

CV Sander Nieuwenhuis

Personal data:

Name: Sander Tjalling Nieuwenhuis
Current office: Cognitive Psychology Unit, Leiden University, FSW
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Education/Professional History:

1997	M.S. in Experimental Psychology, Rijksuniversiteit Groningen Thesis Title: The temporal dynamics of task switching Thesis Advisor: Ritske de Jong
1992-1996	Classical guitar studies at the Groningen Conservatory
01-06/1997	Visiting researcher, University of Cambridge, Department of Experimental Psychology (Stephen Monsell)
1997-2001	Ph.D. in Cognitive Neuroscience, University of Amsterdam Dissertation Title: Control failures, error processing, and cognitive aging Thesis Advisors: Richard Ridderinkhof, Maurits van der Molen & Albert Kok
2001-2002	Lecturer, University of Amsterdam
2002-2003	Postdoctoral Fellow, Princeton University Neuroscience of Cognitive Control Lab (Jonathan Cohen)
2003-2006	Postdoctoral Fellow, Vrije Universiteit Amsterdam Department of Cognitive Psychology
2006-2008	Assistant Professor, Leiden University Cognitive Psychology Unit
2009-2012	Associate Professor, Leiden University Cognitive Psychology Unit
2012-	Full Professor, Leiden University Cognitive Psychology Unit
2017-2023	Chair of the Cognitive Psychology Unit
2021-2022	Research director ad interim of the Institute of Psychology, Leiden University

Teaching:

1997-2001	Several practical courses in research- and writing skills, University of Amsterdam
2004-2006	Bachelor course "Attention" (lecturing)
2005-2006	Bachelor course "Cognitive Neuroscience & Neuropsychology" (development, coordination, lecturing)
2008-2011	Bachelor course "Cognitieve Neurowetenschap" (coordination, lecturing)
2009-	Research master course "Scientific Writing" (coordination, lecturing)
2011	Basiskwalificatie Onderwijs (BKO)
2013-2019	Bachelor course "Attention: Theory and Practice" (coordination, lecturing)
2017-2020	Designing an Empirical Study (coordination, lecturing)
2024-	Reinforcement Learning and Decision Making: Computational and Neural Mechanism (coordination, lecturing)

Supervision / postdocs

Research assistants

Nisan Mol (2003-2004)
Niels Alting von Geusau (2004-2006)
Sabrina La Fors (2006-2007)
Saskia Heijnen (2015-2016)
Iliana Samara (2016-2017)
Myrthe Vel Tromp (2020-2021)
Lysanne Groenewegen (2022-2023)
Federica Lucchi (2022-2023)

PhD students

Marieke Jepma (2006-2010)(cum laude)
Stephen Brown (2009-2014)
Laura Steenbergen (2016)
Rudy van den Brink (2012-2017)
Klodiana Daphne Tona (2013-2018)
Martin Kolnes (visiting, 2019)
Bryant Jongkees (2019)
Beth Lloyd (2019-2024)
Jeshua Tromp (2019-2024)
Roderik Gerritsen (2023)

Postdocs

Mischa de Rover (2008-2011)
Marieke Jepma (2010-2011)
Christopher Warren (2012-2016)
Peter Murphy (2012-2015)
Árni Ásgeirsson (2015-2016)
Szymon Wichary (2018d-2020)
Verónica Mäki-Marttunen (2020-2022)
Franz Wurm (2020-2023)
Philippa Johnson (2023-2025)
Martin Kolnes (2023-2025)

Honors, Awards, and Grants

2002	NWO TALENT-stipendium (\$32,000)
2002	Winner A.F. Sanders Award for best research paper by EPOS graduate student
2003	NWO-VENI grant (€200,000)
2005	NWO-Cognitie netwerksubsidie (€10,000) and NWO-Fonds Internationalisering Sociale Wetenschappen (€7,500)
2006	Young Scientist Award from the Federation of European Psychophysiology Societies
2006	Beurs voor KNAW Akademie-Colloquium (€19,500)
2006	A.N.T. Young Scientist Award (international award for “exceptional advances in EEG/MEG research”)
2006	NWO-VIDI grant (€600,000)

2009	NWO-MaGW “Vrije Competitie” PhD grant (€218,000)
2009	Award for Distinguished Early Career Contributions to Psychophysiology from the Society for Psychophysiological Research (SPR)
2010	Co-applicant of NWO-ALW “Open Competitie” PhD grant (€208,193; main applicant Eric-Jan Wagenmakers)
2011	ERC Starting Grant (consolidator group; €1,500,000)
2018	Marie Curie Intra-European Fellowship, Szymon Wichary (role: scientist in charge; €200.000)
2018	Leiden University Profile Area Grant €120,000; co-applicants Else Tolner and Gisela Terwindt)
2019	NWO-VICI grant (€1,500,000)

Reviewing and Editorships

1998-1999	Associate editor of quarterly journal of the Nederlandse Vereniging voor Psychonomie: “De Psychonoom”
1999	Editor of the “Stamboom van de Nederlandse Psychonomie” (PhD family tree of Dutch Experimental Psychology; with Nomi Olsthoorn)
2000 -	Reviewer for various professional journals: <u>Psychology</u> : Acta Psychologica, Attention, Perception & Psychophysics; Cognition; Cognition and Emotion; Cognitive Psychology; Current Directions in Psychological Science; Emotion; Emotion Review. Experimental Psychology; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory, and Cognition; Memory & Cognition; Psychological Bulletin; Psychological Research; Psychological Review; Psychological Science; Psychology and Aging; Psychonomic Bulletin & Review; Quarterly Journal of Experimental Psychology; Trends in Cognitive Sciences; Vision Research <u>Psychophysiology</u> : Biological Psychology; International Journal of Psychophysiology; Journal of Psychophysiology; Psychophysiology <u>Cognitive Neuroscience</u> : Behavioral and Brain Functions; Behavioural Brain Research; Brain and Cognition; Cognitive, Affective & Behavioral Neuroscience; Cognitive Brain Research; Experimental Brain Research; Journal of Cognitive Neuroscience; Social Cognitive and Affective Neuroscience; Social Neuroscience <u>Neuroscience</u> : Brain Stimulation; Cerebral Cortex; Cortex; European Journal of Neuroscience; Frontiers in Neuroscience; Human Brain Mapping; Journal of Neurophysiology; Journal of Neuroscience; Nature Neuroscience; Neural Computation; NeuroImage; Neuron; Neuroreport; Neuroscience; Neuroscience & Biobehavioral Reviews; Neuroscience Letters <u>Psychiatry, neurology and neuropsychology</u> : Archives of General Psychiatry; Biological Psychiatry; Brain; Journal of Psychiatric Research; Psychiatry Research; Neuropsychologia; Schizophrenia Research <u>Psychopharmacology</u> : International Journal of Neuropsychopharmacology; Journal of Psychopharmacology; Progress in Neuro-Psychopharmacology & Biological Psychiatry; Psychopharmacology <u>Other</u> : Current Biology; eLife; IEEE:Systems, Man, & Cybernetics; iScience; JoVE; Nature Communications; Nature Human Behaviour; Nature Scientific

	Reports; PLoS Biology; PLoS Computational Biology (guest editor); PLoS ONE; PNAS; Science Advances; WIREs Cognitive Science.
2004 - 2007	Action editor for <i>Brain and Cognition</i>
2007	Guest editor for special issue of <i>Cognitive, Affective & Behavioral Neuroscience</i> on medial frontal cortex function (with Richard Ridderinkhof and Todd Braver)
2005 -	Reviewer for the National Science Foundation (USA); the Netherlands Organization of Scientific Research (NWO); Research into Ageing (UK); the Irish Research Council; the Research Foundation Flanders (Belgium, FWO); the Medical Research Council (UK, MRC); the Handbook of Emotion Regulation (2nd ed., Guilford Press); the Deutsche Forschungsgemeinschaft (Germany, DFG); the European Research Council (ERC); the French National Research Agency; the Volkswagen Foundation; the Wellcome Trust; Fonds de la Recherche Scientifique (FNRS); Swiss National Science Foundation
2024	Guest editor for special issue of <i>Psychophysiology</i> on transcutaneous vagus nerve stimulation and cognitive/brain function (with Martina d'Agostini)
2018 -	Associate editor for <i>Psychophysiology</i>
2025	Guest editor for special issue of <i>Psychophysiology</i> on the 'Effects of non-invasive vagus nerve stimulation on brain and cognition' (with Martina d'Agostini)

Member of PhD committees:

Elkan Akyürek (2005, Leiden), Lorenza Colzato (2005, Leiden), Jennifer Ramautar (2005, University of Amsterdam), Zoe Tiegies (2007, University of Amsterdam), Edita Poljac (2009, Radboud University Nijmegen), Simon van Gaal (2009, University of Amsterdam), Nelleke van Wouwe (2009, University of Amsterdam), André Keizer (2010, Leiden), Shaozheng Qin (2010, Radboud University Nijmegen), Martijn Lamers (2011, Radboud University Nijmegen), Christopher Warren (2011, University of Victoria, Canada), Henk van Steenbergen (2012, Leiden), Martine van Schouwenburg (2012, Radboud University Nijmegen), Alexander Logemann (2013, Utrecht University), Pascal Haazebroek (2014, Leiden), Anna Wilschut (2014, Vrije Universiteit Amsterdam), Félice van Nunspeet (2014, Leiden), Helga Harsay (2014, University of Amsterdam), Stephan Verschoor (2014, Leiden), Anouk van Loon (2014, University of Amsterdam), Judith Schomaker (2015, Vrije Universiteit Amsterdam), Margot Schel (2015, Leiden), Niels Kloosterman (2015, University of Amsterdam), Marret Noordewier (2016, Leiden), Ke Ma (2016, Leiden), Mirte Brom (2016, Leiden); Laura Steenbergen (2016, Leiden, as promotor); Mikael Kowal (2016, Leiden); Willem Slegers (2017, Tilburg); Brett MacDonald (2017, University of Wollongong, Australia); Roy de Kleijn (2017, Leiden); Michele Colombo (2018, University of Amsterdam); Antonino Visalli (2018, University of Padova); Neeltje Blankenstein (2019, Leiden); Bryant Jongkees (2019, Leiden, as promotor); Andreas Burger (2019, Leiden); Iris Schutte (2019, Utrecht University); Anne Bolders (2021, Leiden), Eliska Prochazkova (2021, Leiden), Michael Rojek-Giffin (2021, Leiden), Marloes van Moort (2022, Leiden), Thomas Meindersma (2022, University of Amsterdam), Mia Thomaidou (2022, Leiden), Jing Wang (2022, University of Groningen), Alberto de Luca (2023, Leiden), Diana Kim (2023, Leiden), Gülşen Balta (2024, Groningen), Iliana Samara (2024, Leiden), Chenyan Zhang (2024, Leiden), Anne Trutti (2024, Leiden), Magdalena Sabat (Paris), Elise Beckers (2025, Maastricht), Eelke de Vries (2025, Amsterdam), Lola Beerendonk (2025, Amsterdam), Jennifer Becker (2025, Leiden).

Other Relevant Professional Experience:

2005	Co-organizer NVP Wintercongres in Egmond aan Zee
2006	Organizer International Workshop “Errors, Conflicts, and Rewards: The Role of Medial Frontal Cortex in Cognitive Control and Performance Monitoring” in Amsterdam
2007	Co-organizer International Symposium “Blinks of the mind: New insights in temporal attention and consciousness” in Amsterdam
2007-2012	Member of the Board of Examiners, Institute of Psychology, Leiden
2008-2022	Coordinator of the Research Master programme at the Institute of Psychology, Leiden
2008-	Chair of the Research Master Programme Committee of the MSc Psychology (Research)
2008-2009	Leergang Bestuurlijke Vaardigheden, Universiteit Leiden
2009	Member of the beoordelingscommissie NWO-Veni 2009
2009-2011	Executive Board, Leiden Institute for Brain and Cognition
2011	Member of the Scientific Committee for the 11th meeting of the International Conference on Cognitive Neuroscience (ICON XI) in Mallorca, Spain
2011	Jury member NVP dissertatieprijs 2011
2011-	Member of the Attention & Performance Advisory Council
2012-2013	Member of the NWO-Rubiconcommissie 2012
2012	Organizer of LIBC Public Symposium “Drugs and the Brain: Bio-psychologische effecten van geneesmiddelen en recreatieve drugs” (with Serge Rombouts)
2013-2021	Implementation of data-management policy, Institute of Psychology, Leiden
2017	Member of the beoordelingscommissie NWO-SGW Veni 2017
2017	Member of the beoordelingscommissie NWO-SGW Vidi 2017 (preselection)
2018-2019	Member of the program committee for the annual meeting of the Society for Psychophysiological Research 2019 in Washington, DC
2019	Chair of the Midterm Review Committee of the master Developmental Psychopathology in Education and Child Studies (Research) of Leiden University
2019-2022	Chair of the Early Career Award committee of the (Dutch) Society for Brain and Cognition (NVP)
2021	Member of the panel for the assessment of the BSc Biologie, BSc Psychobiologie and MSc Biological Sciences, University of Amsterdam
2022	Member of the beoordelingscommissie NWO-SGW Vici 2022 (preselection)
2023	Member of the beoordelingscommissie NWO-SGW Open Competitie L 2023
2024	Member of the panel for the accreditation of the BSc Human Neurowetenschappen, Radboud University Nijmegen
2025	Chair of the panel for the assessment of MSc Neuroscience programs in the Netherlands

Publications:

- Johnson, P. A., **Nieuwenhuis**, S., Mejías, J., & Urai, A. E. (in preparation). A dynamical systems model of arousal-driven behavioural state transitions.
- Tromp, J., **Nieuwenhuis**, S., Cohen, J. D., & Jongkees, B. J. (submitted). A normative account of the trade-off between cognitive stability and flexibility.
- Kolnes, M. & **Nieuwenhuis**, S. (submitted). Arousal does not enhance the dominant spatial scope of attention.
- Tromp, J., Wurm, F., Lucchi, F., de Kleijn, R., & **Nieuwenhuis**, S. (submitted). Phasic alertness impairs cognitive control by amplifying competition between evidence accumulators. *Journal of Neuroscience*, 45, e1595242025.
- Lloyd, B., Miletić, S., & **Nieuwenhuis**, S. (2025). Pupil-linked arousal counteracts the positive effects of reward anticipation on incidental memory encoding. *Cognition*, 264, 106237.
- Mäki-Marttunen & **Nieuwenhuis**, S. (2025). Neuromodulatory influences on propagation of brain waves along the unimodal-transmodal gradient. *Cerebral Cortex*, 35, bhaf183.
- Lloyd, B., Miletić, S., Bazin, P.-L., Isherwood, S., Tse, D.H.Y., Håberg, A., Forstmann, B., & **Nieuwenhuis**, S. (2025). Subcortical nuclei of the human ascending arousal system encode anticipated reward but do not predict subsequent memory. *Cerebral Cortex*, 35, bhaf101.
- Mäki-Marttunen, V., Felea, A., & **Nieuwenhuis**, S. (2025). Strength of low-frequency EEG phase entrainment to external stimuli is associated with fluctuations in the brain's internal state. *eNeuro*, 12.
- van Steenbergen, H., Wilderjans, T.F., Band, G.P.H., & **Nieuwenhuis**, S. (2024). Boosting arousal and cognitive performance through alternating posture with a sit-stand desk: Insights from a multi-method laboratory study. *Psychophysiology*, 61, e14634.
- Nieuwenhuis**, S. (2024). Arousal and performance: revisiting the famous inverted-U-shaped curve. *Trends in Cognitive Sciences*, 28, 394-396.
- Lloyd, B. & **Nieuwenhuis**, S. (2024). The effect of reward-induced arousal on the success and precision of episodic memory retrieval. *Scientific Reports*, 14: 2105
- Lucchi, F., Lloyd, B., & **Nieuwenhuis**, S. (2024). Non-invasive vagus nerve stimulation and the motivation to work for rewards: A replication of Neuser et al. (2020, Nature Communications). *Psychophysiology*, 61: e14484.
- Kolnes, M., Uusberg, A., & **Nieuwenhuis**, S. (2024). Broadening of attention dilates the pupil. *Attention, Perception, & Psychophysics*, 86, 146-158.
- Mäki-Marttunen, V., Kies, D.A., Pijpers, J.A., Louter, M.A., van der Wee, N.J., Rombouts, S.A., **Nieuwenhuis**, S., Kruit, M. & Terwindt, G.M. (2023). Functional connectivity of the visual cortex in chronic migraine before and after medication withdrawal therapy. *NeuroImage: Clinical*, 40, 103543.
- Lloyd, B., Wurm, F., de Kleijn, R., & **Nieuwenhuis**, S. (2023). Short-term transcutaneous vagus nerve stimulation increases pupil size but does not affect EEG alpha power: a replication of Sharon et al. (2021, Journal of Neuroscience). *Brain Stimulation*, 16: 1001-1008.
- Lloyd, B., de Voogd, L.D., Mäki-Marttunen, V., & **Nieuwenhuis**, S. (2023). Pupil size reflects activation of subcortical ascending arousal system nuclei during rest. *eLife*, 12: e84822.
- Giraudier, M., Ventura-Bort, C., Burger, A.M., Claes, N., D'Agostini, M., Fischer, R., Franssen, M., Kaess, M., Koenig, J., Liepelt, L., **Nieuwenhuis**, S., Sommer, A., Usichenko, T., Van Diest, I., von Leupoldt, A., Warren, C.M., & Weymar, M. (2022). Evidence for a modulating effect of transcutaneous auricular vagus nerve stimulation (taVNS) on salivary alpha-amylase as indirect noradrenergic marker: a pooled mega-analysis. *Brain Stimulation*, 15, 1378-1388.
- Tromp, J., **Nieuwenhuis**, S., & Murphy, P.R. (2022). The effects of neural gain on reactive cognitive control. *Computational Brain & Behavior*, 5, 422-433.

- Scheffer, M., Borsboom, D., **Nieuwenhuis, S.**, & Westley, F. (2022). Belief traps: Tackling the inertia of harmful beliefs. *Proceedings of the National Academy of Sciences*, *119*, e2203149119.
- van den Brink, R.L., Murphy, P.R., Desender, K., de Ru, N., & **Nieuwenhuis, S.** (2021). Temporal expectation hastens sensory encoding but does not affect evidence quality. *Journal of Neuroscience*, *41*, 130-143.
- Tona, K.D., Revers, H., Verkuil, B., & **Nieuwenhuis, S.** (2020). Noradrenergic regulation of cognitive flexibility: no effects of stress, transcutaneous vagus nerve stimulation and atomoxetine on task-switching. *Journal of Cognitive Neuroscience*, *32*, 1881-1895.
- Ásgeirsson, Á.G. & **Nieuwenhuis, S.** (2019). Effects of arousal on biased competition in attention and short-term memory. *Attention, Perception, & Psychophysics*, *81*, 1901-1912.
- Warren, C.M., Tona, K.D., Ouwerkerk, L., van Paridon, J., Poletiek, F., van Steenbergen, H., Bosch, J.A., & **Nieuwenhuis, S.** (2019). The neuromodulatory and hormonal effects of transcutaneous vagus nerve stimulation as evidenced by salivary alpha amylase, salivary cortisol, pupil diameter, and the P3 event-related potential. *Brain Stimulation*, *12*, 635-642.
- Tona, K.D., van Osch, M.J.P., **Nieuwenhuis, S.**, & Keuken, M.C. (2019). Visualizing the human locus coeruleus in vivo at 7 Tesla MRI. *PLoS ONE*, *14*: e0209842.
- Jepma, M., Brown, S.B., Murphy, P.R., Koelewijn, S.C., de Vries, B., van den Maagdenberg, A.M., & **Nieuwenhuis, S.** (2018). Noradrenergic and cholinergic modulation of belief updating. *Journal of Cognitive Neuroscience*, *30*, 1803-1820.
- van den Brink, R.L., **Nieuwenhuis, S.**, & Donner, T.H. (2018). Amplification and suppression of distinct brain-wide functional networks by catecholamines. *Journal of Neuroscience*, *38*, 7476-7491.
- Shine, J.M., van den Brink, R.L., Hernaus, D., **Nieuwenhuis, S.**, & Poldrack, R.A. (2018). Catecholaminergic manipulation alters dynamic network topology across cognitive states. *Network Neuroscience*, *2*, 381-396.
- Harsay, H.A., Cohen, M.X., Spaan, M., Weeda, W.D., **Nieuwenhuis, S.**, & Ridderinkhof, K.R. (2018). Error awareness and motivational significance: Shifts in networks centering on anterior insula co-vary with error blindness and pupil dilation. *Behavioural Brain Research*, *355*, 24-35.
- van den Brink, R.L., **Nieuwenhuis, S.**, van Boxtel, G.J.M., van Luitelaar, G., Eilander, H.J., & Wijnen, V.J.M. (2018). Task-free spectral EEG dynamics track and predict patient recovery from severe acquired brain injury. *NeuroImage: Clinical*, *17*, 43-52.
- Ásgeirsson, Á.G. & **Nieuwenhuis, S.** (2017). No arousal-biased competition in focused visuospatial attention. *Cognition*, *168*, 191-204.
- Tona, K.D., Keuken, M.C., de Rover, M., Lakke, E., Forstmann, B.U., **Nieuwenhuis, S.**, & van Osch, M.J.P. (2017). In vivo visualization of the locus coeruleus in humans: Quantifying the test-retest reliability. *Brain Structure and Function*, *222*, 4203-4217.
- Warren, C.M., Wilson, R.C., van der Wee, N.J., Giltay, E.J., van Noorden, M.S., Cohen, J.D., & **Nieuwenhuis, S.** (2017). The effect of atomoxetine on random and directed exploration in humans. *PLoS ONE*, *12*: e0176034.
- de Gee, J.W., Colizoli, O., Kloosterman, N., Knapen, T., **Nieuwenhuis, S.**, & Donner, T.H. (2017). Dynamic modulation of decision biases by brainstem arousal systems. *eLife*, *6*: e23232.
- Warren, C.M., van den Brink, R.L., **Nieuwenhuis, S.**, & Bosch, J.A. (2017). The norepinephrine transporter blocker atomoxetine increases salivary alpha amylase. *Psychoneuroendocrinology*, *78*, 233-236.
- Murphy, P.R., Boonstra, E., & **Nieuwenhuis, S.** (2016). Global gain modulation generates time-dependent urgency during perceptual choice in humans. *Nature Communications*, *7*, 13526.

- Jepma, M., Murphy, P., Nassar, M.R., Rangel-Gomez, M., Meeter, M., & **Nieuwenhuis, S.** (2016). Catecholaminergic regulation of learning rate in a dynamic environment. *PLoS Computational Biology*, *12*: e1005171.
- van den Brink, R.L., Murphy, P.R., & **Nieuwenhuis, S.** (2016). Pupil diameter tracks lapses of attention. *PLoS ONE*, *11*: e0165274.
- van den Brink, R.L., Pfeffer, T., Warren, C.M., Murphy, P.R., Tona, K.D., van der Wee, N.J., Giltay, E.J., van Noorden, M.S., Rombouts, S.A., Donner, T.H., & **Nieuwenhuis, S.** (2016). Catecholaminergic neuromodulation shapes intrinsic MRI functional connectivity in the human brain. *Journal of Neuroscience*, *36*, 7865-7876.
- Naber, M., Brown, S. B., Vedder, A., & **Nieuwenhuis, S.** (2016). Speed and lateral inhibition of stimulus processing contribute to individual differences in Stroop-task performance. *Frontiers in Psychology*, *7*:822.
- Warren, C.M., Eldar, E., van den Brink, R.L., Tona, K.D., van der Wee, N.J., Giltay, E.J., van Noorden, M.S., Bosch, J.A., Wilson, R.C., Cohen, J.D., & **Nieuwenhuis, S.** (2016). Catecholamine-mediated increases in gain enhance the precision of cortical representations. *Journal of Neuroscience*, *36*, 5699-5708.
- Murphy, P.R., van Moort, M., & **Nieuwenhuis, S.** (2016). The pupillary orienting response predicts adaptive behavioral adjustment after errors. *PLOS ONE* *11*: e0151763.
- Tona, K.D., Murphy, P.R., Brown, S.B., & **Nieuwenhuis, S.** (2016). The accessory stimulus effect is mediated by phasic arousal: a pupillometry study. *Psychophysiology*, *53*, 1108-1113.
- Warren, C.M., Murphy, P.R., & **Nieuwenhuis, S.** (2016). Cognitive control, dynamic salience and the imperative toward computational accounts of neuromodulatory function. *Behavioral and Brain Sciences*, *39*, e227.
- Brown, S.B., Slagter, H.A., van Noorden, M.S., Giltay, E.J., van der Wee, N.J., & **Nieuwenhuis, S.** (2016). Effects of clonidine and scopolamine on multiple target detection in rapid serial visual presentation. *Psychopharmacology*, *233*, 341-350.
- Brown, S.B., van der Wee, N.J., Giltay, E.J., van Noorden, M.S., & **Nieuwenhuis, S.** (2015). Noradrenergic and cholinergic modulation of late ERP responses to deviant stimuli. *Psychophysiology*, *52*, 1620-1631.
- Boonstra, E., de Kleijn, R., Colzato, L.S., Alkemade, A., Forstmann, B.U., & **Nieuwenhuis, S.** (2015). Neurotransmitters as food supplements: the effects of GABA on brain and behavior. *Frontiers in Psychology*, *6*:1520.
- Sellaro, R., van Leusden, J.W., Tona, K.D., Verkuil, B., **Nieuwenhuis, S.**, & Colzato, L.S. (2015). Transcutaneous vagus nerve stimulation (tVNS) enhances post-error slowing. *Journal of Cognitive Neuroscience*, *27*, 2126-2132.
- de Rover, M., Brown, S.B., Band, G.P., Giltay, E.J., van Noorden, M.S., van der Wee, N.J., & **Nieuwenhuis, S.** (2015). Beta receptor-mediated modulation of the oddball P3 but not error-related ERP components in humans. *Psychopharmacology*, *232*, 3161–3172.
- Warren, C.M., **Nieuwenhuis, S.**, & Donner, T.H. (2015). Perceptual choice boosts network stability: Effect of neuromodulation? *Trends in Cognitive Sciences*, *19*, 362-364.
- Van Steenbergen, H., Band, G.P., Hommel, B., Rombouts, S.A., & **Nieuwenhuis, S.** (2015). Hedonic hotspots regulate cingulate-driven adaptation to cognitive demands. *Cerebral Cortex*, *25*, 1746-1756.
- Van Nunspeet, F., Derks, B., Ellemers, N., & **Nieuwenhuis, S.** (2015). Moral impression management: Evaluation by an ingroup member during a moral IAT enhances perceptual attention and conflict- and response-monitoring. *Social Psychological and Personality Science*, *6*, 183-192.
- Brown, S.B., Tona, K.D., van Noorden, M.S., Giltay, E.J., van der Wee, N.J., & **Nieuwenhuis, S.** (2015). Noradrenergic and cholinergic effects on speed and sensitivity measures of phasic alerting. *Behavioral Neuroscience*, *129*, 42-49.

- Matzke, D., **Nieuwenhuis**, S., van Rijn, H., Slagter, H.A., van der Molen, M.W., & Wagenmakers, E.-J. (2015). The effect of horizontal eye movements on free recall: A preregistered adversarial collaboration. *Journal of Experimental Psychology: General*, *144*, e1-e15.
- Murphy, P., Vandekerckhove, J., & **Nieuwenhuis**, S. (2014). Pupil-linked arousal determines variability in perceptual decision making. *PloS Computational Biology*, *10*: e1003854.
- van den Brink, R.L. Wynn, S., & **Nieuwenhuis**, S. (2014). Post-error slowing as a consequence of disturbed low-frequency oscillatory phase entrainment. *Journal of Neuroscience*, *34*, 11096-11105.
- Brown, S., van Steenbergen, H., Kedar, T., & **Nieuwenhuis**, S. (2014). Effects of arousal on cognitive control: Empirical tests of the conflict-modulated Hebbian-learning hypothesis. *Frontiers in Human Neuroscience* 8:23.
- Van Nunspeet, F., Ellemers, N., Derks, B., & **Nieuwenhuis**, S. (2014). Moral concerns increase attention and response monitoring during IAT performance: ERP evidence. *Social Cognitive and Affective Neuroscience*, *9*, 141-149.
- Scheepers, D., Derks, B., **Nieuwenhuis**, S., Lelieveld, G.-J., van Nunspeet, F., Rombouts, S.A., & de Rover, M. (2013). The neural correlates of in-group and self-face perception: Is there overlap for high identifiers? *Frontiers in Human Neuroscience*, *7*:528.
- Colzato, L.S., de Rover, M., van den Wildenberg, W.P.M., & **Nieuwenhuis**, S. (2013). Genetic marker of norepinephrine synthesis predicts individual differences in post-error slowing: A pilot study. *Neuropsychologia*, *51*, 2600- 2604.
- Nieuwenhuis**, S. & de Kleijn, R. (2013). The impact of alertness on cognitive control. *Journal of Experimental Psychology: Human Perception and Performance*, *39*, 1797-1801.
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Dutch publications:

- van Nunspeet, F., Derks, B., Ellemers, N., & **Nieuwenhuis, S. (2012).** Willen, denken, doen: Een ERP-onderzoek naar de invloed van morele motieven op sociale categorisatie in een impliciete associatietest. In M. Stick, M. Baas, L. van Dillen, R. Dotsch, D. Lakens, & M. de Vries (Eds.) *Jaarboek Sociale Psychologie 2012*. Groningen: ASPO Pers.
- Wagenmakers, E.J., & **Nieuwenhuis, S. (2005).** Damasio's error? De somatic marker hypothese onder vuur. *Neuropsaxis*, nr. 6, 165-169.
- Nieuwenhuis, S. (2005).** Foutendetectie in de menselijke hersenen. *Neuropsaxis*, nr. 3, 59-63.
- Nieuwenhuis, S. & Olsthoorn, N. (1999).** *Stamboom van de Nederlandse Psychonomie* (poster).

Invited presentations (selection)

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| 01/2003 | Invited presentation at Brock University, St Catherine's, Canada. |
| 04/2003 | International workshop "Performance Monitoring & Interference Control: Basic Issues & Individual Differences" in Amsterdam. |
| 07/2003 | Workshop "Errors, Conflicts and the Brain. Current Opinions on Performance Monitoring" in Dortmund, Germany. |
| 05/2004 | International workshop "Unique and shared processing limitations in dual-task performance" in Leiden, the Netherlands. |
| 12/2004 | Invited presentation at the University of Ghent, Belgium. |
| 01/2005 | Invited presentation at the 2005 Carmel Meeting "Forty Years of P300" in St Petersburg, Florida. |
| 03/2005 | International workshop "Control in Attention and Action" in Amsterdam, the Netherlands. |
| 09/2005 | Annual Meeting of the Society for Psychophysiological Research (SPR) in Lisbon, Portugal. |
| 06/2006 | Young Scientist Award lecture at the 6 th European Conference of the Federation of European Psychophysiology Societies (FEPS) in Budapest, Hungary. |
| 05/2008 | Annual Cognition Lecture Wolfram Schultz at the KNAW in Amsterdam. How to investigate the role of neuromodulatory systems in human cognition? (supporting act) |
| 07/2008 | International symposium "Attention and Performance XXIII: Decision making" in Stowe, VT, USA. |
| 05/2009 | Invited presentation at the University of Magdeburg, Germany. |

10/2009	Early Career Award lecture at the 49 th annual meeting of the Society for Psychophysiological Research (SPR) in Berlin, Germany.
12/2009	Invited presentation at the University of Trier, Germany.
06/2010	International workshop “Motivational & Cognitive Control” in Oxford.
01/2013	Invited presentation at the University of Exeter, U.K.