# KEP KEE LOH, Ph.D.

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ResearchGate: https://www.researchgate.net/profile/Kep_Kee_Loh

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## EDUCATION

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| 01/10/2014 – 01/10/2018 | **Ph.D. in Neuroscience.** *Stem Cell and Brain Research Institute (Inserm U1208), University Claude Bernard Lyon 1, Bron, France.* Thesis: Anatomo-functional organization of adaptive manual, orofacial and vocal control in the human frontal cortex. Advisors: Dr. Celine Amiez, Prof. Emmanuel Procyk. |
| 26/09/2011 – 25/09/2012 | **M.Sc. in Cognitive Neuroscience.** *Institute of Cognitive Neuroscience, University College London, United Kingdom.* Thesis: Individual differences in online social media use are reflected in brain structure. Advisor: Dr. Ryota Kanai. |
| 11/08/2007 – 07/05/2011 | **B. Soc. Sci (2nd Upp. Hons.) in Psychology.** *National University of Singapore, Singapore.* Project: Attentional focus on what's motivationally relevant aids performance at high exercise intensities. Advisor: Assoc. Prof. Stephen Lim. |
| 04/01/2010 – 19/03/2010 | **Overseas Exchange Program.** *University of California, Santa Cruz, USA.* |

## RESEARCH AND PROFESSIONAL EXPERIENCES

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| 01/01/2019 – Present | **ILCB Postdoctoral Fellow** at *Institute de Neurosciences de la Timone, Aix-Marseille Université, France.* Advisors: Dr. Olivier Coulon and Dr. Adrien Meguerditchian. Project: Nested cortical sulci organisation models for human and non-human primate inter-species comparisons. |
| 01/10/2014 – 01/10/2018 | **LabEx Cortex PhD Student** at *Stem Cell and Brain Research Institute (Inserm U1208), University Claude Bernard Lyon 1, Bron, France.* Advisors: Dr. Celine Amiez, Prof. Emmanuel Procyk. Thesis: Anatomo-functional organization of adaptive manual, orofacial and vocal control in the human frontal cortex. |
| 10/09/2012 – 06/06/2014 | **Post-Graduate Research Assistant** at *Cognitive Neuroscience Laboratory, Duke-NUS Medical School, Singapore.* Advisors: Dr. June Lo, Prof. Michael Chee. Projects: 1. Longitudinal brain and cognitive changes in a healthy elderly cohort (Singapore Longitudinal Aging Brain Study). 2. Effects of sleep deprivation on brain and cognition. |
| 2012 – Present | **Research Collaboration** with *Dr. Ryota Kanai (CEO, Araya Brain Imaging, Japan)* Project: The effects of Internet technologies on brain structure and cognitive functions. |
| 2011 – Present | **Research Collaboration** with *Assoc. Prof Stephen Lim (National University of Singapore)* Project: The effects of media-multitasking on classroom learning. |
| 2011 | **Research Internship** at *Defence Psychology Department, Ministry of Defence, Singapore.* Project: Designing a survey research guide for the Defence Psychology Department. |
| 2006 – Present | **Army Lieutenant** at *6th Division Engineers, Singapore Armed Forces.* |

**PEER-REVIEWED PUBLICATIONS**

**(**Latest update: August 2020; Source: Web of Science, self-citations excluded**)** **Citations**

1. **Loh, K. K.**, & Lim, S. W. H. (2020). Positive associations between media-multitasking and creativity. ***Computer in Human Behavior Reports***. **0**
2. **Loh, K. K.,** Procyk, E., Neveu, R., Lamberton, F., Hopkins, William D., Petrides, M., & Amiez, Céline. (2020). Cognitive control of orofacial motor and vocal responses in the ventrolateral and dorsomedial human frontal cortex. ***PNAS*** **[IF: 9.35]** **0**
3. **Loh, K. K.**, Hadj-Bouziane, F., Petrides, M. & Procyk, E. (2018). Rostro-caudal organization of connectivity between cingulate motor areas and lateral frontal regions. ***Frontiers in Neuroscience*** **[IF: 3.81]**. **5**
4. **Loh, K. K.**, Petrides, M., Hopkins, W. D., Procyk, E. & Amiez, C. (2017). Cognitive control of vocalizations in the primate ventrolateral-dorsomedial frontal (VLF-DMF) brain network. ***Neuroscience and Biobehavioral Reviews*** **[IF: 8.40]**. **14**
5. **Loh, K. K.** & Kanai, R. (2016). How has the Internet reshaped human cognition? ***The Neuroscientist*** **[IF: 5.34]** [Interviewed by *Science et Vie*, Issue: June 2017]. **39**
6. **Loh, K. K.**, Tan, B. Z. H. & Lim, S. W. H. (2016). Media multitasking predicts video-recorded lecture learning performance through mind wandering tendencies. ***Computers in Human Behaviour*** **[IF: 4.62]** **15**
7. **Loh, K. K.** & Kanai, R. (2014). Higher media-multitasking activity is associated with decreased gray matter density in the anterior cingulate cortex. ***PloS One*** **[IF: 3.77]** [Media coverage: *Huffington Post, BBC Science Focus, CBS news, Forbes, Time, etc.*]. **39**
8. Lo, J. C., **Loh, K. K.,** Zheng, H., Sim, S. K. & Chee, M. W. L. (2014). Sleep duration and age-related changes in brain structure and cognitive Performance. ***Sleep*** **[IF: 5.47]** **48**
9. Lo, J. C., Leong, R. L., **Loh, K. K.**, Dijk, D., & Chee, M. W. L. (2014). Young adults' sleep duration on work days: differences between East and West. ***Frontiers in Neurology*** **[IF: 3.57].** **13**

**PREPRINTS/WORKING MANUSCRIPTS**

1. Messinger, A., … **Loh, K. K.,** et al. (*Accepted*, *Neuroimage*). A collaborative resource platform for non-human primate neuroimaging. [Collaborative paper from PRIME-DE consortium; preprint on ***BioRxiv***: doi.org/10.1101/2020.07.31.230185]
2. Friedrich, P., … **Loh, K. K.,** et al. (under review, *Neuroimage*). Imaging the primate brain evolution: the next frontier? [Collaborative paper from Comparative MRI (CompMRI) meeting 2019; preprint on ***ResearchGate***: doi 10.13140/RG.2.2.23892.83849/1]
3. **Loh, K. K.**, Chakraborty, P., Sadhu, A., Mukherjee, M., Datta, H., Chatterjee, G., Kanai, R. (in revision, *Computers in Human Behavior*). Longitudinal cognitive and brain changes associated with one-month of increased Internet access. [preprint on ***PsyArXiv:*** doi.org/10.31234/osf.io/p927z]

**ONLINE RESOURCES AND SOFTWARES**

1. **Loh, K. K.,** Mars, R., Sein, J., Xu, T., Klink, C. (2020). A primer to non-human primate neuroimaging: The Primate Resource Exchange Guide for the Perplexed and Frustrated. [Tutorial for non-human primate MRI on the PRIME-RE collaborative resource; https://github.com/PRIME-RE/prime-re.github.io/wiki]
2. Meunier, D., Cagna, B., Trapeau, R., Sein, J., **Loh, K. K.** (2020). Macapype – an open-source multi-modal brain data analysis kit for non-human primate neuroimaging data. [Python-based software package for non-human primate MRI anatomical processing; https://macatools.github.io/macapype/].

## CONFERENCES, POSTERS AND TALKS

1. **Loh, K. K.,** Auzias, G., Lemercier, P., Hopkins, W., Coulon, O. (2019). A sulci-based organization model of the macaque brain for within- and between-species comparisons. Poster at *Brain and Behavioral Evolution in Primates Workshop*, Erice, Sicily, Italy.
2. **Loh, K. K.** (2019). Cognitive control of orofacial and vocal motor responses in the human frontal cortex. Invited talk at *ILCB Lunch Talks*, Marseille, France.
3. **Loh, K. K**. (2018). Anatomo-functional organization of adaptive manual, vocal and orofacial control in the human frontal cortex. Invited seminar at Institute de Neurosciences de la Timone, Marseille, France.
4. **Loh, K. K**., Procyk, E., & Amiez, C. (2017). Cognitive control of vocal and orofacial responses in the human Broca-MCC network. Poster at *NeuroFrance Meeting 2017*, Bordeaux, France.
5. **Loh, K. K**., Procyk, E., & Amiez, C. (2016). Cognitive control of vocalizations in the human ventrolateral-dorsomedial frontal brain network. Poster at *6th Motivation and Cognitive Control Symposium*, St Andrews, UK. **[Brain Travel Award].**
6. **Loh, K. K**. (2016). Cognitive control of vocalizations in the primate frontal cortex. Talk for *Labex Cortex Student Conference*, Institute des Sciences Cognitives, Bron, France.
7. **Loh, K. K.** & Kanai, R. (2013) Higher media multitasking activity is associated with decreased gray matter density and functional connectivity in cognitive control brain regions. Poster at *Society for Neuroscience Meeting 2013*, San Diego, USA.
8. **Loh, K. K.** & Kanai, R. (2013). Individual differences in social media use are reflected in brain structure. AAAI Technical Report. Oral presentation at *Association of Artificial Intelligence (AAAI) Spring Symposium 2013*, Stanford University, USA.
9. **Loh, K. K.** & Lim, S. W. H. (2012). Attention focus on what's motivationally relevant aids performance at high exercise intensities. Oral presentation at *Annual International Conference on Cognitive and Behavioral Psychology*, Singapore. **[Best Research Paper Award].**

## AWARDS, HONOURS, AND FUNDING

*Academic*

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| 2019 – 2020 | **ILCB Postdoctoral Fellowship** (ranked 2nd in competitive selection among postdoctoral applicants as a doctoral student) from *Aix-Marseille Université,* 48000€. |
| 2017 – 2018 | **Fin de Thése de Sciences 4th year PhD scholarship** from *Fondation Recherche pour la Recherche Médicale (FRM),* 34008€. |
| 2016 | **Travel Award** for the 6th Motivation and Cognitive Control from *Brain, A Journal of Neurology*. £200 + registration and accommodation fees. |
| 2014 – 2017 | **LabEx Cortex PhD Scholarship** from *Université de Lyon*. 60657.48€. |
| 2012 | **Best Research Paper** at *Annual International Conference on Cognitive and Behavioral Psychology,* Singapore**.** |
| 2007 | **Dean's List for Excellent Academic Performance.** *National University of Singapore.* |

*Non-academic*

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| 2012 | **Champion** in 3rd/4th Kyu Grade, -90 Kg Category**,** *British Judo Championships*. |
| 2011 | **Commendation for Service (Distinction)** at NUS Kent Ridge Hall. |
| 2010 | **Honorary Award – Aquathlon,** *National University of Singapore.* |

2008 **President Sports Team of the Year – Aquathlon,** *National University of Singapore.*

2006 **Certificate of Military Service (Excellent),** *Ministry of Defence, Singapore.*

## SKILLS

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| MRI | • Processing and analysis of anatomical (T1, diffusion-weighted imaging, surface-based data) and functional (resting-state, task-based data) MRI data.<br>• Familiar with both human and non-human primate MRI data.<br>• Familiar with a range of neuroimaging softwares: FSL, ANTs, AFNI, SPM, Freesurfer, Brainvisa, MRtrix, Nipype. |
| Primate neuroanatomy | • Human and non-human primate brain sulcal anatomy<br>• Comparative studies of anatomical and functional MRI data involving macaques, baboons, chimpanzees and humans.<br>• Actively involved in international non-human primate neuroimaging communities (e.g. PRIME-DE, PRIME-RE) |
| Non-human primate research | • Setting up equipment for macaque fMRI training and experimentation<br>• Training of macaque monkeys for fMRI and behavioral experimentation.<br>• Macaque husbandry: feeding, conditioning and maintenance of living spaces. |
| Coding/ Data analyses | • Software package development (https://github.com/Macatools/macapype)<br>• Version control with Git.<br>• Statistical analyses with R, Python, Matlab and SPSS.<br>• Scripting in R, python, Matlab and bash. |
| Sleep research | • Polysomnography: setting up of equipment and data analysis<br>• Sleep deprivation behavioral protocols |
| Aging research | • MRI scanning and neuropsychological testing involving elderly subjects. |
| Languages | • English and Mandarin Chinese (Native level)<br>• French (B1 proficiency) |

## TEACHING AND MENTORSHIP

1. Supervised Jeanne Abitbol (Aix-Marseille Université) for her Masters internship in *inter-species cortical surface comparisons*.
2. Supervised Nicolas Clairis (Ecole Normale Superieur Lyon) for his Masters internship in *human fMRI*.
3. Supervised Julie Polge (University Claude Bernard Lyon 1) for her Masters thesis in *human fMRI*.
4. Supervised Noémie Bakouch (Faculté de Médecine Lyon-Sud) for her medical research internship.
5. Supervised Isabelle Jousset (Centre Recherche Interdisciplinaires) for her undergraduate internship.
6. Supervised Salomé Fayolle (University Claude Bernard Lyon 1) for her undergraduate dissertation in the *comparative analyses of macaque-human resting-state connectivity*.

## JOURNAL REVIEWER

1. Ad-hoc reviewer for *Scientific Reports.*
2. Review editor for *Frontiers in Psychology.*