

SALVA ARDID, PHD.






RESEARCH POSITIONS

- 2020 ● **GENT DISTINGUISHED RESEARCH GROUP LEADER**
Universitat Politècnica de València  València, Spain
- 2020 | 2019 ● **ASSOCIATE RESEARCH SCIENTIST**
Yale University  New Haven CT, USA
- Lab: I Levy
- 2018 | 2008 ● **POSTDOCTORAL RESEARCH SCIENTIST**
Boston University | York University | Yale University  USA & Canada
- Lab: N Kopell (BU) T Womelsdorf (YorkU) XJ Wang (Yale)
 - Period: 2018-2014 2014-2011 2011-2008
- 2008 | 2003 ● **PHD CANDIDATE SCIENTIST**
Neuroscience Institute UMH-CSIC  Alacant, Spain
- Lab: A Compte



EDUCATION

- 2008 ● **PHD IN COMPUTATIONAL NEUROSCIENCE WITH HONORS**
Neuroscience Institute, UMH-CSIC  Alacant, Spain
- Thesis: Neural Mechanisms of Selective Attention in a Microcircuit Model of Interacting Cortical Areas
 - PhD Advisor: A Compte
- 2003 ● **MENG IN ELECTRONIC ENGINEERING WITH HONORS**
Universitat de València  València, Spain
- 1999 ● **BSc + MSc IN PHYSICS**
Universitat de València  València, Spain








MAIN PUBLICATIONS

- 2020 ● **PREFRONTAL OSCILLATIONS MODULATE THE PROPAGATION OF NEURONAL ACTIVITY REQUIRED FOR WORKING MEMORY**
Neurobiology of learning and memory
- J Sherfey, S Ardid, EK Miller, ME Hasselmo, NJ Kopell
 - Citations: 2
- 2019 ● **FEATURE-SPECIFIC PREDICTION ERRORS AND SURPRISE ACROSS MACAQUE FRONTO-STRIATAL CIRCUITS**
Nature communications
- M Oemisch, S Westendorff, M Azimi, SA Hassani, S Ardid, P Tiesinga, ...
 - Citations: 19



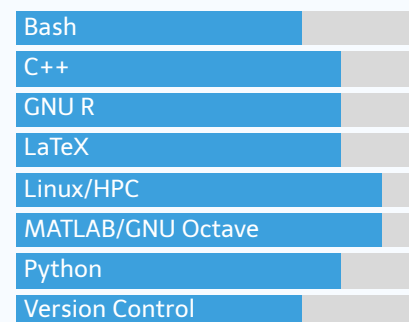
GENT DISTINGUISHED RESEARCH GROUP LEADER

Universitat Politècnica de València






 sardid@upv.es
 Scholar
 GitHub
 Bitbucket
 Twitter



COMPUTING PROFICIENCY



OPEN SOURCE CONTRIBUTIONS

-  **waveformAnalysis**
Code to identify broad vs. narrow neurons based on action potential waveforms
-  **clusteringAnalysis**
Code for functional cell classification based on waveform and firing properties
-  **dynaSim**
Toolbox for modeling dynamical systems
-  **fig2svg**
Code to export Matlab/Octave figures to SVG format
-  **SierraBreezeEnhanced**
Enhanced KDE Breeze Window Decorations



LANGUAGES

Catalan: native
English: fluent
Spanish: native

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Last updated on 2020-09-13.

- 2019 ● **BIASED COMPETITION IN THE ABSENCE OF INPUT BIAS REVEALED THROUGH CORTICOSTRIATAL COMPUTATION**
 Proceedings of the National Academy of Sciences
- S Ardid, JS Sherfey, MM McCarthy, J Hass, BR Pittman-Polletta, N Kopell
 - Citations: 8
- 2018 ● **DYNASIM: A MATLAB TOOLBOX FOR NEURAL MODELING AND SIMULATION**
 Frontiers in Neuroinformatics
- JS Sherfey, AE Soplata, S Ardid, EA Roberts, DA Stanley, ...
 - Citations: 19
- 2018 ● **FLEXIBLE RESONANCE IN PREFRONTAL NETWORKS WITH STRONG FEEDBACK INHIBITION**
 PLoS computational biology
- JS Sherfey, S Ardid, J Hass, ME Hasselmo, NJ Kopell
 - Citations: 12
- 2017 ● **A COMPUTATIONAL PSYCHIATRY APPROACH IDENTIFIES HOW ALPHA-2A NORADRENERGIC AGONIST GUANFACINE AFFECTS FEATURE-BASED REINFORCEMENT LEARNING IN THE MACAQUE**
 Scientific reports
- SA Hassani, M Oemisch, M Balcarras, S Westendorff, S Ardid, ...
 - Citations: 14
- 2016 ● **ATTENTIONAL SELECTION CAN BE PREDICTED BY REINFORCEMENT LEARNING OF TASK-RELEVANT STIMULUS FEATURES WEIGHTED BY VALUE-INDEPENDENT STICKINESS**
 Journal of cognitive neuroscience
- M Balcarras, S Ardid, D Kaping, S Everling, T Womelsdorf
 - Citations: 14
- 2016 ● **NEUROSWARM: A METHODOLOGY TO EXPLORE THE CONSTRAINTS THAT FUNCTION IMPOSES ON SIMULATION PARAMETERS IN LARGE-SCALE NETWORKS OF BIOLOGICAL NEURONS**
 Uncertainty in biology
- D Gomez-Cabrero, S Ardid, M Cano-Colino, J Tegnér, A Compte
 - Citations: 5
- 2015 ● **MAPPING OF FUNCTIONALLY CHARACTERIZED CELL CLASSES ONTO CANONICAL CIRCUIT OPERATIONS IN PRIMATE PREFRONTAL CORTEX**
 Journal of Neuroscience
- S Ardid, M Vinck, D Kaping, S Marquez, S Everling, T Womelsdorf
 - Citations: 49
- 2015 ● **ANTERIOR CINGULATE CORTEX CELLS IDENTIFY PROCESS-SPECIFIC ERRORS OF ATTENTIONAL CONTROL PRIOR TO TRANSIENT PREFRONTAL-CINGULATE INHIBITION**
 Cerebral Cortex
- C Shen, S Ardid, D Kaping, S Westendorff, S Everling, T Womelsdorf
 - Citations: 42
- 2014 ● **BURST FIRING SYNCHRONIZES PREFRONTAL AND ANTERIOR CINGULATE CORTEX DURING ATTENTIONAL CONTROL**
 Current Biology
- T Womelsdorf, S Ardid, S Everling, TA Valiante
 - Citations: 72

- 2014 ● **"ADAPTIVE LEARNING" AS A MECHANISTIC CANDIDATE FOR REACHING OPTIMAL TASK-SET REPRESENTATIONS FLEXIBLY**
BMC Neuroscience
 - S Ardid, M Balcarras, T Womelsdorf
 - Citations: 1
- 2013 ● **A TWEAKING PRINCIPLE FOR EXECUTIVE CONTROL: NEURONAL CIRCUIT MECHANISM FOR RULE-BASED TASK SWITCHING AND CONFLICT RESOLUTION**
Journal of Neuroscience
 - S Ardid, XJ Wang
 - Citations: 31
- 2013 ● **SUBNETWORK SELECTION IN DEEP CORTICAL LAYERS IS MEDIATED BY BETA-OSCILLATION DEPENDENT FIRING**
Frontiers in systems neuroscience
 - T Womelsdorf, S Westendorff, S Ardid
 - Citations: 3
- 2011 ● **WHAT CAN TRACKING FLUCTUATIONS IN DOZENS OF SENSORY NEURONS TELL ABOUT SELECTIVE ATTENTION?**
Frontiers in systems neuroscience
 - JD Murray, S Ardid
 - Citations: 2
- 2010 ● **RECONCILING COHERENT OSCILLATION WITH MODULATION OF IRREGULAR SPIKING ACTIVITY IN SELECTIVE ATTENTION: GAMMA-RANGE SYNCHRONIZATION BETWEEN SENSORY AND EXECUTIVE CORTICAL AREAS**
The Journal of Neuroscience
 - S Ardid, XJ Wang, D Gomez-Cabrero, A Compte
 - Citations: 55
- 2007 ● **AN INTEGRATED MICROCIRCUIT MODEL OF ATTENTIONAL PROCESSING IN THE NEOCORTEX**
Journal of Neuroscience
 - S Ardid, XJ Wang, A Compte
 - Citations: 108

G SCHOLAR PROFILE

- **458 CITATIONS**
As of 2020-09-13
 - h-index: 11
 - i10-index: 11

MAIN TALKS & SEMINARS



- 2020 ● **BIOLOGICAL SCIENCES TRAINING PROGRAM IN PSYCHIATRY**
Yale University 📍 New Haven CT, USA
- 2019 ● **MATH BIOLOGY SEMINAR SERIES**
Brandeis University 📍 Waltham MA, USA
- 2019 ● **SCHOOL OF PSYCHOLOGY**
University of Birmingham 📍 Birmingham, UK

2018	<ul style="list-style-type: none"> SOUTHWESTERN MEDICAL CENTER University of Texas 	<ul style="list-style-type: none"> 📍 Dallas TX, USA
2017	<ul style="list-style-type: none"> DEPARTMENT OF PSYCHOLOGY Vanderbilt University 	<ul style="list-style-type: none"> 📍 Nashville TN, USA
2017	<ul style="list-style-type: none"> ICAHN SCHOOL OF MEDICINE Mount Sinai 	<ul style="list-style-type: none"> 📍 New York City NY, USA
2017	<ul style="list-style-type: none"> DEPARTMENT OF NEUROBIOLOGY & BEHAVIOR Stony Brook University 	<ul style="list-style-type: none"> 📍 Stony Brook NY, USA
2016	<ul style="list-style-type: none"> 5TH BARCCSYN MEETING Barcelona Computational, Cognitive, and Systems Neuroscience Community 	<ul style="list-style-type: none"> 📍 Barcelona, Spain
2016	<ul style="list-style-type: none"> RHYTHMIC DYNAMICS AND COGNITION SYMPOSIUM Cognitive Rhythms Collaborative 	<ul style="list-style-type: none"> 📍 Boston MA, USA
2011	<ul style="list-style-type: none"> IDIBAPS Hospital Clinic 	<ul style="list-style-type: none"> 📍 Barcelona, Spain
2010	<ul style="list-style-type: none"> ROBARTS RESEARCH INSTITUTE Western University 	<ul style="list-style-type: none"> 📍 London ON, Canada
2009	<ul style="list-style-type: none"> KAVLI WORKSHOP ON DECISION MAKING Yale University 	<ul style="list-style-type: none"> 📍 New Haven CT, USA
2007	<ul style="list-style-type: none"> 12TH SENC CONGRESS Sociedad Española de Neurociencia 	<ul style="list-style-type: none"> 📍 València, Spain
2007	<ul style="list-style-type: none"> SEMINARS IN BIOPHYSICS/BIOMATHEMATICS Universitat Politècnica de Catalunya 	<ul style="list-style-type: none"> 📍 Barcelona, Spain
2006	<ul style="list-style-type: none"> 15TH ANNUAL COMPUTATIONAL NEUROSCIENCE MEETING CNS* Featured Talk 	<ul style="list-style-type: none"> 📍 Edinburgh, UK



TEACHING, MENTORING & UNIVERSITY SERVICES

2019 2018	<ul style="list-style-type: none"> MASTER ADVISOR Deep Learning Applied to Particle Physics, M Ortiz • Master in Artificial Intelligence • Universidad Internacional de Valencia (VIU) 	<ul style="list-style-type: none"> 📍 València, Spain
2019 2018	<ul style="list-style-type: none"> MEMBER OF THE MASTER THESIS EVALUATION COMMITTEE Number of Thesis Defenses: 6 • Master in Artificial Intelligence • Universidad Internacional de Valencia (VIU) 	<ul style="list-style-type: none"> 📍 València, Spain
2015	<ul style="list-style-type: none"> LINEAR ALGEBRA Boston University 	<ul style="list-style-type: none"> 📍 Boston MA, USA

2014	<ul style="list-style-type: none"> GUEST LECTURE: DYNAMICAL SYSTEMS MODELS OF SELECTIVE ATTENTION Massachusetts Institute of Technology • Course: Understanding Visual Attention through Computation, J Tsotsos • Department of Brain and Cognitive Sciences 	📍 Boston MA, USA
2003 2001	<ul style="list-style-type: none"> HIGH SCHOOL TEACHER Department of Education 	📍 Catalonia, Spain
	 ORGANIZATION OF EVENTS	
2012	<ul style="list-style-type: none"> UNDERSTANDING HETEROGENEOUS CORTICAL ACTIVITY: THE QUEST FOR STRUCTURE AND RANDOMNESS COSYNE Workshop • S Ardid, A Bernacchia, T Engel 	📍 Snowbird Resort UT, USA
	 AWARDS, GRANTS & FELLOWSHIPS	
2024 2020	<ul style="list-style-type: none"> DISTINGUISHED RESEARCHER SUPPORT PROGRAMME GenT Plan Award • PI • Amount: 381,500 EUR 	📍 València, Spain
2018 2017	<ul style="list-style-type: none"> ARMY RESEARCH OFFICE GRANT Boston University • co-PI • Amount: 120,000 USD 	📍 Boston MA, USA
2011 2008	<ul style="list-style-type: none"> SWARTZ FELLOWSHIP IN COMPUTATIONAL AND SYSTEMS NEUROSCIENCE Yale University 	📍 New Haven CT, USA
2008 2004	<ul style="list-style-type: none"> VOLKSWAGEN FOUNDATION FELLOWSHIP Neuroscience Institute UMH-CSIC 	📍 Alacant, Spain
2007	<ul style="list-style-type: none"> BARCELONA SUPERCOMPUTING CENTER FELLOWSHIP Barcelona Supercomputing Center 	📍 Barcelona, Spain
2004 2003	<ul style="list-style-type: none"> UNIVERSIDAD MIGUEL HERNANDEZ FELLOWSHIP Neuroscience Institute UMH-CSIC 	📍 Alacant, Spain