

Complete publication list for Dominik R. Bach (September 2016)

(1) Research articles

Forthcoming

Khemka S, Tzovara A, Gerster S, Quednow BB, **Bach DR** (2016). Modelling startle eye blink electromyogram to assess fear learning. Psychophysiology, *in press*.

Bach DR (2016). The cognitive architecture of anxiety-like behavioural inhibition. Journal of Experimental Psychology: Human Perception and Performance, *in press*.

2016

Bach DR, Gerster S, Tzovara A, Castegnetti G (2016). A linear model for event-related respiration responses. Journal of Neuroscience Methods, *270*, 174-155.

Korn CW & **Bach DR** (2016). A solid frame for the window on cognition: Modeling event-related pupil responses. Journal of Vision, *16*, 28.

Castegnetti G, Tzovara A, Staib M, Paulus PC, Hofer N, & **Bach DR** (2016). Modeling fear-conditioned bradycardia in humans. Psychophysiology, *53*, 930-939.

Paulus PC, Castegnetti G, & **Bach DR** (2016). Modeling event-related heart period responses. Psychophysiology, *53*, 837-846.

2015

Bach DR (2015). Anxiety-like behavioural inhibition is normative under environmental threat-reward correlations. PLOS Computational Biology, *11*, e1004646.

Korn CW & **Bach DR** (2015). Maintaining Homeostasis by Decision-Making. PLOS Computational Biology, *11*, e1004301.

Bach DR, Hurlemann R, Dolan RJ (2015). Impaired threat prioritisation after selective bilateral amygdala lesions. Cortex, *63*, 206-213.

Bach DR (2015). A cost minimisation and Bayesian inference model predicts startle reflex modulation across species. Journal of Theoretical Biology, *370*, 53-60.

Bach DR, Staib M (2015). A matching pursuit algorithm for inferring tonic sympathetic arousal from spontaneous skin conductance fluctuations. *Psychophysiology*, 52, 1106-12.

Bach DR, Furl N, Barnes G, Dolan RJ (2015). Sustained Magnetic Responses in Temporal Cortex Reflect Instantaneous Significance of Approaching and Receding Sounds. *PLOS ONE*, 10, e0134060.

Bach DR, Seifritz E, Dolan RJ (2015). Temporally unpredictable sounds exert a context-dependent influence on evaluation of unrelated images. *PLOS ONE*, 10, e0131065.

Staib M, Castegnetti G, **Bach DR** (2015). Optimising a model-based approach to inferring fear learning from skin conductance responses. *Journal of Neuroscience Methods*, 255, 131-138.

2014

Bach DR, Guitart-Masip M, Packard PA, Miró J, Falip M, Fuentemilla L, Dolan RJ (2014). Human hippocampus arbitrates approach-avoidance conflict. *Current Biology*, 24, 541-547.

Pooresmaeli A, FitzGerald THB, **Bach DR**, Toelch U, Ostendorf F, Dolan RJ (2014). Crossmodal effects of value on perceptual acuity and stimulus encoding. *PNAS*, 111, 15244-15429.

Bach DR, Schmidt-Daffy M, Dolan RJ (2014). Facial expression influences face identity recognition during the attentional blink. *Emotion*, 14, 1007-1013.

Toelch U, **Bach DR**, Dolan RJ (2014). The neural underpinnings of an optimal exploitation of social information under uncertainty. *Social Cognitive and Affective Neuroscience*, 9, 1746-1753.

Bach DR (2014). A head-to-head comparison of SCRalyze and Ledalab, two model-based methods for skin conductance analysis. *Biological Psychology*, 103, 63-88.

Bulganin L, **Bach DR**, Wittmann BC (2014). Prior fear conditioning and reward learning interact in fear and reward networks. *Frontiers in Behavioral Neuroscience*, 8, 67.

Pooresmaeli A, **Bach DR**, Dolan RJ (2014). The effect of visual salience on memory-based choices. *Journal of Neurophysiology*, 111, 481-487.

2013

Bach DR, Friston KJ, Dolan RJ (2013). An improved algorithm for model-based analysis of evoked skin conductance responses. *Biological Psychology*, 94, 490-497.

Bach DR, Hurlemann R, & Dolan RJ (2013). Unimpaired discrimination of fearful prosody after amygdala lesion. Neuropsychologia, 51, 2070-2074.

2012

Bauer M, Kluge C, **Bach D**, Bradbury D, Heinze HJ, Dolan RJ, & Driver J (2012). Cholinergic enhancement of visual attention and neural oscillations in the human brain. Current Biology, 22, 397-402.

Campbell-Meiklejohn DK, Kanai R, Bahrami B, **Bach DR**, Dolan RJ, Roepstorff A, & Frith CD (2012). Structure of orbitofrontal cortex predicts social influence. Current Biology, 22, R123-R124.

Chumbley JR, Flandin G, **Bach DR**, Daunizeau J, Fehr E, Dolan RJ, & Friston KJ (2012). Learning and Generalization under Ambiguity: An fMRI Study. PLOS Computational Biology, 8 (1).

2011

Symmonds M, Wright ND, **Bach DR**, & Dolan RJ (2011). Deconstructing risk: Separable encoding of variance and skewness in the brain. Neuroimage, 58, 1139-1149.

Klein-Flügge MC, Hunt LT, **Bach DR**, Dolan RJ, & Behrens TEJ (2011). Dissociable Reward and Timing Signals in Human Midbrain and Ventral Striatum. Neuron, 72, 654-664.

Bach DR, Weiskopf N, & Dolan RJ (2011). A stable sparse fear memory trace in human amygdala. Journal of Neuroscience, 31, 9383-9389.

Guitart-Masip M, Fuentemilla L, **Bach DR**, Huys QJM, Dayan P, Dolan RJ, & Duzel E (2011). Action dominates valence in anticipatory representations in the human striatum and dopaminergic midbrain. Journal of Neuroscience, 31, 7867-7875.

Bach DR, Talmi D, Hurlemann R, Patin A, & Dolan RJ (2011). Automatic relevance detection in the absence of a functional amygdala. Neuropsychologia, 49, 1302-1305.

Bach DR, Hulme O, Penny W, & Dolan RJ (2011). The known unknowns: Neural representation of second-order uncertainty, and ambiguity. Journal of Neuroscience, 31, 4811-4820.

Nicolle A, **Bach DR**, Frith C, & Dolan RJ (2011). Amygdala involvement in self-blame regret. Social Neuroscience, 6, 178-89.

Nicolle A, Fleming SM, **Bach DR**, Driver J, & Dolan RJ (2011). A Regret-Induced Status Quo Bias. Journal of Neuroscience, 31, 3320-3327.

Bach DR, Buxtorf K, Strik WK, Neuhoff JG, & Seifritz E (2011). Evidence for impaired sound intensity processing in schizophrenia. Schizophrenia Bulletin, 37, 426-431.

Bach DR, Behrens TE, Garrido L, Weiskopf N, Dolan RJ (2011). Deep and superficial amygdala nuclei projections revealed in vivo by probabilistic tractography. Journal of Neuroscience, 31, 618-23.

Bach DR, Daunizeau J, Kuelzow N, Friston KJ, & Dolan RJ (2011). Dynamic causal modelling of spontaneous fluctuations in skin conductance. Psychophysiology, 48, 252-57.

Nicolle A, **Bach DR**, Driver J, & Dolan RJ (2011). A Role for the Striatum in Regret-related Choice Repetition. Journal of Cognitive Neuroscience, 23, 845-56.

2010

Fitzgerald TH, Seymour B, **Bach DR**, & Dolan RJ (2010). Differentiable Neural Substrates for Learned and Described Value and Risk. Current Biology, 20, 1823-29.

Bach DR, Daunizeau J, Friston KJ, & Dolan RJ (2010). Dynamic causal modelling of anticipatory skin conductance responses. Biological Psychology, 85, 163-70.

Campbell-Meiklejohn DK, **Bach DR**, Roepstorff A, Dolan RJ, & Frith CD (2010). How the Opinion of Others Affects our Valuation of Objects. Current Biology, 20, 1165-70.

Bach DR, Friston KJ, & Dolan RJ (2010). Analytic measures for quantification of arousal from spontaneous skin conductance fluctuations. International Journal of Psychophysiology, 76, 52-55.

Bach DR, Flandin G, Friston KJ, & Dolan RJ (2010). Modelling event-related skin conductance responses. International Journal of Psychophysiology, 75, 349-356.

Bach DR, Kindler J, & Strik WK (2010). Elevated bilirubin in acute and transient psychotic disorder. Pharmacopsychiatry, 43, 12-16.

2009

Bach DR, Seymour B, & Dolan RJ (2009). Neural activity associated with the passive prediction of ambiguity and risk for aversive events. Journal of Neuroscience, 29, 1648-1656.

Bach DR, Flandin G, Friston KJ, & Dolan RJ (2009). Time-series analysis for rapid event-related skin conductance responses. Journal of Neuroscience Methods, *184*, 224-234.

Bach DR, Neuhoff JG, Perrig W, & Seifritz E (2009). Looming sounds as warning signals: the function of motion cues. International Journal of Psychophysiology, *74*, 28-33.

Herdener M, Lehmann C, Esposito F, Di Salle F, Federspiel A, **Bach DR**, Scheffler K, & Seifritz E (2009). Brain responses to auditory and visual stimulus offset: Shared representations of temporal edges. Human Brain Mapping, *30*, 725-733.

Bach DR, Herdener M, Grandjean D, Sander D, Seifritz E, & Strik WK (2009). Altered lateralisation of emotional prosody processing in schizophrenia. Schizophrenia Research, *110*, 180-187.

Bach DR, Buxtorf K, Grandjean D, & Strik WK (2009). The influence of emotion clarity on emotional prosody identification in paranoid schizophrenia. Psychological Medicine, *39*, 927-936.

2008

Bach DR, Grandjean D, Sander D, Herdener M, Strik WK, & Seifritz E (2008). The effect of appraisal level on processing of anger and fear prosody in meaningless speech. Neuroimage, *42*, 919-927.

Bach DR, Schächinger H, Neuhoff JG, Esposito F, DiSalle F, Lehmann C, Herdener M, Scheffler K, & Seifritz E (2008). Rising sound intensity: An intrinsic warning cue activating the amygdala. Cerebral Cortex, *18*, 145-150.

2007

Bach DR & Erdmann G (2007). Influences of habitual and situational bodily symptom focusing on stress responses. Cognition and Emotion, *21*, 1091-1101.

Herry C*, **Bach DR***, Esposito F, Di Salle F, Perrig WJ, Scheffler K, Luthi A, & Seifritz E (2007). Processing of temporal unpredictability in human and animal amygdala. Journal of Neuroscience, *27*, 5958-5966. * equal contribution

Lehmann C, Herdener M, Schneider P, Federspiel A, **Bach DR**, Esposito F, Di Salle F, Scheffler K, Kretz R, Dierks T, & Seifritz E (2007). Dissociated lateralization of transient and sustained blood oxygen level-dependent signal components in human primary auditory cortex. Neuroimage, *34*, 1637-1642.

Herdener M, Esposito F, Di Salle F, Lehmann C, **Bach DR**, Scheffler K, & Seifritz E (2007). BOLD correlates of edge detection in human auditory cortex. Neuroimage, *36*, 194-201.

2006

Bach DR, Erdmann G, Schmidtman M, & Monnikes H (2006). Emotional stress reactivity in irritable bowel syndrome. European Journal of Gastroenterology and Hepatology, *18*, 629-636.

Andresen V, Poellinger A, Tsrouya C, **Bach D**, Stroh A, Foerschler A, Georgiewa P, Schmidtman M, van der Voort I, Kobelt P, Zimmer C, Wiedenmann B, Klapp BF, & Monnikes H (2006). Cerebral processing of auditory stimuli in patients with irritable bowel syndrome. World Journal of Gastroenterology, *12*, 1723-1729.

Lehmann C, Herdener M, Esposito F, Hubl D, Di Salle F, Scheffler K, **Bach DR**, Federspiel A, Kretz R, Dierks T, & Seifritz E (2006). Differential patterns of multisensory interactions in core and belt areas of human auditory cortex. Neuroimage, *31*, 294-300.

2005

Andresen V, **Bach DR**, Poellinger A, Tsrouya C, Stroh A, Foerschler A, Georgiewa P, Zimmer C, & Monnikes H (2005). Brain activation responses to subliminal or supraliminal rectal stimuli and to auditory stimuli in irritable bowel syndrome. Neurogastroenterology and Motility, *17*, 827-837.

2004

Osmanoglou E, van der Voort I, Fach K, Kosch O, **Bach D**, Hartmann V, Strenzke A, Weitschies W, Wiedenmann B, Trahms L, & Mönnikes H (2004). Oesophageal transport of solid dosage forms depends on body position, swallowing volume and pharyngeal propulsion velocity. Neurogastroenterology and Motility, *16*, 547-556.

(2) Review papers

Freund P, Friston K, Thompson AJ, Stephan KE, Ashburner J, **Bach DR**, Nagy Z, Helms G, Draganski B, Mohammadi S, Schwab ME, Curt A, Weiskopf N. (2016). Embodied neurology: an integrative framework for neurological disorders. Brain, *in press*.

Stephan KE, **Bach DR**, Fletcher PC, Flint J, Frank MJ, Friston KJ, Heinz A, Huys QJ, Owen MJ, Binder EB, Dayan P, Johnstone EC, Meyer-Lindenberg A, Montague PR, Schnyder U, Wang XJ, Breakspear M (2016). Charting the landscape of priority problems in psychiatry, part 1: classification and diagnosis. Lancet Psychiatry, *3*, 77-83.

Stephan KE, Binder EB, Breakspear M, Dayan P, Johnstone E, Meyer-Lindenberg A, Schnyder U, Wang XJ, **Bach DR**, Fletcher PC, Flint J, Frank MJ, Heinz A, Huys QJM, Montague PR, Owen JM, Friston KJ (2016). Charting the landscape of priority problems in psychiatry, part 2: pathogenesis and aetiology. Lancet Psychiatry, *3*, 84-90.

Bach DR, & Friston KJ (2013). Model-based analysis of skin conductance responses: Towards causal models in psychophysiology. Psychophysiology, *50*, 15-22.

Bach DR, & Dolan RJ (2012). Knowing how much you don't know: a neural organization of uncertainty estimates. Nature Reviews Neuroscience, *13*, 572-586.

(3) Peer-reviewed case reports

Bach DR, Moggi F, Muller TJ, Seifritz E, Strik WK, & Wirtz G (2007). Possible genetic link between Darier's disease and depression : Review of the literature and case history. [Article in German.] Nervenarzt, *78*, 81-84.

Bach DR & Seifritz E (2005). "Simple dissociative disorder" in Central Europe: a case report. European Psychiatry, *20*, 572-573.

(4) Peer-reviewed commentaries

Bach DR (2014). Sympathetic nerve activity can be estimated from skin conductance responses - a comment on Henderson et al. (2012). Neuroimage, *84*, 122-123.

Bach DR, & Friston KJ (2012). No evidence for a negative prediction error signal in peripheral indicators of sympathetic arousal. Neuroimage, *16*, 883-884.

(5) Book chapters

Bach DR, Pryce CR, & Seifritz E (2011). The experimental manipulation of uncertainty. In: Raber J (Ed.). Animal models of behavioural analysis. New York: Springer. [ISBN 978-1-60761-883-6]

Bach DR & Erdmann G (2008). Subjective bodily symptoms during anticipation of public speaking: Influence of habitual symptom perception and actual symptom focusing. [Article in German]. In: Janke W, Schmidt-Daffy M, & Debus G (Eds.). Experimentelle Emotionspsychologie. Lengerich: Pabst. [ISBN 978-3-89967-450-7]

(6) Books

Bach DR (2009). Emotionale Effekte einer indirekten Amygdalastimulation beim Menschen. Berlin: dissertation.de