

Institut de la Vision
Université Paris Sorbonne
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Adrien Chopin
Ph.D in Psychology

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- Strong background in quantitative life science, stats and programming
- 16 scientific publications, 2 ongoing patents, 18 conferences, 12 invited talks
- 22 collaborations, 26 supervised students, 269h of teaching
- Recipient of a Marie-Curie grant, co-leader on a 4-year industrial grant (ANR)
- Numerous diffusion activities and regular communications with news outlets

Research

Main expertise

Psychophysics, binocular vision, learning

Current scientific interests

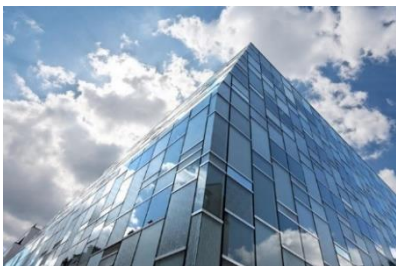
Perception, learning, binocular and 3D vision, child cognition and aging, amblyopia, stereoblindness, prediction of falls, fMRI, media, game and meditation effects on cognition, ambiguous perception

Scientific approaches

Psychophysics, fMRI, pathology, development, remediation (gaming, perceptual learning), virtual reality, meta-analyses, computational models, robotics, psychometrics, kinematics

Academic positions

Université Paris Sorbonne (France)
Sep 2019 - now



Université de Genève (Switzerland)
Oct 2017 – Aug 2019

Researcher under a 4-year University-Essilor-SNCF grant in Angelo Arleo's team, at Institut de la Vision

- *Demonstrated the efficiency of combined approaches to estimate non-monotonic psychometric functions*
- *Tested three new stereoacuity and stereoblindness tests for validity and test-retest*
- *Found that stereoacuity is uncorrelated to fixation error but correlated to vergence variability*
- *Analyzed experimental data showing that newborns differentiate direct and faraway gazes*
- *Found that robots can be as good as live tutors at teaching to young children, ASD children and birds*

Research and Teaching Fellow (Maitre-Assistant) under Daphne Bavelier's chair

- *Demonstrated that action video games increase learning speed in a large-scale pre-registered intervention*



University of California, Berkeley (USA)
Jun 2016 – Sep 2017



- *Meta-analysis showing that 20h of gaming are causing perceptual gains*
- *Reviewed the literature on clinical stereotests and estimated a 7%-stereoblindness prevalence. Showed that prevalence does not depend on stimulus duration.*
- *Failed to show the importance of stereovision for driving a real bike in a VR environment*

Postdoctoral scholar under a NEI grant

- *Demonstrated a new treatment for global stereoblindness in amblyopia using transfer from local stereo-training*
- *Investigated the phenomenon of amblyopic rivalry with mixed results*

École Normale Supérieure, Paris (France)

CNRS, Paris (France)
Mar 2015 – Feb 2016



Postdoctoral scholar under an EU Marie Curie IOF grant with Pascal Mamassian

- *Investigated pRF retinotopy in amblyopia and failed to show (fMRI) cortical plasticity during stereo-recovery*
- *Demonstrated speech audio-visual integration in newborns*

University of California, Berkeley (USA)
CNRS & University of Paris (France)

Mar 2014 – Feb 2015



Postdoctoral scholar under an EU Marie Curie IOF grant, with Dennis Levi and Michael Silver

- *Demonstrated binocular non-stereoscopic cues in clinical stereotests*
- *Developed a complete and modular pRF pipeline for processing fMRI retinotopy*

Université de Genève (Switzerland)

Dec 2012 - Aug 2013
Dec 2013 - Jan 2014



UNIVERSITÉ DE GENÈVE

Postdoctoral scholar with Daphne Bavelier in collaboration with Dennis Levi and David Knill

- *Showed that the stereoscopic system computes relative disparities from absolute disparities*
- *Discovered dressmakers' high stereo-abilities*

University of Oxford, Oxford (UK)

Sep – Nov 2012



Visiting scholar in Christopher Summerfield's lab

- *Failed to replicate predictive adaptation in face rivalry and to apply the paradigm in the fMRI*

CNRS & University of Paris (France)

Feb – June 2012



Postdoctoral scholar with Pascal Mamassian

- *Tested predictions of predictive adaptation framework with mixed results*

Vanderbilt University, Nashville (USA)

Dec 2011 – Jan 2012
Sep - Dec 2010



Visiting Research Fellow with Randolph Blake

- *Failed to show transfers of adaptation from a bistable stimulus to another, suggesting no common step*
- *Showed that stereopsis and rivalry rely on illusory rather than real orientations in tilt illusions*
- *Investigated a new neural model of binocular rivalry*

University of St. Andrews, Scotland (UK)
Aug 2007



Summer internship with Julie Harris

- *Showed an absence of role for cyclovergence and horopter tilt in mysterious depth biases*

Education

University of Paris, Paris (France)

CNRS, Paris (France)

2008-2012

Credited: Mar 28, 2012

Highest academic distinction:

Très honorable avec les félicitations du Jury à l'unanimité.

Ph.D in Psychology with Pascal Mamassian

- Created the predictive adaptation framework
- Demonstrated implicit and probabilistic computations in human visual ambiguous perception (effect of usefulness)
- Showed that individual bistable preferences could be created by these probabilistic computations

École Normale Supérieure,

University of Paris,

EHESS, Paris (France)

2006-2008

Master (equivalent to M.S.) in **Cognitive Sciences**, called Cogmaster

Investigated dynamics of human binocular rivalry

Ranked #1, summa cum laude

University of Paris, Paris (France)

2003-2006 Graduated magna cum laude

Licence (equivalent to B.S.) in **Psychology**

The French degree involves a detailed knowledge of clinical psychopathologies.

Université Paris Diderot, Paris (France)

2002-2003

Non-degree medical studies in Medicine school

Université Pierre et Marie Curie, Paris (France) 2001-2002

Non-degree preparation school to medical studies

Publications in international peer-reviewed journals

[2y-IF is the Impact Factor at 2 years]

Araguas, A., Guellaï, B., Gauthier, P., Richer, F., Montone, G., **Chopin, A.**, & Derégnaucourt, S. (accepted in *Journal of Experimental Biology*). Design of a robotic zebra finch for experimental studies on developmental song learning. <https://doi.org/10.1242/jeb.242949>

Guellaï, B., Esseily, R., Somogyi, E., & **Chopin, A.** (revision in *Frontiers in Psychology*) Effects of screen exposure on young children's cognitive development: A review.

1. Zhang, R.-Y.*, **Chopin, A.***, Shibata, K., Lu, Z.-L., Jaeggi, S. M., Buschkuhl, M., ... Bavelier, D. (2021). Action video game play facilitates "learning to learn." *Communications Biology*, 4(1), 1154. <https://doi.org/10.1038/s42003-021-02652-7> [2y-IF 2020: 6.3] * **equal contribution**
2. **Chopin, A.**, Silver, M.A., Sheynin, Y., Ding, J. & Levi, D.M. (2021) Transfer of perceptual learning from local stereopsis to global stereopsis in adults with amblyopia: a preliminary study. *Frontiers in Neuroscience* 15:1244. Doi: 10.3389/fnins.2021.719120 [2y-IF 2020: 4.5]
3. Guellaï, B., Hausberger, M., **Chopin, A.**, & Streri, A. (2020). Premises of social cognition: Newborns are sensitive to a direct versus a faraway gaze. *Scientific Reports*, 10(1), 9796. [2y-IF 2020 : 4.4]
4. **Chopin, A.**, Bediou, B. & Bavelier, D. (2019). Altering perception: the case of action video gaming. *Curr. Opin. Psychol.* **29**, 168–173. [2y-IF 2020: 5.7]

5. **Chopin, A.**, Chan, S.W., Guellai, B., Bavelier, D., & Levi, D.M. (2019). Binocular non-stereoscopic cues can deceive clinical tests of stereopsis. *Scientific Reports*, **9**, 5789. [2y-IF 2020 : 4.4]
6. **Chopin, A.**, Bavelier, D., & Levi, D.M. (2019). The prevalence and diagnosis of 'stereoblindness' in adults less than 60 years of age: a best evidence synthesis. *Ophthalmic and Physiological Optics*, **39**(2), 66–85. <https://doi.org/10.1111/opo.12607> [2y-IF 2020: 3.1 – OPO's top read 2018-2019]
7. **Chopin, A.**, Levi, D.M., Knill, D., & Bavelier, D. (2017) Dressmakers show enhanced stereoscopic vision. *Scientific Reports*, **7**:3435. Doi: 10.1038/s41598-017-03425-1 [2y-IF 2020 : 4.4 – Altmetrics 2020: 512 – 779th/270,660 of all articles of same age]
8. **Chopin, A.**, Levi, D.M., Knill, D., & Bavelier, D. (2016). The absolute disparity anomaly and the mechanism of relative disparities. *Journal of Vision*, **16**(8), 2. [2y-IF 2020: 2.2]
9. Guellai, B., Streri, A., **Chopin, A.**, Rider, D., & Kitamura, C. (2016). Newborns' Sensitivity to the Visual Aspects of Infant-Directed Speech: Evidence From Point-Line Displays of Talking Faces. *Journal of Experimental Psychology: Human Perception and Performance*. DOI: 10.1037/xhp0000208 [2y-IF 2020: 3.3]
10. **Chopin, A.**, Mamassian, P. (2013) Response: Genuine long-term positive aftereffects. *Current Biology*, **23**(10): R439. [2y-IF 2020: 10.8]
11. **Chopin, A.**, Mamassian, P., & Blake, R. (2012). Stereopsis and rivalry are based on perceived rather than physical orientations. *Vision Research*, **63**: 63-68. [5y-IF 2020: 2.5]
12. Harris, J.M., **Chopin, A.**, Zeiner, K.M., & Hibbard, P.B. (2012). Perception of relative depth interval: systematic biases in perceived depth. *The Quarterly Journal of Experimental Psychology*, **65**(1), 73-91. doi:10.1080/17470218.2011.589520. [2y IF 2020: 2.1]
13. **Chopin, A.**, & Mamassian, P. (2012). Predictive properties of adaptation. *Current Biology*, **22**(7): 622-626. doi:10.1016/j.cub.2012.02.021. [2y-IF 2020: 10.8]
14. **Chopin, A.**, & Mamassian, P. (2011). Usefulness Influences Visual Appearance in Motion Transparency Depth Rivalry. *Journal of Vision*, **11**(7). doi:10.1167/11.7.18. [2y-IF 2020: 2.2]
15. **Chopin, A.**, & Mamassian, P. (2010). Task usefulness affects perception of rivalrous images. *Psychological Science*, **21**(12): 1886-93. [2y-IF 2020: 7]

Publications in national peer-reviewed journals

1. Esseily, R., Guellai, B., **Chopin, A.**, Somogyi, E. (2017) L'écran est-il bon ou mauvais pour le jeune enfant? *Spirale*, **3**(83): 28-40. doi: 10.3917/spi.083.0028

Proceedings and conferences (posters and talks)

1. Shibata, K., **Chopin, A.**, Zhang, R.Y., Lu, Z., Jaeggi, S., Buschkuhl, M., Green, C.S., & Bavelier, D. Facilitating cognitive and perceptual learning through action video game play [FENS 2020]
2. Zhang, R.Y., **Chopin, A.**, Shibata, K., Lu, Z.L., Jaeggi, S. M., Buschkuhl, M., ... & Bavelier, D. (2020). "Learning to learn" as a new path for learning generalization in working memory: the case of action video game play. *Journal of Vision*, **20**(11), 1697-1697. [VSS 2020]
3. Pichon, S., Joessel, A., **Chopin, A.**, Bavelier, B. (2020) A serious games for targeting cognitive problems in anxiety [symposium "Treating anxiety, depression and bipolar disorders: aiming at the amygdala" at the European Congress of Psychiatry]
4. Pichon, S., Provost, A., Bourdon, V., Fall, A., Cerri, T., Cavalli, G., **Chopin, A.**, Nguyen, A., Geslin, E., Bavelier, D. (2019) Combining attention bias modification training with attentional control training [ACBM Conference Berlin, July 2019].

5. **Chopin, A., Bavelier, D., & Levi, D. M.** (2019). The prevalence and diagnosis of “stereoblindness”: A best evidence synthesis. *Journal of Vision, 19*(10), 262b-262b. [VSS 2019]
6. Denkinger, S., Levi, D.M., Backus, B., **Chopin, A., & Bavelier, D.** (2019). New Measures of Stereoscopic Vision. [Neuroscience Master Day; Geneva; December 2019].
7. Chopin, A., & Arleo, A. (2019) Stereo-deficiencies in older adults: measures, impact and remediation. [10 years of fighting blindness, Jussieu, Paris].
8. Shibata, K., **Chopin, A., Zhang, R. & Bavelier, D.** (2018) Learning to Learn: A generalised route to learning. [Talk presented at UNIGE Neuroscience Masters' Day; Campus Biotech, Geneva Switzerland]
9. Shibata K., **Chopin A., Zhang R., Todeschini J., Martins M., Poma P., Denkinger S., Lu Z.L., Jaeggi S., Buschkuehl M., Green C.S. & Bavelier D.** (2018) Method to study learning generalisation through training [UNIGE Neuroscience Masters' Day; Campus Biotech, Geneva Switzerland].
10. McDermott, K.C., **Chopin, A., Ptukha, A., & Mamassian, P.** (2015). History effects in perception after manipulating the statistics of the environment. *Journal of Vision, 15*(12):392. doi: 10.1167/15.12.392. [VSS 2015]
11. **Chopin, A., Knill, D.C., Levi, D.M., & Bavelier, D.** (2014). Stereoscopic depth from absolute and relative disparities. *Journal of Vision, 14* (10), 969. doi:10.1167/14.10.969 [VSS 2014]
12. Mamassian, P., & **Chopin, A.** (2012) Long-term recalibration of orientation perception. *Perception, 41*, supplement: 42. [Talk at ECVF 2012]
13. **Chopin, A., Mamassian, P., & Blake, R.,** (2011). Transition between stereopsis and binocular rivalry is based on perceived, rather than physical, orientation. *Journal of Vision, 11*(11):301. [VSS 2011]
14. **Chopin, A., Capps, M., & Mamassian, P.** (2010). Expectation from temporal sequences influences binocular rivalry [Abstract]. *Journal of Vision, 10*(7):347. [VSS 2010]
15. **Chopin, A., Mamassian, P.** (2010) *L'utilité d'un percept influence la bistabilité dans la transparence de mouvement.* Talk at the Annual meeting of the doctoral school 261, Paris (France).
16. **Chopin, A., Mamassian, P.** (2009) *Percept usefulness influences bistability in motion transparency.* Talk at the Annual national meeting of the French research in vision (GDR Vision), Toulouse (France).
17. **Chopin, A., & Mamassian, P.** (2009). Task demands can affect binocular rivalry dynamics [Abstract]. *Journal of Vision, 9*(8):299, 299a. [VSS 2009]
18. Harris, J., **Chopin, A., & Zeiner, K.** (2008). Individual differences in depth perception: are biases correlated with eye position? *Journal of Vision, 8*(6):93, 93a. [VSS 2008]

Invited academic talks

2021 – Invited talk at the Smith Kettlewell Eye Research Institute (San Francisco). *New developments in measuring stereoscopic vision.*

2020 – Talk invited by Michel Paques - Centre d'investigation clinique - Hôpital des 15-20 (Paris). *How to measure stereoscopic vision and why?*

2019 – Geneva Amblyopia Meeting (Geneva). *How to measure stereoblindness and stereovision accurately in rehabilitation protocols?*

2017 - Talk invited by Angelo Arleo – Institut de la Vision (Paris). *Bringing completely stereoblind amblyopic patients to stereo-recovery.*

2017 - Talk invited by Austin Roorda – Oxyopia Seminar, School of Optometry, UC Berkeley (CA). *Bringing completely stereoblind amblyopes to stereo-recovery.*

2017 - Talk invited by Zoe Kourtzy & John Mollon – Rank Prize Funds Symposium on Learning to See: From Retinal to Brain Computation – Grasmere (UK). *Recovery of stereopsis in completely stereoblind amblyopes.*

2016 - Talk invited by Mark Wexler – LPP, Paris (France). *The mechanism of relative disparity.*

2016 - Talk invited by Carole Peyrin – LPNC, Grenoble (France). *The mechanism of relative disparity.*

2015 – Talk invited by Guillaume Masson / Frederic Chavanne – INT, Marseille (France). *The absolute disparity anomaly and the mechanism of relative disparities.*

2015 – Talk invited by Simon Thorpe / Yves Trotter – Cerco, Toulouse (France). *The absolute disparity anomaly and the mechanism of relative disparities.*

2015 – Talk invited by Martin Banks, University of California, Berkeley (USA). *Absolute and relative disparities.*

2008 – Talk invited by Daniel Pressnitzer, National workshop on perceptual bistability, Paris, Ecole Normale Supérieure (France). *Expected utility in binocular rivalry.*

Patents

2021: 2 ongoing patents with Essilor

Grants, awards and competitions

2019-2023: co-leader of an research axis in an industrial grant (leader: Angelo Arleo) with Sorbonne University, Essilor and SNCF (ANR Silversight II)

2019: grant from the FNS, Switzerland (\$12,800)

2016: qualified to the functions of associate professor in Neurosciences (qualification 2016-2020).

2013-2015: EU Marie-Curie grant (IOF – Career development) for two-year funding at the University of California, Berkeley (USA) and Ecole Normale Supérieure (Paris, France), ~\$206,000.

2012: qualified to the functions of associate professor in Psychology (qualification 2012-2016).

2012: Doctoral award, awarded once a year for the best Ph.D thesis in the Cognitive Science, Psychology, Neurosciences and Computer Science fields of the University of Paris.

2008-2011: Ph.D grant from the French Research Ministry (3-year funding – ~\$153,000)

2008-2011: Teaching grant from the University of Paris (3 years – ~\$30,000)

2010: Travel & exchange grant from the University of Paris. Travelled to Randolph Blake's Lab, Vanderbilt University, Nashville, USA for three months of research on binocular rivalry.

Collaborations

Active academic collaboration groups (Ph.D students and researchers – 10 groups)

1. Evolution of stereopsis in older adults
Angelo Arleo, INSERM, Paris (France)
2. Effects of stereovision in kinematics of everyday life tasks
Catherine Agathos, Smith-Kettlewell Institute, San Francisco (USA)
Angelo Arleo, INSERM, Paris (France)
Vito Monaco, Sant'Anna School of Advanced Studies, Pisa (Italy)
Valérie Parmentier, Essilor, Paris (France)
3. Efficiency of robot teacher in birds, neurotypical and autistic (ASD) children
Alice Araguas, Université Paris Ouest Nanterre La Défense, Nanterre (France)
Bahia Guellai, Université Paris Ouest Nanterre La Défense, Nanterre (France)

- Sébastien Derégnaucourt, Université Paris Nord - Paris 13 (France)
4. Amblyopic rivalry
Claudia Lunghi, Ecole Normale Supérieure, Paris (France)
Concetta Morrone, Pisa University, Pisa (Italy)
Dennis Levi, University of California, Berkeley (USA)
 5. Gaming for decreasing anxiety and increasing attention
Naima Gradi, Université de Genève (Switzerland)
Swann Pichon, Geneva School of Health Sciences (Switzerland)
Daphné Bavelier, Université de Genève (Switzerland)
 6. Determining the predictors of falls in older adults
Denis Sheynikhovich, Sorbonne Université, Paris (France)
Angelo Arleo, INSERM, Paris (France)
 7. Effect of meditation on learning speed
Lia Antico, Université de Genève (Switzerland)
Daphné Bavelier, Université de Genève (Switzerland)
 8. Hyperacuity to diagnose early DMLA
Josselin Gautier, INSERM, Paris (France)
Michel Paques, Hôpital des 15-20, Paris (France)
Angelo Arleo, INSERM, Paris (France)
 9. Effects of screens on children's cognition
Rana Esseily, Université Paris Ouest Nanterre La Défense, Nanterre (France)
Bahia Guellai, Université Paris Ouest Nanterre La Défense, Nanterre (France)
Eszter Somogyi, University of Portsmouth, Portsmouth (UK)
 10. Test-retest and validity of stereoscopic measures
Ben Backus, SUNY, Vivid Vision, NY/CA (USA)
Vivid Vision (company, USA)
Daphné Bavelier, Université de Genève (Switzerland)

Former collaborations (12 groups):

Ru-Yuan Zhang, Shanghai Jiao Tong University, Shanghai (China)
Kengo Shibata, Oxford University (UK)
Zhong-Lin Lu, NYU Shanghai (China)
Susanne Jaeggi, University of California, Irvine, CA (USA)
Martin Buschkuhl, MIND Research Institute, CA (USA)
Shawn Green, University of Wisconsin-Madison, WI (USA)
Anna-Flavia Di Natale, Università degli studi di Milano-Bicocca, Milano (Italy)
Emmanuela Bricolo, Università degli studi di Milano-Bicocca, Milano (Italy)
Benoit Bediou, Université de Genève (Switzerland)
Michael Silver, University of California, Berkeley (USA)
Jian Ding, University of California, Berkeley (USA)
Eunice Yang, University of California, Berkeley (USA)
Justin Theiss, University of California, Berkeley (USA)
Jacob Sheynin, McGill University, Montreal (Canada)
Kyle McDermott, University of California, Davis (USA)
Pascal Mamassian, ENS & CNRS (France)
Arlette Streri, University of Paris, Paris (France)
David Knill, University of Rochester (USA)
Randolph Blake, Vanderbilt University (TN, USA)

Jan Brascamp, Utrecht University (the Netherlands)
 Christopher Summerfield, University of Oxford (UK)
 Raymond van Ee, Utrecht University (the Netherlands)
 Julie Harris, University of St. Andrews (UK)
 Paul Hibbard, University of St. Andrews (UK)
 Katharina Zeiner, Stuttgart Media University (Germany)

Teaching

Year	UE	Location	Type	Hours	Audience
2021	Physiological Optics	d	CM	7	Master students & Opticians
	Cognitive Sciences	c	TD	12	B.S. students
2020	Physiological Optics	d	CM	3.5	Master students & Opticians
	Neuro-ergonomics	c	TD	9	Master 1 Ergonomics
	Cognitive Sciences	c	TD	12	B.S. students
2019	Neurosciences	c	TD	6	Master 1 Ergonomics
	Continuing education	b	TD	6	Teachers
2011	Differential Psychology	a	TD	26	
	Experimental Psychology	a	TD	52	
2010	Experimental Psychology	a	TD	52	B.S. students
2009	Experimental Psychology	a	TD	52	
	Differential Psychology	a	TD	26	

Locations

Total TD-equivalent: 269h

a – University of Paris, Institut de Psychologie, Boulogne

b - Département de l'Instruction Publique, Service Ecran-Media, Switzerland

c – University of Paris, Faculté des Sciences Fondamentales et Biomédicales, Paris

d – Université Paris Saclay, Orsay

Types CM = Lecture (in amphitheatre) – TD = Seminar (in class)

Full list

2020 and 2021 – 3x3.5h – initial optometry formation and optician continuous education - Master Ingénierie de la Santé, parcours Sciences de la Vision, UE Optique physiologique, *Cognition visuelle*, Location d

2020 and 2021 – 2x12h – Licence 2 Biomédicale et Bi-Licence 2, *Sciences Cognitives 1*, SA04M070, Location c

2020 – 9h - Master STS, Mention Ergonomie, *Introduction à la neuroergonomie*, and *Introduction to Neurosciences*, ER0BM080, Location c

2019 – 6h – Master STS, Mention Ergonomie, *Introduction to Neurosciences*, "Perception-Attention" and "Memory-Langage", Location c

2019 – 6h – continuing education for teachers, *The effect of screens on intellectual development*, Location b

2008-2011 – 208h - Licence 1 de Sciences de la Santé, mention Psychologie, teaching assistant ("Monitorat" at CIES Paris Sorbonne), Location a

Mentoring and interns: mentored 1 Ph.D. student (co-tutoring), 14 graduate students (direct supervision, including a successful honor thesis) and 11 undergraduate students.

Qualification for the French position *Maître de Conférence* (associate professor): 16th section (2012-2016: Psychology) and 69th section (2016-2020: Neurosciences)

Service

2019-06: co-organized the 2019 Geneva Amblyopia Meeting, an international 2-days workshop gathering the leaders of visual interventions in amblyopia, with a grant from the Swiss FNS.

2018-2019: co-organized the 2019 Festival of Education of Switzerland, in Geneva (<https://printemps-education.ch/festival-education/>)

2015-2017: created an fMRI-analysis pipeline (Pipeline_JAS) - a set of matlab automated modules for pre-processing, segmentation of fMRI data in mrVista/Freesurfer/FSL, pRF retinotopy and visualization. Shared on Github (https://github.com/Stereo-Boy/Pipeline_AS) and wrote an extensive wiki documentation for it.

2014-2016: organized the lab system for enrolling and screening amblyopic patients with the eye clinic.

2010 – 2011: elected member at the doctoral school's academic board (University of Paris)

2010: organized weekly lab seminars

2007-2008: founded a student seminar in the Cogmaster

Reviewing: peer-reviewing for the following scientific journals: Optometry and Vision Science, Plos Computational Biology, Plos One, Current Biology, iPerception, Journal of International medical research, Scientific Reports, Journal of Vision, Vision Research, Annals of translational medicine, Frontiers in Human Neuroscience, Perception, The International Journal for the Psychology of Religion

Media presence & General public dissemination





Dec 2021: interview for *Marianne* (French weekly magazine, 350k readers/month) about the effect of digital technology on cognitive abilities and brain development

Oct 2021: cover of our work on action video games on the Swiss radio (RTS, la 1ere, CQFD

<https://tinyurl.com/videogameslearning>)

Oct 2021: Invited talk at a projection of the documentary “Le Cerveau des Enfants” about how we can use neuroscience to help children learn (non-profit *Ensemble Grandir Avec Nos Enfants*)

May 2021: webinar for Adios-Corona:

<https://www.youtube.com/watch?v=EuTkDVoFIEE&feature=youtu.be>

Nov 2020: intervention on Belgian TV channel RTL-TVI (weekly news “c’est pas tous les jours Dimanche”) about the reuse of surgical masks during the COVID-19 pandemic (for Adios Corona)

<https://tinyurl.com/chirmaskreuse>

Oct 2020: Press conference and interviews with [l’Express](#), *le Monde*, *le Canard Enchaîné*, [Que Choisir](#), and [France Inter](#) about the reuse of surgical masks during the COVID-19 pandemic (for Adios Corona).

Dec 2018: Interviewed for “Ca m’intéresse” (French monthly magazine 200k readers/month).

Sept 2018: Interviewed for Libraradio, broadcasted on Frequence Banane (local Swiss-French radio).

June 2018: [Blog article at Ecole & Bien-être](#) about an earlier preview showings talk

May 29 2018 and June 6: Invited talks at preview showings of the documentary “Le Cerveau des Enfants” about how we can use neuroscience discoveries to help children learn and grow cognitive skills (*Cinelux, Geneva*) – broad audience.

June 2017: Our study about dressmaker’s enhanced stereovision received world coverage. Interviewed for radio news: BBC ([World Service Healthcheck](#) – 260M listeners/month), CBS ([Science Today](#) – 260M listeners/month), KBCS, NPR ([Health Shots](#) – 84M listeners/month), BYU ([Top of the Mind with Julie Rose](#)), and the AOP ([Optometry Today](#)), or [Inside Science](#). From Altmetrics, >58 news outlets reported our study.

Jan 2017: Interviewed for PC Gamer (22k readers a month) about visual perception in video games. *How many frames per second can the human eye really see? Alex Wiltshire*

October 2016: Interviewed for the *Berkeley Optometry Magazine* about the efficiency of stereopsis recovery and one of my recovered patient. *Discovering the World’s Depth Later in Life. Gordy Slack*

May 2016: published two articles about open-access for the biology website BiteSize Bio (200k readers a month). *How to Access All Science for Free? / Five Truths About Science Publishing or Why All Science Should be Free. Adrien Chopin*

Apr 2016: published an article on the cognitive impact of TV and screens on very young children, including the mechanism, for Coginnov (non-profit), illustrated by Fiamma Luzzati. *Les écrans en quelques maux. Adrien Chopin, Bahia Guellai and Nawal Abboub.*

Mar 2016: Interviewed for the French magazine “*La Recherche*” (65k readers a month), on stereoscopic vision in insects and the reason why it tells us something interesting. *La mante religieuse, nouveau modèle d’étude de la vision 3D? Laurence Dennis.*

Sep 2013: Interviewed for the Swiss radio (RTS, la 1ere, CQFD) on treating amblyopia and stereoblindness with dichoptic action video games. *Les bienfaits des jeux vidéo pour la santé.*
<https://tinyurl.com/amblyopiagames>

Mar-May 2011: Consulting for a diffusion project about Cognitive Sciences targeted to elementary school with the organization “la Main à la Pâte” (coordination: Elena Pasquinelli) about the impact of screens on children cognition

Mar 2009-2010-2011: Co-organized a scientific exhibition (surface 50m²), on 3 consecutive years, hosted at the French Forum of Cognitive Sciences, Paris, about face perception, self-perception, neuro-imagery, change blindness, split-brain and language development. The framework was a DCST project that we wrote (financed by the CIES Sorbonne, Jussieu, Nanterre and Créteil), named “Les Sciences Cognitives Expliquées”.

Feb 2010: Series of speeches and demos for the non-profit organization “Science Académie” about Brain, Philosophy and Damages, to a public of high-school students in Paris. “Poverty of vision revealed by change blindness and inattentive blindness”.

Nov 2008: Co-organized a full-day exhibition at the Paris Science Festival for the RISC and Cognivence (about bistability).

Apr 2008: Co-organized the 7th French Forum of Cognitive Sciences in Paris.

Nov 2007: Series of speeches and demos on a full day for the 16th national Science Festival in Paris, to a broad audience public. “What does perceptual bistability teach us?”

May 2007 and 2006: Series of demos on a full day for the 5th and the 6th French Forum of Cognitive Sciences in Paris to a broad audience public. “What do illusions tell us?”

2007-2010: Elected member of the board of non-profit Cognivence (Association of the Students in Cognitive Sciences from Ile de France) whose goal is to spread awareness about cognitive sciences.

Professional skills

Methods: Psychophysics, computational models, imagery, RCT, test validation, kinematics

Statistical Analysis: inferential statistics (frequentist and Bayesian), linear and non-linear models, parametric and non-parametric tests, fMRI permutation tests / cross-validation, classification, bootstrap, GLM, mixed-effect models, hierarchical models, test validation (validity, reliability, sensitivity...). Matlab/SPM/Statistica.

MRI data analysis: MVPA (TdT), pRF and retinotopy (mrVista, FSL, Freesurfer), statistical analysis (SPM).

Experience with clinical patients: amblyopia treatment; basic optometry procedures; clinical recruitment; ethics

Languages: French (native), English (fluent), German (some understanding)

Programming: Matlab & PsychToolBox (advanced), Python (beginner)

Web design: HTML/CSS/Javascript (Front-End), PHP/SQL (Back-End server and database), CMS.

Lab managing: project managing of medium-size teams, lab wiki, journal clubs, collaborative tools

Technical apparatus: experience in MRI scanning (operator for 3T Siemens Trio scanner), stereo-optical devices and clinical stereotests, eye tracking systems (Eyelink II, Arrington VisualSystem, Viewpoint), full-body motion tracking (Optitrack), photometers, autorefractors, immersive environments (virtual reality sets with hands and bike controller), acuity tests, visual field perimeters

Certified trainings and Ethics

MRI: Safety training course and standard operating procedures (2014-2017) and user training course (2015-2017) - Li Ka Shing Brain Imaging Center (UCB, USA).

Ethics: Sexual Violence and Sexual Harassment Prevention Training for Staff – score 100% (UCB e-course 2015, 2017), Ethical Values and Conduct (UCB e-course 2015), Conflict of Interest for Researchers Briefing (COIR UCB e-course 2017), Cyber Security Awareness (UCB e-course 2015, 2017), Group 1 Biomedical research investigators and key personnel – score 92% (CITI program 2014)

Personal commitment & Activism

I am strongly committed and active in the following causes:

- ❖ Universal access to science, as provider of a webpage referencing servers allowing universal access to science: <https://tinyurl.com/scihubserver> (total 422,000 visits)
- ❖ Knowledge spread and fact-checking, through the creation of the Coronavirus Fact-Checking Taskforce (a collaborative scientific database about COVID-19: <https://zici.fr/49> and its discussion group: <https://www.facebook.com/groups/272901456732257/>), and as one of the main content editor at adioscorona.org. **Adios Corona** is a website providing scientific recommendations related to COVID-19, translated in 10 languages (total ~1M visits), whose information is also spread through Santé.fr (official French information channel for COVID).
- ❖ Best-impact investing, with the Best-impact stock investing list 2021: <https://tinyurl.com/stocklist21>
- ❖ Ecology and effective altruism, as founder of Verts-Luisants - <http://vertsluisants.fr> – a website promoting effective altruistic donations, ecology and zero waste, and as a taker of the GWWC pledge
- ❖ Zero-waste, as creator of the FB Zero-Waste challenge (2018-2020) - <https://tinyurl.com/y5urg8o3>
- ❖ Efficient education, as former website manager for Le Printemps de l'Éducation – Suisse - <https://printemps-education.ch/> - (2018-2019) - a Swiss non-profit for promoting innovative, alternative or efficient education, and co-organizer of the 2019 Festival de l'Éducation.

Cognitive skills

Cognitive skills are measured in-lab with the test indicated in the right column (e.g. VTS: Vienna Test System), and standardized against the general or same-age population.

Visuo-spatial working memory	● ● ● ● ●	100 th percentile	Corsi cubes
Updating of working memory	● ● ● ● ●	100 th percentile	Dual n-back
Mental flexibility	● ● ● ● ●	100 th percentile	TMT
Attentional control	● ● ● ● ●	99 th percentile	MOT test
Updating of visuo-spatial memory	● ● ● ● ●	99 th percentile	N-back
Learning (visual content)	● ● ● ● ●	98 th percentile	FGT
Mental inhibition	● ● ● ● ●	97 th percentile	VTS INHIB test
Visuo-spatial short-term memory	● ● ● ● ●	88 th percentile	Corsi cubes
Mental rotations / 3D transformations	● ● ● ● ●	86 th percentile	VTS 3D test
Mental processing speed	● ● ● ● ●	85 th percentile	TMT
Visual acuity	● ● ● ● ○	68 th percentile	ETDRS test
Auditive acuity	● ● ● ○ ○	51 th percentile	Audiogram
Reflexive reaction time	● ● ○ ○ ○	29 th percentile	VTS INHIB test

Other interests

Hiking, running, bouldering, piano improvisation and investing on stock market