Dr. Anne-Dominique Gindrat

Research output list

Publications in peer-reviewed scientific journals

2018 Contestabile A, Colangiulo R, Lucchini M, **Gindrat AD**, Hamadjida A, Kaeser M, Savidan J, Wyss AF, Rouiller EM, Schmidlin E, *Asymmetric and distant effects of a unilateral lesion of the primary motor cortex on the bilateral supplementary motor areas in adult macaque monkeys*. J Neurosci. DOI: 10.1523/JNEUROSCI.0904-18.2018 [full text]

2015 **Gindrat AD***, Chytiris M*, Balerna* M, Rouiller EM, Ghosh A, *L'utilisation de smartphones façonne le traitement cortical de l'information sensorielle tactile provenant de l'extrémité des doigts*. Med Sci (Paris) 31(4):363-366. DOI: 10.1051/medsci/20153104006 [full text]

2015 **Gindrat AD***, Chytiris M*, Balerna M*, Rouiller EM, Ghosh A, *Use-Dependent Cortical Processing from Fingertips in Touchscreen Phone Users*. Current Biology 25(1):1-8. DOI: 10.1016/j.cub.2014.11.026 [full text]

2014 Kaeser M*, Chatagny P*, **Gindrat AD**, Savidan J, Badoud S, Fregosi M, Moret V, Roulin C, Schmidlin E, Rouiller EM, *Variability of manual dexterity performance in non-human primates (Macaca fascicularis)*. International Journal of Comparative Psychology 27(2):295-325 [full text]

2014 **Gindrat AD***, Quairiaux C*, Britz J, Brunet D, Lanz F, Michel CM, Rouiller EM, *Whole-scalp EEG mapping of somatosensory evoked potentials in macaque monkeys*. Brain Structure and Function 1-22. DOI: 10.1007/s00429-014-0776-y [full text]

2013 Chatagny P*, Badoud S*, Kaeser M, **Gindrat AD**, Savidan J, Fregosi M, Moret V, Roulin C, Schmidlin E, Rouiller EM, *Distinction between hand dominance and hand preference in primates: a behavioral investigation of manual dexterity in nonhuman primates (macaques) and human subjects*. Brain and Behavior 3:575-595, DOI: 10.1002/brb3.160 [full text]

2011 Schmidlin E, Kaeser M, **Gindrat AD**, Savidan J, Chatagny P, Badoud S, Hamadjida A, Beaud ML, Wannier T, Belhaj-Saif A, Rouiller EM, *Behavioral assessment of manual dexterity in non-human primates*. Journal of Visualized Experiments (57) e3258. DOI: 10.3791/3258 [full text]

2011 Peuser J, Belhaj-Saif A, Hamadjida A, Schmidlin E, **Gindrat AD**, Volker AC, Zakharov P, Hoogewoud HM, Rouiller EM, Scheffold F, *Follow-up of cortical activity and structure after lesion with laser speckle imaging and magnetic resonance imaging in nonhuman primates*. Journal of Biomedical Optics 16(9):096011-1-096011-11. DOI:10.1117/1.3625287 [full text]

Patent

7th Dec. 2017 Patent *Brain activity prediction* delivered by the European Patent Office, Inventors: Ghosh Arko, Rouiller Eric, Chytiris Magali, Balerna Myriam, **Gindrat Anne-Dominique**, publication number: US2017351958 (A1) [link]

Presentations

Invited talks

9th Sep. 2019 *Towards causal interference of the hand grasping network of rhesus monkeys*, Conference in honor of Prof. Eric M. Rouiller's retirement, Fribourg, Switzerland

5th Aug. 2015 *A window into the plasticity of the sensorimotor system in adult primates using EEG: Insights from lesion, repeated stimulation and touchscreen use*, German Primate Center, Göttingen, Germany

3rd Mar. 2015 *What do smartphones or macaque monkeys tell us about the reorganisation of the sensorimotor cortex in primates?*; Brain and Development Meeting, Children Hospital Zürich, Switzerland

29th Jan. 2015 *Lesion-induced or use-dependent reorganisation of sensorimotor cortex in primates*; Max Planck Institute for Biological Cybernetics, Tübingen, Germany

14th May 2014 *La recherche en neurosciences est-elle concevable sans modèle animal ?*; Société jurassienne d'Émulation; Porrentruy, Switzerland

31st Mar. 2010 *Development of an EEG cap allowing multichannel somatosensory evoked potential recordings in macaque monkey*; Faculty of Medicine, University of Geneva, Switzerland

Oral presentations

8th Sep. 2014 *Effect of primary motor cortex lesion on cortical processing of tactile finger stimulation in adult monkeys*; Hand, Brain and Technology, CSF Conference, Monte Verità, Switzerland

2nd Oct. 2013 *The sensorimotor system in macaque monkeys following a motor cortex lesion: study from whole-scalp EEG mapping of somatosensory evoked potentials and from the Brinkman box task*; Fribourg Day of Cognition 2013, University of Fribourg, Switzerland

27th June 2012 *Recordings of high-density scalp somatosensory evoked potentials in macaque monkeys (Macaca fascicularis)*; Dep-Med Seminar, Department of Medicine, University of Fribourg, Switzerland

14th June 2011 *Feasibility of high-density somatosensory evoked potential recordings in macaque monkeys*: a pilot study; NCCR P3 progress report, ETH, Zürich, Switzerland

Posters

2020 **Gindrat AD**, Scherberger H, *Towards causal interference of the hand grasping network of rhesus monkeys*, 30th Annual Neural Control of Movement Meeting, Dubrovnik, Croatia (*Abstract accepted but the meeting was later cancelled due to the COVID-19 pandemic*)

2020 **Gindrat AD**, Scherberger H, *Towards causal interference of the hand grasping network of rhesus monkeys*, Primate Neurobiology Conference, Tübingen, Germany
(*Abstract accepted but the conference was later cancelled due to the COVID-19 pandemic*)

2019 **Gindrat AD**, Scherberger H, *Toward electrophysiological and behavioral effects of causal perturbations in the hand grasping network of rhesus monkeys*, Meeting of the Society for Neuroscience, Chicago, USA

2018 **Gindrat AD**, Roux C, Kaeser M, Schmidlin E, Rouiller EM, Ghosh A, *Surround inhibition on the fingertips of human and non-human primates*, Hand, Brain and Technology, CSF Conference, Monte Verità, Switzerland

2018 **Gindrat AD**, Scherberger H, *Causal investigation of the primate hand grasping network with pathway-specific neuro-optogenetics*, Primate Neurobiology Meeting, Tübingen, Germany

2017 **Gindrat AD**, Scherberger H, *Probing the primate hand grasping network with neuro-optogenetics*, Primate Neurobiology Meeting, Göttingen, Germany

2015 **Gindrat AD**, Rouiller EM, Ghosh A, *Tactile processing from the hand is altered by a motor cortex lesion in non-human primates*, Meeting of the Swiss Society for Neuroscience, Fribourg, Switzerland

2014 **Gindrat AD**, Rouiller EM, Ghosh A, *Tactile information processing associated with the primate hand is altered by motor cortex lesion*, Meeting of the Society for Neuroscience, Washington CD, USA

2014 Rouiller EM, **Gindrat AD**, Kaeser M; Wyss A; Leuthard C, *Visually blind behavioural assessment of functional recovery of manual dexterity from motor cortex lesion in macaque monkeys*, Meeting of the Society for Neuroscience, Washington DC, USA

2014 **Gindrat AD**, Rouiller EM, Ghosh A, *Effect of primary motor cortex lesion on cortical processing of tactile finger stimulation in adult monkeys: an EEG study*, Hand, Brain and Technology, CSF Conference, Monte Verità, Switzerland

2014 **Gindrat AD**, Rouiller EM, Ghosh A, *EEG assessment of the cortical mechanisms underlying sensory integration from the fingers in non-human primates*, FENS Forum, Milano, Italy

2014 Schmidlin E, **Gindrat AD**, Kaeser M, Wyss A, Leuthard C, Rouiller EM, *Functional restitution of manual dexterity in macaque monkeys after a motor cortex lesion assessed with the Brinkman box task*, FENS Forum, Milano, Italy

2014 **Gindrat AD**, Leuthard C, Kaeser M, Wyss A, Rouiller E M, *Functional recovery of manual dexterity in non-human primates following a motor cortex lesion assessed with the Brinkman box task*, Meeting of the Swiss Society for Neuroscience, Berne, Switzerland

2013 **Gindrat AD**, Leuthard C, Kaeser M, Wyss A, Rouiller E M, *Assessment of functional recovery of manual dexterity in non-human primates following a motor cortex lesion using the Brinkman box task*, 28th Life Science Symposium, Lausanne, Switzerland

2013 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *High-density scalp somatosensory evoked potentials as follow-up of functional recovery from motor cortex lesion in macaque monkeys*, BENEFRI Neuroscience workshop, Bern, Switzerland

2013 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *High-density scalp somatosensory evoked potentials in macaque monkeys in the context of a future motor cortex lesion*, Meeting of the Swiss Society for Neuroscience, Geneva, Switzerland

2012 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *High-density scalp somatosensory evoked potentials as follow-up of functional recovery from motor cortex lesion in macaque monkeys*, NC3Rs Primate Welfare Meeting - Chronic implants workshop: let's share what works, London, UK

2012 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *High-density scalp somatosensory evoked potentials in macaque monkeys as follow-up of functional recovery from motor cortex lesion*, FENS Forum, Barcelona, Spain

2012 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *Recordings of scalp somatosensory evoked potentials in macaque monkeys with a high-density electrode array*, BENEFRI Neuroscience workshop, Fribourg, Switzerland

2012 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *Recordings of scalp somatosensory evoked potentials in macaque monkeys with a high-density electrode array*, Meeting of the Swiss Society for Neuroscience, Zürich, Switzerland

2011 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Michel CM, Rouiller EM, *Feasibility of high-density scalp somatosensory evoked potential recordings in macaque monkeys: a pilot study*, 10^{e} Colloque de la Société française des Neurosciences, Marseille, France

2011 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Michel CM, Rouiller EM, *Development of high-density scalp somatosensory evoked potential recordings in macaque monkeys*, NCCR Neuro, Ittigen, Switzerland

2011 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Brunet D, Michel CM, Rouiller EM, *Development of high-density scalp somatosensory evoked potential recordings in macaque monkeys*, BENEFRI Neuroscience workshop, Berne, Switzerland

2011 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Michel CM, Rouiller EM, *Development of high-density scalp somatosensory evoked potential recordings in macaque monkeys*, Meeting of the Swiss Society for Neuroscience, Basel, Switzerland

2010 **Gindrat AD**, Quairiaux C, Britz J, Lanz F, Michel CM, Rouiller EM, *High-density scalp somatosensory evoked potential recordings in macaque monkey: development of a minimally invasive tool*, FENS Forum, Amsterdam, Netherlands

Scientific outreach

26th Jan. 2019 Volunteer at Fourth *Nacht des Wissens*, where scientists from the Göttingen Campus present their work to the public, Göttingen, Germany

25th Mar. 2015 Radio interview for a scientific broadcast (RTS la 1ère, CQFD) *L'impact des smartphones sur le cerveau* [link]

14th Jan. 2015 TV interview for Swiss prime-time news (RTS, le 19h30) *Chez le natif digital, l'usage de la main est modifié ainsi que les effets sur le cerveau* [link]

2014 – 2015 Interview for written press (La Liberté, Le Quotidien Jurassien) *Impact of smartphone use on sensory processing in the brain*

14th May 2014 *La recherche en neurosciences est-elle concevable sans modèle animal ?*; Public lecture at the Société jurassienne d'Émulation; Porrentruy, Switzerland

Unpublished work

2018 **Gindrat AD**, Roux C, Kaeser M, Schmidlin E, Rouiller EM, Ghosh A, *Surround inhibition on the fingertips of human and non-human primates*, in preparation

2017 **Gindrat AD***, Aleksic M*, Rouiller EM, Ghosh A, *Unstable temporal dynamics of neuronal responses to touch in anesthetized macaque monkeys*, in preparation

2015 **Gindrat AD**, *A window into the plasticity of the sensorimotor system in adult primates using EEG: insights from lesion, repeated stimulation and touchscreen use*. University of Fribourg, Department of Medicine, PhD thesis n° 1923, 749 pp. [full text]

Göttingen, February 10, 2021