsterdam, The Netherlands (August 5-9, 2017).

2017 (SC) *57th Meeting of the Society for Psychophysiological Research (SPR)*, Vienna, Austria (October 11-15, 2017).

2014 (SC) *International Conference on Cognitive Neuroscience* (ICON XII), Brisbane, Australia (July 27-31, 2014).

2013 (OC; SC) *Workshop on Developmental Cognitive Neuroscience: A diffusion model analysis of cognitive flexibility in children*, Palma, Mallorca (July 4-5, 2013).

2011 (OC; SC) *International Conference on Cognitive Neuroscience* (ICON XI), Palma de Mallorca (Sept. 25-29, 2011). Attendance: this was the biggest meeting on Cognitive Neuroscience ever organized in Mallorca, with over 800 scientists attending the meeting). Keynote speakers: Dr. Joaquin Fuster, UC Los Angeles; Dr. Kia Nobre, Oxford University; Dr. Robert T. Knight, UC Berkeley; Dr. Markus Ullsperger, Radboud University; Dr. Pascal Fries, Frankfurt; Dr. Karl Friston, University College London; Dr. Carles Escera, University of Barcelona.

2010 (SC) *16th Annual Meeting of the Organization for the Human Brain Mapping*, Barcelona, Spain (June 6-10, 2010).

2010 (SC) *50th Meeting of the Society for Psychophysiological Research (SPR)*, Portland, Oregon (September 29-October 3, 2010).

2008 (SC) *International Conference on Cognitive Neuroscience* (ICON X), Bodrum, Turkey (September 1-5, 2008).

2005 (OC; SC) International Workshop '*Imaging the Mind: Tutorial course in Cognitive Neuroscience*', Palma de Mallorca, July 11-12, 2005). Attendance: Over 50 cognitive neuroscientists worldwide. Keynote speakers: Dr. Robert T. Knight, U.C. Berkeley; Dr. Mark D'Esposito, U.C. Berkeley; Dr. Fernando Maestú, Complutense university; Dr. Beatriz Calvo-Merino, University College London.

2004 (OS; SC) International Workshop '*Neuroscience of Cognitive Aging*', Palma de Mallorca (October 13-15, 2004). Attendance: over 200 cognitive neuroscientists

worldwide. Keynote speakers: Dr. Joaquin Fuster, U.C. Los Angeles; Dr. Donald T. Stuss, Rotman Research Institute; Dr. Patrick Rabbitt, Manchester University; Dr. Lawrence Whalley, Aberdeen University; Dr. Barbara Sahakian, Cambridge University.

Participation in International Conferences

Invited talks at scientific meetings & symposia:
(* Indicates symposium organizer)

Oct., 2017* 57th Annual Meeting of the Society for Psychophysiological Research (SPR, Vienna, Austria; 11-15 Oct 2017). Title: *New computational approaches to P300 research in humans.*

Sep., 2017 20th Conference of the European Society for Cognitive Psychology (ESCoP, Postdam, Germany; 3-6 Sep 2017). Title: *A multidisciplinary approach to task switching: an integrative view from information theory and cognitive brain potentials.*

Aug., 2017* 13th International Conference on Cognitive Neuroscience (ICON, Amsterdam, The Netherlands; 5-8 Aug 2017). Title: *An Information theory model of the P300 in cognitive control.*

Sep., 2016* 18th World Congress of the International Organization for Psychophysiology (La Habana, Cuba; 1-4 Sept 2016). Title: *New 21st century approaches to P300 research in humans.*

Apr., 2015 Neuronus IBRO & IRUN Neuroscience Forum, , Krakow, Poland; 17-19 April 2015). Title: *Putting P300 in context: Its role in the updating of sensory versus sensorimotor representations during cognitive task-set switching.*

Apr., 2013 International Conference on Aging & Cognition (A&C 2013), Dortmund, Germany; 25-27 April 2013. Title: *Combined effects of aging and cognitive control on brain oscillations in a task-switching protocol.*

Apr., 2010 International Conference on Aging & Cognition, Dortmund, Germany; 14-16 Oct 2010. Title: *Additive effects of age and cognitive control during the preparatory and execution stages of a task-switching paradigm*

Sep., 2008 First BRAINGLOT workshop (Barcelona, Spain; 27-28 Nov 2008). Title: *An information theoretical approach to language switching: Evidence from cognitive brain potentials.*

May, 2008 X International Conference on Cognitive Neuroscience (ICON 10) (Bodrum, Turkey; Sep 1-5 2008). Title: *An information theoretical approach to task-switching: Evidence from cognitive brain potentials in humans.*

May, 2007 Annual Meeting of the Cognitive Neuroscience Society (New York, USA; May 2007). Title: *An information theoretic approach to context coding and entropy control in the human prefrontal cortex.*

Jul., 2005 — 9th European Congress of Psychology (Granada, Spain; 3-8 Jul 2005). Title: *Think differently: how do brains find out new answers for old problems?*

Jan., 2005 — Carmel 2005 - The P300 at Forty (Florida, USA; 4-9 Jan 2005). *New insights into the P300 potential from task switching paradigms.*

Sep., 2003* — 5th Congress of the Federation of European Psychophysiology Societies (FEPS5; Bourdeaux, France; 4-9 Sep 2003). *Physiology of executive attention.*

Nov., 2002 — International Workshop on Cognitive Neuroscience of Individual Differences (Bremen, Germany 6-7 Nov., 2002). *A new ERP paradigm for studying individual differences in the executive control of attention.*

Nov., 1993 — 3rd Meeting of the British Society for Clinical Neurophysiology (Nottingham, England 6-7 Sep., 1993). *A psychophysiological inquiry into the nature of the Sokolovian Orienting Response comparator model.*

Invited talks at Universities & Research Centers:

Jul., 2017 — Hannover Medical School (Germany). Title: *Quantifying cognitive workload in healthy controls and frontal lobe patients.*

Mar., 2015 — Centre de Recherche en Neurociences (Lyon, France). Title: *Fast neural dynamics of a frontoparietal 'multiple demand' network for cognitive control.*

Apr., 2014 — MRC Cognition and Brain Sciences Unit (Cambridge, UK). Title: *Fast dynamics of a frontoparietal "multiple demand" system for cognitive control.*

May, 2014 — Alzheimer Clinic, Scinawa, Polonia. Title: *Fast dynamics of a frontoparietal "multiple demand" system for cognitive control in cognitively impaired adults and neurological patients.*

Jul., 2014 — University of Newcastle (Newcastle, Australia; symposium on cognitive control). Title: *Fast dynamics of a frontoparietal "multiple demand" system for cognitive control in brain damaged patients.*

May, 2012 — Centre de Recerca Matemàtica (Barcelona, Spain). Title: *A Bayesian model of human sensorimotor control during task switching.*

May, 2009 — University of Amsterdam, Cognitive Science Center Amsterdam (The Netherlands). Title: *Uncertainty, cognitive control and the brain.*

Mar., 2007 — University of Plymouth, School of Psychology (Plymouth, UK). Title: *An information theoretic approach to context coding and cognitive control in the human prefrontal cortex.*

Dec., 2006 — Inserm U742, Département des Etudes Cognitives, Ecole Normale Supérieure (Paris, France). Title: *Task switching and novelty processing activate a common neural network for cognitive control.*

Mar., 2006 Max Planck Institute for Human Cognitive & Brain Sciences (Leipzig, Germany). Title: *Task switching and novelty processing activate a common neural network for cognitive control.*

May, 2004 Caledonian University, Department of Psychology (Glasgow, UK). Title: *Let's think differently: how do our brains handle novelty?*

Extramural Peer Review and National Committees

2012-2015 Chair of the Psychology Panel, Spanish Research Agency (former Agencia Nacional de Evaluación y Prospectiva, ANEP) (http://www.aei.gob.es/).
2003-2021 Ad Hoc Reviewer, Spanish Research Agency (former Agencia Nacional de Evaluación y Prospectiva, ANEP) (http://www.aei.gob.es/)
2007-2014 Ad Hoc Reviewer, European Research Executive Agency, Brussels
2015-2020 Vice-Chair, ECOSOC panel, European Research Executive Agency, Brussels
2018-2021 Ad Hoc Reviewer, European Science Foundation (www.esf.org)
2004-2009 Ad Hoc Reviewer, Agencia de Calidad Universitaria de las Islas Baleares
2009 Ad Hoc Reviewer, School of Psychology, University of Concordia, Montreal, Canada
2007 Ad Hoc Reviewer, School of Medicine, University of Toronto, Canada
2007 Ad Hoc Reviewer, Ministry of Science & Technology, Israel

Editorial Boards (member)

2017-2020 *Psychophysiology*
2012-2016 *Brain Research*
2015-2021 *Frontiers in Psychology*
2007-2021 *Frontiers in Human Neuroscience (Associate Editor between 2008-2012)*

Journal Reviewer (1995 - present)

Biological Psychology, BMC Neuroscience, Brain & Cognition, Brain Research, Brain Structure and Function, Brain Topography, Cerebral Cortex, Clinical Neurophysiology, Cognition, Cognitive and Affective Behavioral Neuroscience, Cognitive Brain Research, Cortex, European Journal of Neuroscience, Experimental Ageing Research, Experimental Brain Research, Frontiers in Human Neuroscience, Frontiers in Psychology, Human Brain Mapping, Journal of Clinical and Experimental Neuropsychology, Journal of Cognitive Neuroscience, Journal of Neuroscience, Journal of Child Psychology and Psychiatry, Journal of Psychophysiology, NeuroImage, Neuropsychologia, Neuropsychology, Neuroscience Letters, Neuroscience and Biobehavioral Reviews, Physiology & Behaviour, PLoS Computational Biology, Psychophysiology, Quarterly J. Experimental Psychology, Seminars in the Neurosciences, Scandinavian Journal of Psychology, Scientific Reports.

Society Membership

Society for Cognitive Neuroscience (2004-2021)
Society for Psychophysiological Research (since 1998)
Sociedad Española de Psicofisiología (Secretary from 1999-2005)

Research Interests

Computational neuropsychology, cognitive neuroscience, electroencephalography, event-related potentials, magnetoencephalography

Publications

A. Refereed Journals.

Citation Count > 3120 (WoS); H index = 26 (WoS); Average citations/item = 56.8
Papers with over > 50 citations (*), > 100 citations (**), > 200 citations (***)

1. Barceló, F. (2020). A predictive processing account of card sorting: Fast proactive and reactive frontoparietal cortical dynamics during inference and learning of perceptual categories. *Journal of Cognitive Neuroscience*, pp. 1–21. https://doi.org/10.1162/jocn_a_01662

2. Brydges, C.R., Barceló, F., Nguyen, A.T., Fox, A. M. (2020) Fast fronto-parietal cortical dynamics of conflict detection and context updating in a flanker task. *Cognitive Neurodynamics* 14, 795–814. https://doi.org/10.1007/s11571-020-09628-z.

3. López, M.E., Pusil, S., Pereda, E., Maestú, F., Barceló, F. (2019) Dynamic low frequency EEG phase synchronization patterns during proactive control of task switching. *NeuroImage*, 186, 70-82. https://doi.org/10.1016/j.neuroimage.2018.10.068.

4. Barceló, F. & Cooper, P.S. (2018). Quantifying Contextual Information For Cognitive Control. *Frontiers in Psychology*, Sep 10;9:1693. https://doi.org/10.3389/fpsyg.2018.01693.

5. Bridges, C.R., Barceló, F. (2018). Functional dissociation of latency-variable, stimulus- and response-locked target P3 subcomponents in task-switching. *Frontiers in Human Neuroscience, 12, 60.* https://doi.org/10.3389/fnhum.2018.00060

6. Díaz-Blancat, G., García-Prieto, J., Maestú, F., Barceló, F. (2018). Fast neural dynamics of proactive cognitive control in a task-switching analogue of the Wisconsin Card Sorting Test. *Brain Topography*, http://rdcu.be/ygZa. https://doi.org/10.1007/s10548-017-0607-6

7. Barceló F, Cooper PS. (2018). An information theory account of late frontoparietal ERP positivities in cognitive control. *Psychophysiology*, 55: e12814. https://doi.org/10.1111/psyp.12814

8. Enriquez-Geppert S, Barceló F. (2018). Multisubject decomposition of event-related positivities in cognitive control: Tackling age-related changes in reactive control. *Brain Topography*, *31*, 17-34. https://doi.org/10.1007/s10548-016-0512-4

9. Cooper PS, Darriba Á, Karayanidis F, Barceló F. (2016). Contextually sensitive power changes across multiple frequency bands underpin cognitive control. *Neuroimage 132*, 499-511. https://doi.org/10.1016/j.neuroimage.2016.03.010

10. Weeda, W.D., van der Molen, M.W., Barceló, F., & Huizinga, M. (2014). A diffusion model analysis of developmental changes in children's task switching. *Journal of Experimental Child Psychology 126*, 178–197. https://doi.org/10.1016/j.jecp.2014.05.001

11. Prada, L., Barceló, F., Escera, C., & Herrmann, C.S. (2014). EEG delta oscillations index inhibitory control of contextual novelty to both irrelevant distracters and relevant task-switch cues. *Psychophysiology 51*, 658-672. https://doi.org/10.1111/psyp.12210

12. *Hernández, M., Martin, C.D., Barceló, F., & Costa, A. (2013). Where is the bilingual advantage in task-switching? *Journal of Language and Memory 69*, 257-276. https://doi.org/10.1016/j.jml.2013.06.004

13. Rodríguez-Pujadas, A.; Ventura-Campos, N.; Román, P.; Martin, C.; Barceló, F.; Costa, A.; Ávila, C. (2013) Bilinguals use language-control brain areas more than monolinguals to perform nonlinguistic switching tasks. *PLoS ONE 8*(9): e73028. https://doi.org/10.1371/journal.pone.0073028

14. Finke, M., Escera, C., & Barceló, F. (2012). The effects of foreknowledge and task-set shifting as mirrored in cue- and targetlocked event-related potentials. *PLoS ONE 7* (11):e49486. https://doi.org/10.1371/journal.pone.0049486

15. Adrover-Roig, D., Sesé, A., Barceló, F., & Palmer, A. (2012). A latent variable approach to executive control in healthy ageing. *Brain & Cognition 78*, 284-299.

16. *Parmentier, F.B., Elsley, J.V., Andres, P., & Barceló, F. (2011). Why are auditory novels distracting? Contrasting the roles of novelty, violation of expectation and stimulus change. *Cognition 119*, 374-380.

17. Martin, C.D., Barceló, F., Hernandez, M., & Costa, A. (2011). The time course of the asymmetrical "local" switch cost: Evidence from event-related potentials. *Biological Psychology 86*, 210-218.

18. Garcia-Garcia, M., Barceló, F., Clemente, I.C., & Escera, C. (2011). COMT and ANKK1 gene–gene interaction modulates contextual updating of mental representations. *Neuroimage 56*, 1641-1647. https://doi.org/10.1016/j.neuroimage.2011.02.053

19. Finke, M., Barceló, F., Garolera, M., Cortinas, M., Garrido, G., Pajares, M., & Escera, C. (2011). Impaired preparatory re-mapping of stimulus-response associations and rule-implementation in schizophrenic patients--the role for differences in early processing. *Biological Psychology 87*, 358-365.

20. *Voytek, B., Davis, M., Yago, E., Barceló, F., Vogel, E.K., & Knight, R.T. (2010). Dynamic neuroplasticity after human prefrontal cortex damage. *Neuron 68*, 401-408. https://doi.org/10.1016/j.neuron.2010.09.018

21. Garcia-Garcia, M., Barceló, F., Clemente, I.C., & Escera, C. (2010). The role of DAT1 gene on the rapid detection of task novelty. *Neuropsychologia 48*, 4136-4141.

22. Garcia-Garcia, M., Barceló, F., Clemente, I.C., & Escera, C. (2010). The role of the Dopamine Transporter DAT1 genotype on the neural correlates of cognitive flexibility. *European Journal of Neuroscience 31*, 754–760. https://doi.org/10.1111/j.1460-9568.2010.07102.x

23. *Adrover-Roig, D., Barceló, F. (2010). Individual differences in aging and cognitive control modulate the neural indexes of context updating and maintenance during task switching. *Cortex 46*, 434-450. https://doi.org/10.1016/j.cortex.2009.09.012

24. ***Nyhus, E., & Barceló, F. (2009). The Wisconsin Card Sorting Test and the cognitive assessment of prefrontal executive functions: a critical update. *Brain and Cognition 71*, 437-451. https://doi.org/10.1016/j.bandc.2009.03.005

25. Pérez-Velázquez JL, Barceló F, Hunga Y, Leshchenkoa Y, Nenadovica V, Belkas J, Raghavana V, Briand J, Garcia Dominguez L (2009). Decreased brain coordinated activity in autism spectrum disorders during executive tasks: Reduced long-range synchronization in the fronto-parietal networks. *Int. J. Psychophysiology 73*, 341-349.

26. Barceló, F. (2009). The emotional consequences of being distracted. *Front. Neurosci*., 3, 10: 6–7. https://doi.org/10.3389/neuro.01.010.2009

27. ***Sánchez-Cubillo, I., Periánez, J.A., Adrover-Roig, D., Rodriguez-Sanchez, J.M., Rios-Lago, M., Tirapu, J., Barceló, F. (2009). Construct validity of the Trail Making Test: role of task-switching, working memory, inhibition/interference control and visuo-motor abilities. *Journal of the International Neuropsychological Society 15*(3), 438-50. https://doi.org/10.1017/S1355617709090626

28. Periáñez, J.A., Barceló F. (2009). Updating sensory versus task representations during task-switching: Insights from cognitive brain potentials in humans. *Neuropsychologia 47*, 1160-1172. https://doi.org/10.1016/j.neuropsychologia.2009.01.014

29. *Barceló, F., Periáñez, J.A., & Nyhus, E. (2008). An informational theoretical approach to task-switching: Evidence from cognitive brain potentials in humans. *Frontiers in Human Neuroscience 1*: 13. https://doi.org/10.3389/neuro.09.013.2007

30. Barceló, F., and Knight, R. T. (2007). Theoretical sequelae of a chronic neglect and unawareness of prefrontotectal pathways in the human brain. *Behavioral and Brain Sciences 30*, 83-85.

31. Barceló, F. & Knight, R.T. (2007). An information theoretic approach to contextual processing in the human brain: Evidence from prefrontal lesions. *Cerebral Cortex 17*: i51-i60. https://doi.org/10.1093/cercor/bhm111

32. **Periáñez, J. A., Rios-Lago, M., Rodríguez-Sánchez, J. M., Adrover-Roig, D., Sanchez-Cubillo, I., Crespo-Facorro, B., Quemada, J. I., and Barceló, F. (2007). Trail Making Test in traumatic brain injury, schizophrenia, and normal ageing: Sample comparisons and normative data. *Archives of Clinical Neuropsychology 22*, 433-447. https://doi.org/10.1016/j.acn.2007.01.022

33. **Barceló, F., Escera, C., Corral, M. J., and Periáñez, J. A. (2006). Task switching and novelty processing activate a common neural network for cognitive control. *Journal of Cognitive Neuroscience 18*, 1734-1748. https://doi.org/10.1162/jocn.2006.18.10.1734

34. *Periáñez, J. A., Maestú, F., Barceló, F., Fernández, F., Amo, C., and Ortiz Alonso, T. (2004). Spatiotemporal brain dynamics during preparatory set shifting: MEG evidence. *Neuroimage 21*, 687-695. https://doi.org/10.1016/j.neuroimage.2003.10.008

35. Yago, E., Duarte, A., Wong, T., Barceló, F., and Knight, R. T. (2004). Temporal kinetics of prefrontal modulation of the extrastriate cortex during visual attention. *Cognitive, Affective, and Behavioral Neuroscience 4*, 609-617.

36. *Barceló, F. (2003). The Madrid card sorting test (MCST): a task switching paradigm to study executive attention with event-related potentials. *Brain Res Protocols 11*, 27-37. https://doi.org/10.1016/s1385-299x(03)00013-8

37. Barceló, F., Periáñez, J. A., and Gomila, A. (2003). Tidying up sensory stores with supraordinate representations. *Behavioral and Brain Sciences 26*, 730-731.

38. **Barceló, F., and Knight, R. T. (2002). Both random and perseverative errors underlie WCST deficits in prefrontal patients. *Neuropsychologia 40*, 349-356. https://doi.org/10.1016/s0028-3932(01)00110-5

39. **Barceló, F., Periáñez, J. A., and Knight, R. T. (2002). Think differently: a brain orienting response to task novelty. *NeuroReport 13*, 1887-1892. https://doi.org/10.1097/00001756-200210280-00011

40. Barceló, F. (2001). Does the Wisconsin Card Sorting Test measure prefrontal function? *Spanish Journal of Psychology 4*, 79-100.

41. **Barceló, F., Muñoz-Céspedes, J. M., Pozo, M. A., and Rubia, F. J. (2000). Attentional set shifting modulates the target P3b response in the Wisconsin card sorting test. *Neuropsychologia 38*, 1342-1355. https://doi.org/10.1016/s0028-3932(00)00046-4

42. ***Barceló, F., Suwazono, S., and Knight, R. T. (2000). Prefrontal modulation of visual processing in humans. *Nature Neuroscience 3*, 399-403. https://doi.org/10.1038/73975

43. *Barceló, F. (1999). Electrophysiological evidence of two different types of error in the Wisconsin card sorting test. *NeuroReport 10*, 1299-1303. https://doi.org/10.1097/00001756-199904260-00027

44. Barceló, F., and Rubia, F. J. (1998). Non-frontal P3b-like activity evoked by the Wisconsin Card Sorting Test. *NeuroReport 9*, 747-751.

45. Barceló, F., and Gale, A. (1997). Electrophysiological measures of cognition in biological psychiatry: Some cautionary notes. *Int. J. Neuroscience 92*, 219-240.

46. Barceló, F., Martín-Loeches, M., and Rubia, F. J. (1997). Event-related potentials during memorization of spatial locations in the auditory and visual modalities. *Electroencephalography and Clinical Neurophysiology 103*, 257-267.

47. Martín-Loeches, M., Barceló, F., and Rubia, F. J. (1997). Sources and topography of supramodal effects of spatial attention in ERP. *Brain Topography 10*, 1-14.

48. *Barceló, F., Sanz, M., Molina, V., and Rubia, F. J. (1997). The Wisconsin Card Sorting Test and the assessment of frontal function: A validation study with event-related potentials. *Neuropsychologia 35*, 399-408. https://doi.org/10.1016/S0028-3932(96)00096-6

49. Barceló, F., Gale, A., and Hall, M. (1995). Multichannel EEG power reflects information processing and attention during visual orienting, and predicts performance in a subsequent recognition task. *Journal of Psychophysiology 9*, 32-44.

50. Barceló, F., Hall, M., and Gale, A. (1995). A psychophysiological inquiry into the nature of the Sokolovian orienting response comparator model: skin conductance and EEG data. *Biological Psychology 41*, 147-166.

B. Edited Journal Issues.

1. Barceló, F., Bestmann, S., Yu, A. J. (Editors) (2011). Cognitive control, uncertainty and the brain. Research topic in *Frontiers in Human Neuroscience*. Impact: 12 articles, 37 authors; >110.000 views and >20.000 article downloads since its publication. https://www.frontiersin.org/research-topics/67/cognitive-control-uncertainty-and-the-brain

C. Invited Book Chapters.

1. Andrés, P.; Funes, M.J.; Barceló, F. (2016). Neurociencia cognitiva de las funciones ejecutivas: una visión actual. In: M. T. Bajo, L. J. Fuentes, J. Lupiáñez, y M.R. Rueda (Coords.), *Mente y cerebro: De la psicología experimental a la neurociencia cognitiva*. Alianza Universidad: Madrid. pp. 1 - 15. (España): Alianza Editorial. ISBN 978-84-9104-233-4

2. Díaz, G.; García-Prieto, J.; Barceló, F. (2015). Estudio de conectividad en las funciones ejecutivas y control cognitivo. In: Maestú, F., Pereda, E. & del Pozo, F. (Eds.): *Conectividad Funcional y Anatómica en el Cerebro Humano. Análisis de señales y aplicaciones en ciencias de la salud*. pp. 149 - 170. (España): Elsevier, 2015. ISBN 978-84-9022-525-7.

3. Periáñez, J.A., Ríos, M., Barceló, F., Madrid, E., Ruz, M. (2008). Electroencefalografía y potenciales evocados. In *Neuroimagen: Técnicas y Procesos Cognitivos*. Maestú, F., Ríos, M., y Cabestrero, R. (eds.) (Madrid, Elsevier-Masson), pp. 281-316. ISBN: 978-84458-1776-6.

4. Nowak, R., Escera, C., Corral, M.J., Barceló, F. (2008). Electroencefalografía y potenciales evocados. In *Neuroimagen: Técnicas y Procesos Cognitivos*. Maestú, F., Ríos, M., y Cabestrero, R. (eds.) (Madrid, Elsevier-Masson), pp. 155-172. ISBN: 978-84458-1776-6.

5. Muñoz-Céspedes, J.M., Barceló, F., Pozo, M.A. & Rubia, F. Evaluación neuropsicológica de las disfunciones atencionales en traumatismos craneoencefálicos. In J. Botella & V. Ponsoda (Eds.), *La Atención: Un enfoque pluridisciplinar*. Valencia: Promolibro, 1998. Pp. 361-372.

6. Barceló, F., Periañez, J. A., & Knight, R. T. (2003). A new ERP paradigm for studying individual differences in the executive control of attention. In *The Cognitive Neuroscience of Individual Differences*, I. Reinvang, M. W. Greenlee, and M. Herrmann, eds. (Oldenburg, bis-Publishers), pp. 47-62.

7. Blay, N., Barceló, F., Montoya, P. & Yagüez, L. (2003). Age-related differences in executive control: Introducing the Canavan Conditional Associative Learning Task (C-CALT). In *The Cognitive Neuroscience of Individual Differences*, I. Reinvang, M. W. Greenlee, and M. Herrmann, eds. (Oldenburg, bis-Publishers), pp. 267-278.

8. Menéndez de la Prida, L; Barceló, F.; Pozo, M.A.; Rubia, F.J. (1999). Local pattern of synchronization in extraestriate networks during visual attention. In *Lecture Notes in Computer Science*, 1607, G. Goos, J. Hartmanis, J. van Leeuwen, eds. (Heidelberg, Springer Verlag), pp. 273- 278. ISBN: 3-540-66068-2

D. Doctoral Dissertation.

Barceló, F. (1993). *Psychophysiology of Visual Attention: Electroencephalographic and Electrodermal Orienting to Stimulus and Task Parameters*. Unpublished doctoral dissertation. University of Southampton, England. Dissertation advisor: Professor Anthony Gale.

Teaching

2015-2021 Department of Psychology, University of the Balearic Islands
Undergraduate courses (enrolments):
Human Neuropsychology (85)

2000-2021 Department of Psychology, University of the Balearic Islands
Undergraduate courses (enrolments):
Human Neuropsychology (85)
Clinical Neuropsychology (40)
Graduate courses (enrolments):
Neuropsychology of Frontal Lobe Function (2)

1995-2000 Department of Psychobiology, Complutense University of Madrid
Undergraduate courses (enrolments):
Introduction to Neuroscience (150)
Physiological Psychology (150)
Graduate courses (enrolments):
Cognitive Neuropsychology (10)
Cognitive Neuroscience (10)

Students Advised

Graduate Students

2012-2018 Gema Díaz-Blancat, PhD in Psychology, Universidad Complutense de Madrid, Spain (defense, September 2018). Now: Clinical Neuropsychologist, Madrid.

2014-2018 Sandra A. Pusil, PhD in Biomedical Engineering, Politecnic University of Madrid, Spain (co-supervised by Ernesto Pereda). Now: Postdoctoral fellow, Politecnic University of Madrid, Spain.

2010-2013 Mareike Finke, Ph.D. in Psychology, University of Barcelona, Spain (co-supervised by Carles Escera). Now: Postdoctoral fellow, Hannover Medical School, Hannover, Germany.

2005-2009 Daniel Adrover-Roig, Ph.D. in Psychology, University of the Balearic Islands. Now: Associate Professor (tenured; "Titular"), University of the Balearic Islands.

2002-2005 José Antonio Periáñez, Ph.D. in Psychology, Complutense University of Madrid. Now: Associate Professor, Complutense University of Madrid.

Postdoctoral Fellows

2016-2017 Maria Eugenia López García (Ph.D. Complutense University, Spain). Juan de la Cierva – Training Fellowship, sponsored by Francisco Barceló. Now: Associate Professor (tenured; "Titular"). School of Psychology, Complutense University of Madrid.

2015-2016 Stefanie Enrique-Geppert (Ph.D. WWU Münster University, Germany). Sponsored by Francisco Barceló (Fundació La Marató TV3; MINECO). Now: Assistant Professor, Department of Clinical and Developmental Neuropsychology, University of Groningen, The Netherlands.

2015-2016 Christopher R. Brydges (Ph.D. University of Western Australia). Sponsored by Francisco Barceló (Fundació La Marató TV3; MINECO). Now: Postdoctoral Fellow at the Department of Human Development and Family Studies, Colorado State University, USA.