

Curriculum Vitae

トーケル・クリングバーグ

アドレス

Dept. Women and Child Health, Karolinska Institutet
Stockholm Brain Institute, MR-center N8:0, 171 76 Stockholm, Sweden
Phone: +46-8-51776118
E-mail: torkel.klingberg@ki.se
Web: www.klingberglab.se

現在のポジション

カロリンスカ大学認知神経科学教授
Professor in Cognitive Neuroscience at Karolinska Institutet
王立科学アカデミー研究職
Research position from the Royal Academy of Science (KVA).

学業・研究歴

- 1997** カロリンスカ大学博士号。論文名: “The Neurophysiology of Working Memory - functional mapping of the human brain with positron emission tomography”. 指導教授 Per E Roland。
- 1998** カロリンスカ大学および病院より医学博士号(1998年1月)。
- 1998** P 米国カリフォルニア州スタンフォード大学心理学科(John Gabrieli 教授)および放射線医学科(Michael Moseley 教授)にてポストドク。
- 2001** カロリンスカ大学ポストドク。
- 2002** スウェーデン研究評議会助教授(Assistant professor (“forskarassistent tj·nst”), Swedish Research Council (VR))。
- 2004** カロリンスカ大学脳神経科学准教授(Associate Professor (“docent”) in Neuroscience at Karolinska Institutet)。
- 2005** 王立科学アカデミー資金による研究職(Research position financed by the Royal Academy of Sciences (KVA))。
- 2006** カロリンスカ大学認知神経科学教授(Professor in Cognitive Neuroscience at Karolinska Institutet)。

受賞

- 国際神経心理学会より重要な貢献 Butter's 賞 2002 年(Butter's award 'for outstanding contribution.' From the International Neuropsychological Society, 2002)。
- スウェーデン失読症基金重要な研究賞 2002 年(Swedish Dyslexia Foundation reward for outstanding research, 2002)。
- 戦略研究基金より 2004 年度”未来の研究指導者”賞、6 年間、1000 万スウェーデンクローネ寄附金およびキャリア開発計画。4 年毎に 17 人の若手教授に与えられる。“Research Leader of the Future” - award from Strategic Research Foundation, 2004, a 6-year, 10 MSEK grant and a career development program given to 17 junior professors in Sweden every 4 years.
- 博士課程学生 Pernille Olesen が 2005 年カロリンスカ大学ベスト論文として Chorafa 賞と、2007 年”Child medicin”から受賞。PhD student Pernille Olesen got the Chorafa prize for best thesis at the Karolinska Institute, 2005, and prize from “Child medicin” 2007.
- フィリップス北欧賞 2006。Philips Nordic Prize, 2006.

授与と表彰(英文のままとさせていただきます)

Brain Foundation's (Hj·rnfonden) Post-doc Stipend 2000; Wenner-Gren Post-doc Stipend 1998 and 1999; Sven Jerrings Foundation, 2000; Dyslexia Foundation, 2000
 Stiftelsen Barnav·rd, grant, 2000; Jeansson Stiftelse stipendiat, 2000, 2001
 RBU, grant 2000; Linn·a och Josef Carlsson Stifelse, grant 2000; KI “Young promising researcher” grant, 2001; Medical Research Council (MFR/VR) 1999, 2000, 2001, 2002, 2003, 2004; Wallenberg Global Learning Network (Principal applicant, in collaboration with Stanford University) 2002-2003, 2005-2006. Elected member of the Rodin Remediation Academy, 2002. Future Research Leader gran (6 years 10 MSEK) from Foundation for Strategic Research. 2004-2010; Elected member of the Swedish Dyslexia Foundation, 2006; Riksbanken Jubileumsfond Grant: “Learning and memory in children and young adults”, 3 year, 16 MSEK, 2006.

査読者(論文誌、学会)

Science, Brain, Archives of General Psychiatry, Trends in Cognitive Sciences, Cerebral Cortex, Journal of Neuroscience, Cognitive Brain Research, Human Brain Mapping, NeuroImage, NeuroReport, Neuroscience Letters, Neuropsychology, J Clinical and Experimental

Neuropsychology, Quarterly Journal of Experimental Psychology, Medical Research Council UK, Developmental Science, J Affective and Behavioral Neuroscience.

招聘國際講演

- Intern. Summer School of Brain Research, Amsterdam, 1999.
- Functional Mapping of the Human Brain, Brighton, UK, 2001
- Memory and the Brain”, Sendai, Japan, 2001
- ISMRM Diffusion MRI Workshop”, Saint-Malo, France, 2002.
- Rodin Remediation Academy”, Munich, Germany, 2002
- IBRO/FENS Summer School 2003, entitled "Development and Plasticity of the Human Cerebral Cortex".
- New York Academy of Sciences meeting, 2004
- European Academy of Child Disability, Edinburgh, GB, 2004.
- Advances in developmental cognitive neurosci., Amsterdam. April 2005.
- European Soc. for on Cognitive Psychol.. Leiden, Holland, August 2005.
- IBRO/FENS Summer School, Zagreb, Croatia, September, 2005.
- Conference Children and Adults with ADHD (CHADD), Chicago, 2006.
- European Society for Neuropsychology, Toulouse, 2006.
- Cognitive Neuroscience Society, New York, April, 2007.
- European College of Neuropsychopharmacology, Vienna, Oct 2007.
- Conf. Children and Adults with ADHD (CHADD), Washington, Nov 2007

特許

- Main inventor on US patent 6,463,315 “Analysis of Cerebral White Matter For Prognosis and Diagnosis of Neurological Disorders”.
- Main inventor on European patent 1387644 “Computer training system”
- Inventor of US patent 7,186,116 “System and method for improving memory capacity of a user”.

指導生徒

Co-supervisor of graduate students

Fritjof Norrelgen (dissertation 2002)

Zoltan Nagy (2001-2003)

Fredrik Edin (starting 2003, dissertation jan 2008)

Main supervisor of graduate students

Helena Westerberg (dissertation, May 2004)

Pernille Olesen (dissertation Nov 2005)

Julian Macoveanu (dissertation Sep 2006).

Sissela Bergman (registered, Sep 2006)

Supervision of post-docs

Fabien Schneider (2005 - 2006)

Lisa Thorell (2005)

Fiona McNab (Aug 2005 -)

Ga·lle Leroux (2006-2007)

Henrik Larsson (Jan 2007-)

出版物

Klingberg T, Roland PE, Kawashima R (1994) The human entorhinal cortex participates in associative memory. *NeuroReport* 6:57-60.

Klingberg T, Roland PE, Kawashima R (1996) Activation of multi-modal cortical areas underlies short-term memory. *European J Neurosci.*, 8, 1965-1971.

Geyer, S, Ledberg, A., Schleicher, A., Kinomura, S., Schormann, T., B·rgel, U., Klingberg, T., Larsson, J., Zilles, K., Roland, PE. (1996) Two different areas within the primary motor cortex of man. *Nature* 382: 805-807.

Klingberg T, Roland PE (1997) Interference between two concurrent tasks is associated with activation of overlapping fields in the cortex. *Cognitive Brain Res.* 6, 1-8.

Klingberg T, O'Sullivan BT, Roland PE (1997) Bilateral activation of fronto-parietal networks by incrementing demand in a working memory task. *Cerebral Cortex*, 7, 465-471.

Klingberg, T. (1997) The neurophysiology of working memory · functional mapping of the human brain with positron emission tomography. *Thesis*.

Klingberg T, Roland PE (1998) Right prefrontal activation during encoding, but not during retrieval, in a non-verbal paired associates task. *Cerebral Cortex* 8:73-9.

Klingberg T (1998) Concurrent performance of two working memory tasks: potential mechanisms of interference. *Cerebral Cortex* 8:593-601.

Klingberg T, Vaidya CJ, Gabrieli JDE, Moseley ME, Hedehus M (1999) Myelination and organization of the frontal white matter in children: a diffusion tensor MRI study. *Neuroreport* 10:2817-21.

Nilsson LG, Nyberg L, Klingberg T, Berg C, Persson J, Roland PE (2000) Activity in motor areas while remembering action events. *NeuroReport* 11: 2199-2201.

Bunge SA, Klingberg T, Jacobsen RB, Gabrieli JDE. (2000) A resource model of the neural basis of executive working memory. *Proc Natl Acad Sci, USA*,97(7): 3573-3578

Klingberg T, Hedehus M, Temple E, Salz T, Gabrieli JDE, Moseley ME, Poldrack RA (2000) Microstructure of Temporo-Parietal White Matter as a Basis for Reading Ability : Evidence from Diffusion Tensor Magnetic Resonance Imaging. *Neuron*: 25:493-500

Klingberg T, (2000) Limitations in information processing in the human brain: neuroimaging of dual-task performance and working memory tasks. *Prog Brain Res*.126:95-102.

Herath P, Klingberg T, Young J, Roland PE (2001) Neural correlates of dual task interference can be dissociated from those of divided attention: an fMRI study. *Cerebral Cortex* 11(9):796-805

Klingberg, T, Forssberg, H, Westerberg, H (2002) Increased Brain Activity in Frontal and Parietal Cortex Underlies the Development of Visuo-spatial Working Memory Capacity During Childhood. *J Cognitive Neuroscience*.14(1):1-10.

Klingberg, T, Forssberg, H, Westerberg, H (2002) Training of Working Memory in Children with ADHD *J Clinical and Experimental Neuropsychology* 24(6): 781-91.

Nagy, Z, Westerberg, H, Skare, S, Andersson, JL, Fernell, E, Holmberg, K, B·hm, B, Forssberg, H, Lagercrantz, H, Klingberg, T (2003) Preterm children have disturbances of white matter at 11 years of age as shown by diffusion tensor imaging. *Paediatric Research* Nov;54(5):672-9.

Olesen, P, Nagy, Z, Westerberg, H, Klingberg, T (2003) Combined analysis of DTI and fMRI data reveals a joint maturation of white and grey matter in a fronto-parietal network. *Cognitive Brain Research* 18(1) 48-57

Olesen, P, Westerberg, H, Klingberg, T (2004) Increased prefrontal and parietal brain activity after training of working memory. *Nature Neuroscience* 7 (1):75-79

Westerberg, H, Hirvikoski, T, Forssberg, H, Klingberg, T (2004) Visuo-spatial working memory span: a sensitive measure of cognitive deficits in children with ADHD. *Child Neuropsychology* 10 (3) 155-61

Nagy, Z, Westerberg, H, Klingberg, T (2004) Regional maturation of white matter during childhood and development of function. *Journal of Cognitive Neuroscience* 16:1227-33

Nagy Z, Lindström, K, Westerberg, H, Skare, S., Andersson, J., Hallberg, B, Lagercrantz, H, Klingberg, T, Fernell, E., (2005) Diffusion tensor imaging on teenagers, born at term with moderate hypoxic-ischemic encephalopathy. *Pediatr Res.* 58 (5): 936-40.

Klingberg, T, Fernell, E, Olesen, P, Johnson, M, Gustafsson, P, Dahlström, K, Gillberg, CG, Forssberg, H, Westerberg, H. (2005) Computerized Training of Working Memory in Children with ADHD - a Randomized, Controlled Trial. *J Am Acad Child Adolesc Psychiatry* 44 (2):177-186

Klingberg, T. (2006) Development of a superior frontal - intraparietal network for visuo-spatial working memory.. *Neuropsychologia*.44 (11):2171-7

Hedman L. Klingberg T. Kjellin A. Wredmark T. Enochsson L. Fellander-Tsai L. (2006) Working memory and image guided surgical simulation. *Studies in Health Technology & Informatics* 119:188-93, 2006.

Macoveanu J, Tegnér J, Klingberg, T (2006) A biophysical model of multiple-item working memory: a computational and neuroimaging study. *Neuroscience* 141(3):1611-8.

Olesen, PJ; Macoveanu, J, Tegnér, J, Klingberg, T (2006) Development of Brain Activity During Separate Working Memory Events - Altered Frontal Activity Related to Distraction in Children. *Cerebral Cortex Epub 2006 Jun 26. Paper version May 2007* 17(5):1047-54.

Shavelson, R.J., Yuan, K., Alonzo, A.C., Klingberg, T., & Andersson, M. (2006). On the Impact of Computer Cognitive Training on Working Memory and Fluid Intelligence. In D.C. Berliner & H. Kuppermintz (Eds.), *Contributions of Educational Psychology to Changing Institutions, Environments, and People*. Mahwah, NJ: Erlbaum.

Hedman, L, Klingberg T, Kjellin A, Wredmark T, Enochsson L, Fellander-Tsai L (2006) Working memory and image guided surgical simulation. *Stud Health Technol Inform.* 119:188-93.

Edin, F, Macoveanu, J, Olesen, P, Tegn r, J, Klingberg, T. (2007) Stronger synaptic connectivity as a mechanism behind development of working memory-related brain activity during childhood. *J. Cogn. Neurosci.*19(5):750-60.

Macoveanu, J., Klingberg T., Tegn r J. (2007) Behavioral evidence supports a strong NMDA receptor dominant recurrent mode of action for working memory as revealed by computational modeling. *Biological Cybernetics* 96(4):407-19.

Westerberg H, Jacobaeus H, Hirvikoski T, Clevberger P, Ostensson J, Bartfai A, Forssberg H, Klingberg T (2007), Computerized working memory training after stroke - a pilot study. *Brain Injury*21 (1) 21-9.

Westerberg, H., Klingberg, T. (2007) Changes in Cortical Activity after Training of Working Memory - a single subject analysis. *Physiology and Behavior*.

Thorell, LB, Lindqvist, S, Bergman, S, Bohlin, G, Klingberg, T (in press) Training and transfer effects of executive functions in preschool children. *Developmental Science*

McNab, F, Klingberg, T (in press) Prefrontal cortex and basal ganglia control access to working memory. *Nature Neuroscience*.

提出済み原稿

Klingberg, T, Andersson, M, Ljungb ck, H, Forssberg, H (submitted) The Effect of Stimulant Medication on Cognitive Training

Strand, F, Norrelgen, F, Forssberg, H, Klingberg, T (submitted) Phonological Working Memory with Auditory Presentation of Non-Words - An Event Related FMRI Study

McNab, F, Strand, F, Thorell, L, Klingberg, T (submitted) Common and unique components of inhibition and working memory.

Edin, F, Klingberg, T, St dberg, T, Tegn r, T (submitted) Fronto-parietal connection assymetry regulates working memory distractability.