

RECALL Reading List

Augmenting Human Memory Capture and Recall in the Era of Lifelogging

This reading list was initially compiled for and during the Dagstuhl Seminar 14362 held in September 2014.

Part 1: Basic Reading and Background

Textbooks

Psychology

- Baddeley, A., Eysenck, M. W., & Anderson, M. C. (2009). Memory. <http://www.amazon.com/Memory-Alan-Baddeley/dp/1848720017/>
- Cohen, G., & Conway, M. A. (2007). Memory in the real world. 3rd edition. Psychology Press. Hove, UK. <http://www.amazon.co.uk/Memory-Real-World-Gillian-Cohen/dp/1841696412>
- Kahana. Foundations of human memory. <http://www.amazon.com/Foundations-Memory-Michael-University-Hardcover/dp/B00E2RKZ2K/>
- Neath, I., & Surprenant, A. M. (2003). Human memory: An introduction to research, data, and theory. Second edition, Belmont, CA: Wadsworth. ISBN: 0534595626. <http://memory.psych.mun.ca/pubs/books/hm2/index.shtml>. <http://www.amazon.co.uk/Human-Memory-Introduction-Research-Theory/dp/0534595626>

Cultural Studies

- van Dijck, J. (2007). Mediated Memories in the Digital Age. Stanford: Stanford University Press. *The author is professor of media study at the University of Amsterdam. She looks at how technology objects (from audio tapes and Super8 to digital photography) support the reconstruction of personal memories. She puts forward a framework that positions the act of remembering as mediation between past and present, self and the others. There is a chapter that looks critically at implemented systems.*

Digital Preservation

- Deegan, M. & Tanner, S. (eds.) (2006) Digital Preservation, Facet Publishing. *A very good overview of the practice and open issues of preserving digital content for future use/generations.*

Papers

Computer Science

- Gemmel, I.J., Bell, G., & Lueder, R. (2006). MyLifeBits: a personal database for everything. *Commun. ACM* 49, 1, 88-95. <http://doi.acm.org/10.1145/1107458.1107460>
- Sellen, A. & Whittaker, S. (2010). Beyond total capture: a constructive critique of lifelogging. *Commun. ACM* 53, 5, 70-77. <http://doi.acm.org/10.1145/1735223.1735243>
- Lamming, M., & Flynn, M. (1994). Forget-me-not: Intimate computing in support of human memory. In *Proc. FRIEND21, 1994 Int. Symp. on Next Generation Human Interface*. <http://www.ee.columbia.edu/~dpwe/papers/LamF94-forgetmenot.pdf>
- Lamming, M., Brown, P., Carter, K., Eldridge, M., Flynn, M., Louie, G., ... & Sellen, A. (1994). The design of a human memory prosthesis. *The Computer Journal*, 37(3), 153-163. <http://comjnl.oxfordjournals.org/content/37/3/153.full.pdf>
- Rhodes, B. J. (1997). The wearable remembrance agent: A system for augmented memory. *Personal Technologies*, 1(4), 218-224. http://download.springer.com/static/pdf/315/art%253A10.1007%252FBF01682024.pdf?auth66=1409994253_1774dddec632dc1daba858ed0ad41966&ext=.pdf
- Rhodes, B., & Starner, T. (1996). Remembrance Agent: A continuously running automated information retrieval system. In *The Proceedings of The First International Conference on The Practical Application Of Intelligent Agents and Multi Agent Technology* pp. 487-495. <http://www.aaai.org/Papers/Symposia/Spring/1996/SS-96-02/SS96-02-022.pdf>
- Gurrin, C., Smeaton, A.F. & Doherty, A.R. (2014) LifeLogging: personal big data. *Foundations and Trends in Information Retrieval*, 8 (1). pp. 1-125. ISSN 1554-0677. <http://doras.dcu.ie/19998/>
Available for download and incl. about 250 references to lifelogging research and applications.

HCI and Users

- Whittaker, S., Kalnikaite, V., Petrelli, D., Sellen, A., Villar, N., Bergman, O., Clough, P. & Brockmeier, J. (2012) Socio-technical Lifelogging: Deriving Design Principles For A Future Proof Digital Past. *Human-Computer Interaction*, 27 (1-2) 37-62. <http://shura.shu.ac.uk/5415/>
- Shen, C., Lesh, N. & Vernier, F. (2003) Personal digital historian: story sharing around the table. *Interact*, 10 (2). http://scholar.harvard.edu/chiashen/files/personal_digital_historian_story_sharing_around_the_table.pdf
- Kalnikaitė, V., Sellen, A., Whittaker, S. & Kirk, D. (2010) Now Let Me See Where I Was: Understanding How Lifelogs Mediate Memory. *Proceedings of the CHI '10 Conference on Human Factors in Computer Systems*, 2045-2054. New York, NY: ACM.
- Kärkkäinen, T., Vaitinen, T. & Väänänen-Vainio-Mattila, K. (2010) I don't mind being logged, but want to remain in control: a field study of mobile activity and context logging. *Proceedings of the CHI '10 Conference on Human Factors in Computer Systems*, 163-172. New York, NY: ACM. <http://dl.acm.org/citation.cfm?id=1753351>
- Marshall, C. (2007) How People Manage Personal Information Over a Lifetime. In Jones and Teevan (eds.) *Personal Information Management*. University of Washington Press, 57-75.

Psychology

- Anderson, A. K., Wais, P. E., & Gabrieli, J. D. (2006). Emotion enhances remembrance of neutral events past. *Proc. NASUSA*, 103(5), 1599-1604
- Conway, M. A. (2005). Memory and the self. *Journal of Memory and Language*, 53, 594-628.
- Conway, M.A., & Dewhurst, S.A. (1995). The self and recollective experience. *Applied Cognitive Psychology*, 9, 1-19.
- Conway, M.A. & Pleydell-Pearce, C.W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review* 107.2: 261.
- Easterbrook, J. A. (1959). The effect of emotion on cue utilization and the organization of behaviour. *Psychological Review* 66 (3): 183–201.
- Brown, N. (2005). On the prevalence of event clusters in autobiographical memory. *Social Cognition*. 23 (1), 35-69.
- Brown, N. & Schopflocher, D. (1998). Event Clusters: An Organization of Personal Events in Autobiographical Memory. *Psychological Science*, 9(6). 470-475.
- Burt, C., Mitchell, D., Raggatt, P., Jones, C. & Cowan, T. (1995). A Snapshot of Autobiographical Memory Retrieval Characteristics. *Applied Cognitive Psychology*. 9. 61-74.
- Biondolillo, M.J. & Pillemer, D.B. (2014). Using memories to motivate future behaviour: An experimental exercise intervention. *Memory*. <http://dx.doi.org/10.1080/09658211.2014.889709>

Culture

- Brokmeier, J. (2010). After the Archive: Remapping Memory. *Culture Psychology* March 2010 vol. 16 no. 1 5-35 <http://cap.sagepub.com/content/16/1/5.abstract>
- Bannon, L. (2006). Forgetting as a feature, not a bug: the duality of memory and implications for ubiquitous computing. *CoDesign*, 2, 3-15. <http://archive.kmdi.utoronto.ca/events/documents/CODesign%20Forgetting.pdf>

Digital Preservation

- Manoff, M. (2006) The Materiality of Digital Collections: Theoretical and Historical Perspective. *portal: Libraries and the Academy*, 6 (3), 311-325.

Neuroscience

- Gazzaniga, M., Ivry, R. & Mangun, G. (2002). Milestones in Cognitive Neuroscience – An Interview with Endel Tulving. In Gazzaniga, M., Ivry, R. & Mangun, G. *Cognitive Neuroscience: The biology of the mind*. 2nd Ed. 322. New York, NY: Norton & Company.
- Singer, W. (2007). Understanding the brain. *European Molecular Biology Organization – Science & Society*, 8, 16-19.
- Detre, G., Natarajan, A., Gershman S. & Norman K. (2013). Moderate levels of activation lead to forgetting in the think/no-think paradigm, *Neuropsychologia*. <http://compmem.princeton.edu/publications/detreetal2013.pdf>

Part 2: Further Readings on Specific Topics

Understanding and augmenting human memory

- Sreekumar, V., Dennis, S., Doxas, I., Zhuang, Y. & Belkin, M. (2014). 'The geometry and dynamics of lifelogs: discovering the organizational principles of human experience.', PLoS One, 9 e97166.
- Zhuang, Y., Belkin, M. & Dennis, S. (2013). 'Metric based automatic event segmentation', Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 110 LNICST 129-148.
- Hamm, J., Belkin, M., Stone, B. & Dennis, S. (2013). 'Automatic annotation of daily activity from smartphone-based multisensory streams', Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 110 LNICST 328-342.

Activity recognition and logging from the wrist

- Berlin, E. & Van Laerhoven, K. (2012). Detecting Leisure Activities with Dense Motif Discovery, Proc. Of UbiComp.
http://www.ess.tu-darmstadt.de/sites/default/files/ubicomp2012_authors-copy.pdf
- Borazio, M., et al. (2014). Towards Benchmarked Sleep Detection with Inertial Wrist-worn Sensing Units, IEEE ICHI 2014.
- Scholl, P. et al. (2013). When Do You Light a Fire? Capturing Tobacco Use with Situated, Wearable Sensors, Recognize2Interact 2013, ACM.
http://www.ess.tu-darmstadt.de/sites/default/files/r2int06-scholl_0.pdf
- Borazio, M. & Van Laerhoven, K. (2012). Combining Wearable and Environmental Sensing into an Unobtrusive Tool for Long-Term Sleep Studies, ACM IHI.
<http://www.ess.tu-darmstadt.de/sites/default/files/paperIHI2012.pdf>
- Seeger, C., et al, MyHealthAssistant: An Event-driven Middleware for Multiple Medical Applications on a Smartphone-mediated BSN, IEEE J-BHI.
http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6819775

Head-Worn Display Optics

- Cakmakci, O. & Rolland, J. (2006). Head-Worn Displays: A Review. Journal of Display Technology, Vol. 2, Issue 3, pp. 199-216.
<http://www.dagstuhl.de/mat/Files/14/14362/14362.CakmakciOzan.Slides.pdf>

Emotional Memories

- Sas, C., & Whittaker, S. (2013). Design for forgetting: disposing of digital possessions after a breakup. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 1823-1832). ACM.
- Sas, C., Fratzak, T., Rees, M., Gellersen, H., Kalnikaite, V., Coman, A., & Höök, K. (2013). AffectCam: arousal-augmented sensecam for richer recall of episodic memories. In CHI'13 Extended Abstracts on Human Factors in Computing Systems (pp. 1041-1046). ACM.

- van den Hoven, E., Sas, C., & Whittaker, S. (2012). Introduction to this special issue on designing for personal memories: past, present, and future. *Human-Computer Interaction*, 27(1-2), 1-12.

Digital Mementos

- Petrelli, D., Whittaker, S. & Brockmeier, J. (2008). Autotopography: What can Physical Mementos tell us about Digital Memories? CHI 2008 – International Conference on Human Factors in Computing Systems. <http://shura.shu.ac.uk/2919/>
- Petrelli, D. & Whittaker, S. (2010). Family Memories in the Home: Contrasting Physical and Digital Mementos. *Journal of Personal and Ubiquitous Computing*, 14 (2), February, 2010. <http://shura.shu.ac.uk/2907/>
- Petrelli, D., van den Hoven, H. & Whittaker, S. (2009). Making History: Intentional Capturing of Future Memories. CHI 2009 – International Conference on Human Factors in Computing Systems. <http://shura.shu.ac.uk/2917/>
- Dib, L., Petrelli, D. & Whittaker, S. (2010). Sonic Souvenirs: Exploring the Paradoxes of Recorded Sounds for Family Remembering. CSCW 2010 - Computer Supported Cooperative Work, 6-10. <http://shura.shu.ac.uk/2908/>
- Petrelli, D., Villar, N., Kainikaite, V., Dib, L. & Whittaker, S. (2010). MF Radio: Family Interplay with Sonic Mementos. CHI 2010 – International Conference on Human Factors in Computing Systems. <http://shura.shu.ac.uk/2912/>

Social Sensing

- Brown, C., Efstratiou, C., Leontiadis, I., Quercia, D., Mascolo, C., Scott, J. & Key, P. (2014). The Architecture of Innovation: Tracking Face-to-Face Interactions with UbiComp Technologies In Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP 2014).
- Brown, C., Efstratiou, C., Leontiadis, I., Quercia, D. & Mascolo, C. (2014). Tracking serendipitous interactions: How individual cultures shape the office In Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing.
- Rachuri, K., C. Efstratiou, C., Leontiadis, I., Mascolo, C. & Rentfrow, P. (2013). METIS: Exploring mobile phone sensing offloading for efficiently supporting social sensing applications In Proceedings of the IEEE International Conference on Pervasive Computing and Communications.
- Efstratiou, C., Leontiadis, I., Picone, M., Rachuri, K., Mascolo, C. & Crowcroft, J. (2012). Sense and Sensibility in a Pervasive World In Proceedings of 10th International Conference on Pervasive Computing.

Lifelogging and Wellbeing in Care Home Residents

- McIntyre, L. & Hanson, V.L. (2014). Buildings and users with visual impairment: Uncovering factors for accessibility using BITKit. In Proceedings of the 16th International ACM SIGACCESS Conference on Computers and Accessibility.

- Webster, G., & Hanson, V.L. (2014). Technology for supporting care staff in residential homes. ACM Transactions on Accessible Computing, 5(3).
<http://dl.acm.org/citation.cfm?id=2568367.2543577>

Human visual behaviour for memory augmentation and life logging

- Bulling, A. & Zander, T. (2014). Cognition-Aware Computing. IEEE Pervasive Computing 13(3), pp. 80-83. https://www.andreas-bulling.de/fileadmin/docs/bulling14_pcm.pdf
- Bulling, A. & Roggen, D. (2011). Recognition of visual memory recall processes using eye movement analysis. Proc. UbiComp'11.
https://www.andreas-bulling.de/fileadmin/docs/bulling11_ubicomp.pdf
- Bulling, A., Roggen, D. & Troester, G. (2009). Wearable EOG goggles: Seamless sensing and context-awareness in everyday environments. Journal of Ambient Intelligence and Smart Environments, 1(2):157-171. https://www.andreas-bulling.de/fileadmin/docs/bulling09_jaise.pdf
- Bulling, A., Ward, J., Gellersen, H. & Troester, G. (2011). Eye movement analysis for activity recognition using electrooculography. IEEE Transactions on Pattern Analysis and Machine Intelligence 33(4):741-753. https://www.andreas-bulling.de/fileadmin/docs/bulling11_pami.pdf
- Bulling, A., et al. (2013). EyeContext: Recognition of high-level contextual cues from human visual behaviour. Proc. CHI'13 https://www.andreas-bulling.de/fileadmin/docs/bulling13_chi.pdf
- Ishiguro, Y., et al. (2010). Aided eyes: eye activity sensing for daily life. Proc. AH'10.
<http://www.vision.cs.chubu.ac.jp/CV-R/pdf/RekimotoACM2010.pdf>
- Roy, D., et al. (2014). Visual memory augmentation: using eye gaze as an attention filter. Proc. ISWC'04. <http://csi.ufs.ac.za/resres/files/Roy.pdf>
- Vidal, M., Bulling, A. & Gellersen, H. (2013). Pursuits: Spontaneous Interaction with Displays based on Smooth Pursuit Eye Movement and Moving Targets, Proc. UbiComp'13.
https://www.andreas-bulling.de/fileadmin/docs/vidal13_ubicomp.pdf
- Vidal, M., Turner, J., Bulling, A. & Gellersen, H. (2012). Wearable Eye Tracking for Mental Health Monitoring. Elsevier Computer Communications, 35(11):1306-1311.
https://www.andreas-bulling.de/fileadmin/docs/vidal12_comcom.pdf
- Zhang, Y., Bulling, A. and Gellersen, H. (2013). SideWays: A Gaze Interface for Spontaneous Interaction with Situated Displays. Proc. CHI'13.
https://www.andreas-bulling.de/fileadmin/docs/zhang13_chi.pdf

Augmenting the Human Mind

Towards tools to improve your brain (Focus on reading tracking).

- Kunze, K., Iwamura, M., Kise, K., Uchida, S. & Omachi, S. Activity Recognition for the Mind: Toward a Cognitive "Quantified Self". Computer. <http://kaikunze.de/papers/kunze2013activity.pdf>.
- Okoso, A., Kunze, K. & Kise, K. (2014). Implicit Gaze based Annotations to Support Second Language Learning. Proceedings of UbiComp'14 Adjunct.
<http://kaikunze.de/papers/okoso2014implicit.pdf>

- Kunze, K., Henze, N. & Kise, K. (2014) Wearable Computing for Older Adults -Initial Insights into Head-Mounted Display Usage. Proceedings of UbiComp'14 Adjunct. <http://kaikunze.de/papers/kunze2014wearable.pdf>.
- Tanaka, K., Kunze, K., Iwata, M. & Kise, K. (2014). Memory Specs-An Annotation System on Google Glass using Document Image Retrieval. Proceedings of UbiComp'14 Adjunct. <http://kaikunze.de/papers/tanaka2014memory.pdf>.
- Ishimaru, S., Kunze, K., Tanaka, K., Uema, U., Kise, K. & Inami, M. Smarter Eyewear- Using Commercial EOG Glasses for Activity Recognition. Proceedings of UbiComp'14 Adjunct. <http://kaikunze.de/papers/ishimaru2014smarter.pdf>.
- Ishimaru, S. and Kunze, K. and Kise, K. and Inami, M. (2014). Position Paper: Brain Teasers - Toward Wearable Computing that Engages Our Mind. Proceedings of UbiComp'14 Adjunct. <http://kaikunze.de/papers/ishimaru2014brain.pdf>.
- Kunze, K., Kawaichi, H., Yoshimura, K. & Kise, K. (2013). The Wordometer--Estimating the Number of Words Read Using Document Image Retrieval and Mobile Eye Tracking. 12th International Conference on Document Analysis and Recognition (ICDAR). <http://kaikunze.de/papers/kunze2013wordometer.pdf>
- Kunze, K. and Kawaichi, H. and Yoshimura, K. and Kise, K. (2013). Towards inferring language expertise using eye tracking. CHI'13 Extended Abstracts on Human Factors in Computing Systems. <http://kaikunze.de/papers/kunze2013towards.pdf>.

Lifelogging at DCU

- Doherty, A. R., Pauly-Takacs, K., Caprani, N., Gurrin, C., Moulin, C. J. A., O'Connor, N. E. & Smeaton, A. F. (2012), Experiences of Aiding Autobiographical Memory Using the SenseCam. *Human-Computer Interaction* 27 (1-2) , 151-174.
- Caprani, N., O'Connor, N.E. & Gurrin, C. (2013). Experiencing SenseCam: a case study interview exploring seven years living with a wearable camera. In Proceedings of the 4th International SenseCam & Pervasive Imaging Conference, pp. 52-59. <http://doi.acm.org/10.1145/2526667.2526676>
- Gurrin, C., Smeaton, A.F., Qiu, Z. & Doherty, A. (2013). Exploring the technical challenges of large-scale lifelogging. In Proceedings of the 4th International SenseCam & Pervasive Imaging Conference, pp. 68-75. <http://doi.acm.org/10.1145/2526667.2526678>
- Lee, H., Smeaton, A.F., O'Connor, N.E., Jones, G.J.F., Blighe, M., Byrne, D., Doherty, A.R. & Gurrin, C. (2008). Constructing a SenseCam visual diary as a media process. *Multimedia Systems Journal*, 14 (6). pp. 341-349. ISSN 1432-1882.

Augmenting memory: a means to what end?

- Mackay, W. (1999). Media Spaces: Environments for Informal Multimedia Interaction. In *Computer Supported Co-operative Work*, Beaudouin-Lafon, M. (ed). John Wiley & Sons. <https://www.lri.fr/~mbl/Trends-CSCW/>
- Roussel, N. (2009). From analog to digital, from the office to the living room: why I happily worked in a media space but don't live in one. In *Media Space: 20+ Years of Mediated Life*. Springer. <http://interaction.lille.inria.fr/~roussel/publications/2009-msbook-anadig.pdf>

- Hutchinson, H., Mackay, W., Westerlund, B., Bederson, B., Druin, A., Plaisant, C., Beaudouin-Lafon, M., Conversy, S., Evans, H., Hansen, H., Roussel, N. Eiderbäck, B. Lindquist, S., & Sundblad, Y. (2003). Technology Probes: Inspiring Design for and with Families. In *Proceedings of ACM Conference on Human Factors in Computing Systems*, pp. 17-24.
<http://interaction.lille.inria.fr/~roussel/publications/2003-CHI-techprobes.pdf>
- Conversy, S., Mackay, W., Beaudouin-Lafon M. & Roussel, N. (2005). VideoProbe: sharing pictures of everyday life. *LRI research report 1409*, Université Paris-Sud, France.
<http://interaction.lille.inria.fr/~roussel/publications/2005-lri-1409-videoProbe.pdf>
- Bau, O. & Mackay, W. (2008). OctoPocus: A Dynamic Guide for Learning Gesture-Based Command Sets. In *Proceedings of ACM Symposium on User Interface Software and Technology*. ACM, pp. 37-46. <http://www.lri.fr/~mbl/Stanford/CS477/papers/Octopocus-UIST2008.pdf>
- Ghomi, E., Huot, S., Bau, O., Mackay, W.E. & Beaudouin-Lafon, M. (2013). Arpège: Learning Multitouch Chord Gestures Vocabularies. In *ACM International Conference on Interactive Tabletops and Surfaces*. ACM, pp. 209-218.
http://hal.inria.fr/docs/00/87/01/73/PDF/ArpegelTS2013_HAL.pdf
- Beaudouin-Lafon, M., Chapuis, O., Eagan, J., Gjerlufsen, T., Huot, S., Klokmoose, C., Mackay, W., Nancel, M., Pietriga, E., Pillias, C., Primet, R. & Wagner, J. (2012). Multi-surface Interaction in the WILD Room. *IEEE Computer*, 45(4):48-56. <http://hal.inria.fr/hal-00687825/PDF/WILD-IEEEComputer-authorversion.pdf>
- Beaudouin-Lafon, M. (2004). Designing interaction, not interfaces. In *Proc. Conference on Advanced Visual Interfaces*, AVI 2004. Gallipoli (Italy) ACM, pp. 15-22.
<http://doi.acm.org/10.1145/989863.989865>