

PERSONAL DATA

Name: Vassilis Raos
Date & Place of Birth: December 11th, 1966, Larissa
Citizenship: Hellenic
Present Family Status: Married, one daughter.
Present Academic Positions:

- Professor of Physiology
School of Medicine, University of Crete
- Director, Lab of Movement Physiology
- Director, Interdisciplinary Graduate Programme in the “BRAIN and MIND” Sciences
- Collaborating Researcher,
Group of Computational Neuroscience, IACM, FORTH.

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EDUCATION

- 6/1989-12/1994: Graduate student, Department of Basic Medical Sciences, School of Medicine, University of Crete, (12/1994 Doctorate degree).
- 9/1984-5/1989: Undergraduate student, Faculty of Biology, University of Patras (5/1989 Bachelor's in biology).
- 14/10-20/11/2020: EUPRIM-Net & German Primate Center, Laboratory Animal Science Course on Non-Human Primates (FELASA accredited Course 057/17_48_2020)

Foreign Languages: English, Italian

PROFESSIONAL HISTORY

- Professor of Physiology, University of Crete, (Φ.Ε.Κ. 2338/01-10-2021 τ.Γ).
- Associate Professor of Physiology, University of Crete, (Φ.Ε.Κ. 519/08-06-2017 τ. Γ).
- Assistant Professor of Physiology (tenured), University of Crete, (Φ.Ε.Κ. 998/14-12-2009 τ. Γ).
- Assistant Professor of Physiology, University of Crete, (Φ.Ε.Κ. 201/17-08-2005 τ. ΝΠΔΔ).
- Full Faculty Member, Interdisciplinary Graduate Programme in the “BRAIN and MIND” Sciences, 2003-
- Collaborating Researcher, Institute of Applied and Computational Mathematics, FORTH, 2002-
- Postdoctoral Research Fellow, University of Crete, 1999-2005
- Postdoctoral Research Fellow, University of Parma, 1996-1999
- Research Fellow, University of Verona, 1991

CURRENT RESEARCH INTERESTS

- To disentangle the role of the dorsal and ventral premotor cortex in the control of hand grasping actions. In particular, to assess the intra- and inter-areal dynamics and examine the causality in the premotor grasping network.
- To reveal the way the brain processes observed actions and the mechanisms whereby we assign meaning to the actions of other subjects, by investigating the underlying neural dynamics at the micro, meso, and macroscopic scales.
- To develop decoders for the real-time control of a dexterous hand able to manipulate objects in a versatile fashion using neural signals recorded from the forelimb representations of the dorsal and ventral premotor cortical areas.

RESEARCH EXPERIENCE

- *Lab of Movement Physiology (Φ.E.K. 3869/02-12-2016 τ. Β), Department of Basic Sciences School of Medicine, University of Crete (August 2005-)*
Neuronal responses to action execution and action observation in frontal cortical areas of the macaque brain.
- *Department of Basic Sciences, School of Medicine, University of Crete (October 1999-July 2005)*
 - Functional mapping of the neural circuits of the macaque brain involved in the observation and execution of hand grasping movements under visual and somatosensory guidance (in collaboration with H.E. Savaki)
 - Revealing the representation of visuo-oculomotor space in the macaque cerebral cortex (in collaboration with H.E. Savaki & A.K. Moschovakis)
 - Representation of the two-dimensional space in the macaque brain (in collaboration with A.K. Moschovakis)
- *Dipartimento di Neuroscienze, Sezione di Fisiologia Umana, Facoltà di Medicina e Chirurgia, Università di Parma, Italia, (October 1996-September 1999).*
 - Motor and visuomotor properties of neurons in the ventral premotor cortex (area F5) of the macaque monkey (supervised by G. Rizzolatti).
 - Functional organisation of the dorsal premotor cortex (area F2) of the macaque monkey (supervised by M. Matelli).
 - Reversible inactivation of different subregions of area F2 in the macaque brain (supervised by V. Gallese & L. Fogassi).

March 1995-September 1996: Military service

- *Laboratory of Functional Brain Imaging, School of Medicine, University of Crete, (June 1989-February 1995).*
 - Doctoral thesis: "Functional relations and anatomical connections of the centrolateral and reticular thalamic nuclei. In vivo study in the rat, by means of the quantitative autoradiographic [¹⁴C] 2-deoxyglucose method and tract-tracing techniques" (supervised by H.E. Savaki).
 - Study of metabolic activity changes in cortical and subcortical structures of the monkey brain during the performance of a visually guided, one direction, arm reaching movement (supervised by H.E. Savaki).
- *Dipartimento di Scienze Morfologico-Biomediche, Sezione di Anatomia e Istologia, Facoltà di Medicina e Chirurgia, Università di Verona, Italia, (March-May 1991).*
Projections of the thalamic reticular nucleus in the rat (supervised by M. Bentivoglio).
- *Laboratory of Physiology, Faculty of Medicine, University of Patras, (October 1988-April 1989).*
Quantification of autoradiographic images produced by the in vitro receptor sites binding technique (supervised by A. Mitsacos).
- *Laboratory of Human and Animal Physiology, Faculty of Biology, University of Patras, (September 1987-July 1988).*
Study of the in vitro neuronal release of the neurotransmitters glutamic acid and glycine and the neuromodulator taurine from mice cerebellum slices (supervised by P. Giombres).

RESEARCH FUNDING

- SARF UoC, 12 months (6/2023-5/2024), 2.500 €, Principal Investigator
- H2020-MSCA-ITN-2020 (Marie Skłodowska-Curie Innovative Training Networks), In2PrimateBrains, 48 months (3/2021-2/2025), 199.817€ (total 4.005.134€), Co-Investigator.
- (MIS) 5048512, E4BM103, Research Grant for the support of researchers with emphasis on young scientists, 15 months (02/2020-05/2021), 46.000 €, Principal Investigator
- John S. Latsis Public Benefit Foundation, 12 months (1/2015-12/2015), 12.000€, Principal Investigator
- MESI, GSRT EXCELLENCE II, 16 months (3/2014-7/2015), 200.000 €, Co-Investigator
- METR, GSRT EXCELLENCE II, 16 months (3/2014-7/2015), 236.000 €, Co-Investigator
- OBSERVENEMO, GSRT 14TUR, Bilateral S&T Cooperation Program, 24 months (1/2014-12/2015), 30.000 €, Principal Investigator

- 3767, SARF UoC, 12 months (1/2013-12/2013), 2.500 €, Principal Investigator
- 3704, SARF UoC, 24 months (11/2012-10/2014), 10.000 €, Principal Investigator
- LS5 (575), GSRT/Supporting postdoctoral researchers, 36 months (2/2012-2/2015), 150.000 €, Supervisor, (Postdoctoral Researcher: Marina Kilintari).
- 03EΔ803, GSRT, 36 months (2/2006-1/2009), 117.000 €, Co-Investigator
- IST-027574, EU-FP6, 36 months (2/2006-1/2009), 335.000 €, Co-Investigator
- 01EΔ111, GSRT, 36 months (8/2002-8/2005), 122.000 €, Co-Investigator
- QLRT-2001-00746, EU-FP5, 36 months (9/2002-8/2005), 193.000 €, Co-Investigator
- 97EA-35, GSRT, 32 months (5/1999-12/2001), 100.000 €, Principal Investigator

FELLOWSHIPS

- Human Capital and Mobility Fellow (02/1994-02/1995)
- European Science Foundation Fellow (10/1996-4/1998)
- BIOMED Fellow (05/1998-04/1999)

AWARDS

- Hellenic Society for Neuroscience award for the attendance of the “European Winter Conference on Brain Research” (03/1993).
- Italian Society for Neuroscience award for the attendance of the “Forum of European Neuroscience” (6/1998).

MEMBERSHIP IN SCIENTIFIC SOCIETIES

- Hellenic Society for Neuroscience
- International Brain Research Organisation
- Federation of European Neuroscience Societies
- Society for Neuroscience
- International Neuropsychology Symposium (elected member)

Ad hoc REVIEWER

- **JOURNALS:** Nature Communications, Journal of Neuroscience, Cerebral Cortex, NeuroImage, Human Brain Mapping, Journal of Neurophysiology, Neuropsychologia, Brain Research Bulletin, Frontiers, Scientific Reports, PLOS One, European Journal of Neuroscience, Transactions on Neural Systems & Rehabilitation Engineering, Neuroscience & Biobehavioral Reviews
- **FUNDING AGENCIES:** General Secretariat of Research and Technology, Italian Ministry of Education, University & Research, University of Padova, University of Bologna, University of Patras.

INVITED SPEAKER

- May 2024, Seminar Series, Faculty of Medicine, University of Thessaly
- April 2022, 1st Meeting of the Hellenic Society of Physiology
- March 2021, Joint Seminar Series in Translational and Clinical Medicine: UoC Medical School – IMBB-FORTH – UCRC
- December 2017, 27th Meeting of the Hellenic Society for Neurosciences
- May 2017, 43rd Panhellenic Medical Congress
- June 2015, International Neuropsychological Symposium, Collioure, France
- October 2009, Symposium: “Sharing in Nature and Culture”, University of Crete
- October 2009, Dipartimento di Psicologia, Università di Padova
- October 2009, Society for Neuroscience Meeting, Chicago, USA
- November 2007, 21st Meeting of the Hellenic Society for Neurosciences
- April 2006, Dipartimento di Fisiologia Umana e Generale, Università di Bologna.
- May 2003, Dipartimento di Neuroscienze, Istituto di Fisiologia Umana, Università di Parma.
- October 2000, 15th Meeting of the Hellenic Society for Neurosciences

TEACHING**Undergraduate level**

- Coordinator of the undergraduate course Physiology C (2006-)
- Lectures in undergraduate courses Physiology A (Nervous System/Motor and premotor cerebral cortices, 1999-2008), Physiology B (Gastrointestinal system, 1999-), Physiology C (Endocrine glands, 1999-2008; Blood, 1999-; Circulation, 2009-; Heart, 2022-) to first- and second-year medical students.
- Physiology lab practicals to second year medical students, (1989-1991).

Graduate level

- Lectures in graduate courses "Introduction to Neurosciences" and "Cerebral cortex and cognitive functions" to first- and second-year graduate students of the graduate programme "Brain and Mind" (2003-).

SUPERVISION/MENTORING**Graduate level**

- Supervision of students in 6-month lab rotations.
[Graduate Programme "Brain and Mind": Papadourakis V, Kechayas V, Kryoneriti D, Petratos D, Kouroupaki K, Sakkelaridi V, Paraskevopoulou M, Chatzimichail K, Paschalidis C, Aliprantis S. Faculty of Biology: Tiblalex M. Erasmus: Pappas N, Squadroni S, Bencivenni G, Putzu G.]
- Examiner, MSc thesis, Graduate Programme "Brain and Mind"
[Papadopoulos S (2020), Chatzimichail K (2022), Antoniadou A (2023)]
- Examiner, MSc exams, Graduate Programme "Brain and Mind"
[Aliprantis (2023), Markantonis V (2023), Kyvelea M (2022), Papadopoulos S (2020), Tsakonitis G (2020), Potsi I (2019), Bourou D (2019), Gouidis F (2019), Skourti E (2018), Sakkelaridi V (2016), Kouroupaki K (2011), Spyropoulos G (2011), Stefanou S (2011), Papadourakis V (2008), Neromyliotis E (2008), Papoutsis A (2008), Kastellakis G (2008), Georgiadis V (2007), Stamos A (2007), Theodorou I (2006)]

Doctoral level

- Supervisor, PhD Thesis
Papadourakis V: "Functional properties of cerebral cortical neurons in and around the central sulcus of the monkey brain during execution and observation of forelimb movements"
<http://hdl.handle.net/10442/hedi/43255>, School of Medicine, 2018
Stamos A: "Neurophysiological study of the perception of biological motion"
<http://hdl.handle.net/10442/hedi/24331>, School of Medicine, 2011
- Advisor, PhD Thesis
[Sifaki A (School of Medicine, in progress), Caytan E (School of Medicine, in progress), Tzanou A (School of Medicine, in progress), Theodorou I (School of Medicine, in progress), Paneri S (School of Medicine, in progress), Agapaki O (School of Medicine, 2021), Kilintari M (Graduate Programme "Brain and Mind", 2010), Neromyliotis E (School of Medicine, 2017)]
- Examiner, PhD Thesis
[Kastellakis G (Faculty of Biology, 2016), Hourdakos E (Faculty of Computer Science, 2012), Tsirka V (School of Medicine, 2011), Pachou E (School of Medicine, 2009), Evangeliou MN (School of Medicine, 2008), Bakola S (School of Medicine, 2007), Hadjidimitrakis K (School of Medicine, 2007)]

Post-Doctoral level

- Tzamali E &
- Papadourakis V: Grasping with the hand and the mind: Is the neural activity induced by action observation adequate for the development of a prehensile brain-machine interface? (EΔBM103, February 2020 – May 2021).
- Kilintari M: Attribution of action to the correct agent (IDENTITY, 2012-2015).

ADMINISTRATIVE DUTIES

- Member, MODIP UoC (2024-2029)
- Coordinator, Committee for Safety and Protection, UoC
- Coordinator, Committee of Spatial Planning, Infrastructure & Safety, School of Medicine (2024-2025).
- Member of the Academic Quality Committee, School of Medicine (2024-2025).
- Director, Interdisciplinary Graduate Programme in the “BRAIN and MIND” Sciences (2022-2024, 2024-2026).
- Coordinator of the Experimental Protocols Evaluation Committee, School of Medicine & Directorate of Veterinary Services, Region of Crete (2014-2019, 2019-2024).
- Member of the Animal Welfare Body, School of Medicine & Directorate of Veterinary Services, Region of Crete (2018-2019, 2019-2024).
- Elected member of the Governing Council of the Hellenic Society for Neuroscience (Treasurer, 2019-2021; Secretary, 2022-2023; President, 2024-2025)
- Alternate member of the Research Ethics Committee of FORTH (9/2021-9/2024)
- Alternate member of the Research and Management Committee of the Special Account for Research Funds of University of Crete (2021-2024).
- Director of the Department of Basic Sciences of the School of Medicine (2019/20, 2020/21).
- Ex officio member of the Dean’s Council, School of Medicine (2019/20, 2020/21)
- Member of the General Assembly of the School of Medicine (2009/10, 2015/16, 2016/17, 2017/18, 2018/19, 2019/20, 2020/21)
- Member of the Animal Facility Committee, School of Medicine (2013/14, 2014/15, 2015/16, 2016/17, 2017/18, 2018/19, 2019/20, 2020/21, 2021/22, 2022/23).
- Member of the Internal Evaluation Group, School of Medicine (2019/20, 2020/21).
- Member of the Admissions Committee, Interdisciplinary Graduate Programme in the “BRAIN and MIND” Sciences (2018, 2020).
- Member of the Special Interdepartmental Committee, Interdisciplinary Graduate Programme in the “BRAIN and MIND” Sciences (2018/20, 2020/22).
- Member of the Committee for the reform of the graduate studies curriculum of the School of Medicine (2019/20).
- Academics and Scientific Ethics Committee, School of Medicine (2019/20).
- Member of the Research and Infrastructure Committee, School of Medicine (2019/20).
- Member of the Library Committee, School of Medicine (2014/15, 2015/16, 2016/17, 2017/18, 2018/19).
- Member of the Committee for the receipt of goods for the Library of the University of Crete (2014/15).
- Member of the Committee for the control of the performance of the contract for the Ration and Housing of Students, University of Crete (2014/15).

PUBLICATIONS

Doctoral thesis

“Functional relations and anatomical connections of the centrolateral and reticular thalamic nuclei. Application of the 14C-deoxyglucose quantitative autoradiographic technique, as well as of tract tracing methods in the rat, in vivo” (<http://hdl.handle.net/10442/hedi/5939>, University of Crete, 1994).

Peer reviewed publications

Original articles

- A1. Raos V, Savaki HE. 2021 Functional Imaging of the Cerebellum during Action Execution and Observation. **Cereb Cortex Commun.** tgab041, DOI: [10.1093/texcom/tgab041](https://doi.org/10.1093/texcom/tgab041)
- A2. Papadourakis V, Raos V. 2019. Neurons in the macaque dorsal premotor cortex respond to execution and observation of actions. **Cereb Cortex** 29(10):4223-4237, DOI: [10.1093/cercor/bhy304](https://doi.org/10.1093/cercor/bhy304).
- A3. Papadourakis V, Raos V. 2017. Evidence for the representation of movement kinematics in the discharge of F5 mirror neurons during the observation of transitive and intransitive actions. **J Neurophysiol** 118(6):3215-3229, DOI: [10.1152/jn.00816.2016](https://doi.org/10.1152/jn.00816.2016).
- A4. Raos V, Savaki HE. 2017. The role of the prefrontal cortex in action perception. **Cereb Cortex** 27(10):4677-4690, DOI: [10.1093/cercor/bhw261](https://doi.org/10.1093/cercor/bhw261).
- A5. Raos V, Savaki HE. 2016. Perception of actions performed by external agents presupposes knowledge about the relationship between action and effect. **Neuroimage.** 132:261-273, DOI: [10.1016/j.neuroimage.2016.02.023](https://doi.org/10.1016/j.neuroimage.2016.02.023).
- A6. Kilintari M, Raos V, Savaki HE. 2014. Involvement of the superior temporal cortex in action execution and action observation. **J Neurosci.** 34(27):8999-9011, DOI: [10.1523/JNEUROSCI.0736-14.2014](https://doi.org/10.1523/JNEUROSCI.0736-14.2014).
- A7. Raos V, Kilintari M, Savaki HE. 2014. Viewing a forelimb induces widespread cortical activations. **Neuroimage.** 89:122-142, DOI: [10.1016/j.neuroimage.2013.12.010](https://doi.org/10.1016/j.neuroimage.2013.12.010).
- A8. Carpaneto J, Raos V, Umiltà MA, Fogassi L, Murata A, Gallese V, Micera S. 2012. Continuous decoding of grasping tasks for a prospective implantable cortical neuroprosthesis. **J Neuroeng Rehabil.** 9:84, DOI: [10.1186/1743-0003-9-84](https://doi.org/10.1186/1743-0003-9-84)
- A9. Fattori P, Breveglieri R, Raos V, Bosco A, Galletti C. 2012. Vision for action in the macaque medial posterior parietal cortex. **J Neurosci.** 32(9):3221–3234, DOI: [10.1523/JNEUROSCI.5358-11.2012](https://doi.org/10.1523/JNEUROSCI.5358-11.2012).
- A10. Carpaneto J, Umiltà MA, Fogassi L, Murata A, Gallese V, Micera S, Raos V. 2011. Decoding the activity of grasping neurons recorded from the ventral premotor area F5 of the macaque monkey. **Neuroscience.** 188:80-94, DOI: [10.1016/j.neuroscience.2011.04.062](https://doi.org/10.1016/j.neuroscience.2011.04.062).
- A11. Kilintari M, Raos V, Savaki HE. 2011. Grasping in the Dark Activates Early Visual Cortices. **Cereb Cortex.** 21(4):949-63, DOI: [10.1093/cercor/bhq175](https://doi.org/10.1093/cercor/bhq175).
- A12. Stamos AV, Savaki HE, Raos V. 2010. The spinal substrate of the suppression of action during action observation. **J Neurosci.** 30:11605-11, DOI: [10.1523/JNEUROSCI.2067-10.2010](https://doi.org/10.1523/JNEUROSCI.2067-10.2010).
- A13. Fattori P, Raos V, Breveglieri R, Marzocchi N, Bosco A, Galletti C. 2010. The dorsomedial pathway is not just for reaching: Grasping neurons in the medial parieto-occipital cortex of the macaque. **J. Neurosci.** 30:342-9, DOI: [10.1523/JNEUROSCI.3800-09.2010](https://doi.org/10.1523/JNEUROSCI.3800-09.2010).
- A14. Savaki HE, Gregoriou GG, Bakola S, Raos V, Moschovakis AK. 2010. The place code of saccade metrics in the lateral bank of the intraparietal sulcus. **J. Neurosci.** 30:1118-27, DOI: [10.1523/JNEUROSCI.2268-09.2010](https://doi.org/10.1523/JNEUROSCI.2268-09.2010).
- A15. Evangelidou MN, Raos V, Galletti C, Savaki HE. 2009. Functional Imaging of the Parietal Cortex during Action Execution and Observation. **Cereb. Cortex.** 19(3):624-39, DOI: [10.1093/cercor/bhn116](https://doi.org/10.1093/cercor/bhn116).
- A16. Kattoulas E, Smyrnis N, Mantas A, Evdokimidis I, Raos V, Moschovakis AK. 2008. Arm movement metrics influence saccade metrics when looking and pointing towards a memorized target location. **Exp. Brain Res.** 189:323-338, DOI: [10.1007/s00221-008-1427-4](https://doi.org/10.1007/s00221-008-1427-4).
- A17. Raos V, Evangelidou MN, Savaki HE. 2007. Mental simulation of action in the service of action perception. **J. Neurosci.** 27:12675-12683, DOI: [10.1523/JNEUROSCI.2988-07.2007](https://doi.org/10.1523/JNEUROSCI.2988-07.2007).
- A18. Bakola S, Gregoriou GG, Moschovakis AK, Raos V, Savaki HE. 2007. Saccade-related information in the superior temporal motion complex: quantitative functional mapping in the monkey. **J. Neurosci.** 27:2224-2229, DOI: [10.1523/JNEUROSCI.4224-06.2007](https://doi.org/10.1523/JNEUROSCI.4224-06.2007).

- A19. Raos V, Umilta MA, Murata A, Fogassi L, Gallese V. 2006. Functional properties of grasping-related neurons in the ventral premotor area F5 of the macaque monkey. **J. Neurophysiol.** 95:709-729, DOI: [10.1152/jn.00463.2005](https://doi.org/10.1152/jn.00463.2005).
- A20. Raos V, Umilta MA, Gallese V, Fogassi L. 2004. Functional properties of grasping-related neurons in the dorsal premotor area F2 of the macaque monkey. **J. Neurophysiol.** 92:1990-2002, DOI: [10.1152/jn.00154.2004](https://doi.org/10.1152/jn.00154.2004).
- A21. Raos V, Evangeliou MN, Savaki HE. 2004. Observation of action: grasping with the mind's hand. **Neuroimage.** 23:193-201, DOI: [10.1016/j.neuroimage.2004.04.024](https://doi.org/10.1016/j.neuroimage.2004.04.024).
- A22. Raos V, Franchi G, Gallese V, Fogassi L. 2003. Somatotopic organization of the lateral part of area F2 (dorsal premotor cortex) of the macaque monkey. **J. Neurophysiol.** 89:1503-1518, DOI: [10.1152/jn.00661.2002](https://doi.org/10.1152/jn.00661.2002).
- A23. Fogassi L, Raos V, Franchi G, Gallese V, Luppino G, Matelli M. 1999. Visual responses in the dorsal premotor area F2 of the macaque monkey. **Exp. Brain Res.** 128:194-199, DOI: [10.1007/s002210050835](https://doi.org/10.1007/s002210050835).
- A24. Murata A, Fadiga L, Fogassi L, Gallese V, Raos V, Rizzolatti G. 1997. Object representation in the ventral premotor cortex (area F5) of the monkey. **J. Neurophysiol.** 78:2226-2230, DOI: [10.1152/jn.1997.78.4.2226](https://doi.org/10.1152/jn.1997.78.4.2226).
- A25. Savaki HE, Raos VC, Dalezios Y. 1997. Spatial cortical patterns of metabolic activity in monkeys performing a visually guided reaching task with one forelimb. **Neuroscience.** 76:1007-1034, DOI: [10.1016/s0306-4522\(96\)00439-3](https://doi.org/10.1016/s0306-4522(96)00439-3).
- A26. Dalezios Y, Raos VC, Savaki HE. 1996. Metabolic activity pattern in the motor and somatosensory cortex of monkeys performing a visually guided reaching task with one forelimb. **Neuroscience.** 72:325-333, DOI: [10.1016/0306-4522\(95\)00516-1](https://doi.org/10.1016/0306-4522(95)00516-1).
- A27. Raos VC, Dermon CR, Savaki HE. 1995. Functional anatomy of the thalamic centrolateral nucleus as revealed with the [14C]deoxyglucose method following electrical stimulation and electrolytic lesion. **Neuroscience.** 68:299-313, DOI: [10.1016/0306-4522\(95\)00114-x](https://doi.org/10.1016/0306-4522(95)00114-x).
- A28. Raos VC, Savaki HE. 1995. Functional anatomy of the thalamic reticular nucleus as revealed with the [14C]deoxyglucose method following electrical stimulation and electrolytic lesion. **Neuroscience.** 68:287-297, DOI: [10.1016/0306-4522\(95\)00113-w](https://doi.org/10.1016/0306-4522(95)00113-w).
- A29. Raos V, Bentivoglio M. 1993. Crosstalk between the two sides of the thalamus through the reticular nucleus: a retrograde and anterograde tracing study in the rat. **J Comp Neurol.** 332:145-154, DOI: [10.1002/cne.903320202](https://doi.org/10.1002/cne.903320202).
- A30. Savaki HE, Raos VC, Dermon CR. 1992. Bilateral cerebral metabolic effects of pharmacological manipulation of the substantia nigra in the rat: unilateral intranigral application of the inhibitory GABAA receptor agonist muscimol. **Neuroscience.** 50:781-794, DOI: [10.1016/0306-4522\(92\)90204-f](https://doi.org/10.1016/0306-4522(92)90204-f).
- A31. Chen S, Raos V, Bentivoglio M. 1992. Connections of the thalamic reticular nucleus with the contralateral thalamus in the rat. **Neurosci. Lett.** 147:85-88, DOI: [10.1016/0304-3940\(92\)90780-b](https://doi.org/10.1016/0304-3940(92)90780-b).

Review articles

- R1. Savaki HE, Raos V. 2019. Action Perception and Motor Imagery: Mental Practice of Action. **Prog Neurobiol** 175:107-125, DOI: [10.1016/j.pneurobio.2019.01.007](https://doi.org/10.1016/j.pneurobio.2019.01.007).

Conference Proceedings / Book chapters

- P1. Ashena N., Papadourakis V., Raos V., Oztop E. 2017. Real-Time Decoding of Arm Kinematics During Grasping Based on F5 Neural Spike Data. In: Cong F., Leung A., Wei Q. (eds) *Advances in Neural Networks - ISNN 2017. Lecture Notes in Computer Science*, vol 10261, pp 261-268. Springer, Cham. DOI: [10.1007/978-3-319-59072-1_31](https://doi.org/10.1007/978-3-319-59072-1_31)

Abstracts

- Raos V, Chatzimichail K, Tzamali E, Papadourakis V. 2024. Mirror neuron populations do mirror. **AREADNE Research in Encoding and Decoding of Neural Ensembles**.
- Chatzimichail K, Papadourakis V, Raos V. 2023. Mirror neurons encode action kinematics. PST414.06 Neuroscience Meeting Planner. Chicago: **Society for Neuroscience**, 2023. Online.

3. Chatzimichail K, Tzamali E, Papadourakis V, Raos V. 2023. Definition of the Neural Representation/Code of Actions in the Population Activity of Mirror Neurons. **30th Meeting of the Hellenic Society for Neuroscience**.
4. Chatzimichail K, Paschalidis C, Papadourakis V, Raos V. 2023. Investigating the Correspondence between Neural Population Codes for Observed and Executed Actions in Premotor Areas of the Macaque Brain. **30th Meeting of the Hellenic Society for Neuroscience**.
5. Chatzimichail K, Papadourakis V, Raos V. 2023. Mirror neurons in the premotor cortex of the macaque monkey encode the kinematics of both observed and executed actions. **30th Meeting of the Hellenic Society for Neuroscience**.
6. Aliprantis S, Chatzimichail K, Maeda K, Murata A, Raos V. 2023. Analyzing Object- and Grip-Related Information within Population Activity Recorded Across Various Behavioral Tasks in the Anterior Intraparietal Area of the Macaque Brain. **30th Meeting of the Hellenic Society for Neuroscience**.
7. Tzamali E, Papadourakis V, Raos V. 2021. Visual to motor cross-decoding of hand shapes from mirror neuron activity. **Vision Sciences Society** 2021.
8. Tzamali E, Papadourakis V, Raos V. 2021. Observation to execution cross-decoding of hand grips from ventral premotor cortex spiking activity. **Computational and Systems Neuroscience (COSYNE 2021)**.
9. Savaki HE, Raos V. 2019. Functional imaging of the monkey cerebellar cortex during action execution and observation. Program No. 405.06 2019 Neuroscience Meeting Planner. Chicago: **Society for Neuroscience**, 2019. Online.
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