### **Curriculum Vitae**



#### Nicolas Rothen, Prof. Dr.

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- sf.io/5b7ha
- R<sup>6</sup> researchgate.net/profile/Nicolas Rothen
- Scholar.google.ch/citations?hl=deuser=Qu04lAcAAAAJ

#### **Research Interests**

I am mostly interested in factors with a strong potential to enhance memory. A great majority of my research focused on synesthetic experiences to investigate how individual differences in visual perception affect memory performance. Moreover, I used extensive training procedures to investigate how perceptual phenomenology is shaped and how synesthetic experiences develop. Recently, I developed a strong interest in evidenced based education from a teacher (factors that enhance teaching) and student (factors that enhance learning) perspective. In my studies, I have used various methodical approaches: laboratory- and internet-based data acquisition, psychophysiology (EDA, SCR), neurophysiology (EEG, ERP), non-invasive brain stimulation (TMS) and computational modeling.

### **Education**

11/2016 Habilitation in Psychology, University of Bern, Switzerland

Defense "Sensorische Substitution: können fehlende / verlorene Sinne durch Technologie ersetzt werden?" [Sensory substitution: is it possible to replace missing / lost senses with technology?] | defense: 21/11/2016

11/2006 – 10/2009 PhD in Psychology, University of Bern, Switzerland

Thesis "Synästhesie: Ursachen, Folgen und assoziierte Eigenschaften" [Synaesthesia: causation, consequences and associated characteristics] | advisor: Prof. Dr. Beat Meier | de-

fense: 05/10/2009

10/2001 – 11/2006 Licenciate (MSc equivalent) in Psychology, University of Bern, Switzerland

Thesis "Der Einfluss von Synästhesie auf grundlegende Lernprinzipien" [The influence of synaesthesia on basic principles of learning] | advisor: Prof. Dr. Beat Meier | date: 17/11/2006

## **Work Experience**

02/2020 - current Faculty of Psychology, Swiss Distance University Institute, Switzerland

Associate Professor (Extraordinarius, tenured)

01/2018 - 01/2020 Faculty of Psychology, Swiss Distance University Institute, Switzerland

Assistant Professor (tenure track)

05/2015 – 11/2018 Institute of Psychology, University of Bern, Switzerland

Swiss National Science Foundation "Ambizione" Fellow (Postdoc)

01/2011 - 04/2015 School of Psychology, Sackler Centre for Consciousness Studies, University of Sussex,

Brighton, United Kingdom

(advisors: Prof. Dr. Jamie Ward, Prof. Dr. Anil Seth)

Visiting Research Fellow;

Swiss National Science Foundation (2011, 2013, 2014, 2015);

Holcim Foundation (2012);

Additional support: Dr Mortimer & Theresa Sackler Foundation (2011-2012)

09/2005 – 12/2010 Institute of Psychology, University of Bern, Switzerland

(advisor: Prof. Dr. Beat Meier)

Postdoc: Research and Teaching Assistant (2009-2010); PhD student: Research and Teaching Assistant (2007-2009);

MSc student: Research Assistant (2005-2007)

08/2008 – 01/2009 Faculty of Psychology, Swiss Distance University Institute, Switzerland

Research and Teaching Assistant (advisor: Prof. Dr. Beat Meier)

10/2006 – 10/2007 Institute of Psychology, University of Bern, Switzerland

(advisor: Prof. Dr. Beat Meier)

Research Assistant in the Swiss National Science Foundation project: "The Relationship between the Prospective and the Retrospective Components in Prospective Memory Tests."

## **Funding**

Total capacity since 2011 in CHF ≈ 2,9 Mio.

10/2019 – 09/2022 **Swiss Canton of Valais (CHF 1'606'600)** | project grant

Project: "Entwicklung und neurokognitive Evaluation einer digitalen Lernhilfe für den Sprachunterricht im Kanton Wallis" [Development and Neurocognitive Evaluation of a Dig-

ital Tool for Language Classes in the Canton of Valais]

Principal Investigator: Nicolas Rothen together with Prof. Dr. Thomas Reber

05/2015 – 05/2018 Swiss National Science Foundation (CHF 600'000) | career grant: Ambizione Fellowship

Project: "Natural Foundations of Enhanced Memory"

Principal investigator: Nicolas Rothen

02/2013 – 02/2015 Swiss National Science Foundation (CHF 108'880) | career grant: late postdoc

Grant for advanced postdocs. Project: "Perceptual functioning and memory performance:

What is the link?"

Principal investigator: Nicolas Rothen

02/2013 – 02/2016 Economic & Social Research Council (GBP 387'000) | project grant

Project: "Enhanced memory ability: Insights from synaesthesia"

Principal investigator: Prof. Dr. Jamie Ward | Co-investigator: Prof. Dr. Julia Simner | Named postdoc (co-applicant): Nicolas Rothen (declined resulting position, due to the awarded grant

above)

01/2012 – 01/2013 Holcim Foundation (CHF 46'920) | career grant

Research grant. Project: "How Synaesthesia Affects Different Memory Systems – Part 2"

Principal investigator: Nicolas Rothen

01/2011 - 01/2012

Swiss National Science Foundation (CHF 42'600) | career grant: early postdoc Grant for early postdocs. Project: "How Synaesthesia Affects Different Memory Systems" Principal investigator: Nicolas Rothen

### **Organization of Symposia**

**Rothen, N.**, & Meier, B. (2016, July). Neural basis of prospective memory. Symposium organized at the ICOM, 6th International Conference on Memory, Budapest, Hungary.

**Rothen, N.**, & Rusted, J. (2015, September). Current methods and advances in prospective memory research. Symposium organized at the ESCOP, 19th Meeting of the European Society for Cognitive Psychology, Paphos, Cypress.

**Rothen, N.**, Walter, S., & Meier, B. (2015, September). Prospective memory: Psychology of the future. Symposium organized at the SGP, 14th Conference of the Swiss Psychological Society, Geneva, Switzerland.

**Rothen, N.**, & Ward, J. (2013, August). Synaesthesia: How unusual perception can inform normal cognition. Symposium organized at the ESCOP, 18th Meeting of the European Society for Cognitive Psychology, Budapest, Hungary.

#### **Invited Talks**

Rothen, N. (2017, December). Training-induced synaesthesia: a special case of expertise? Invited talk, University of Chinese Academy of Sciences, Yangihu, China.

Rothen, N. (2017, December). On the links between perception and memory. University of Giessen, Germany.

Rothen, N. (2017, January). How individual differences in perception affect memory. University of Hei-delberg, Germany.

Rothen, N. (2016, May). Memory and neural plasticity: What we can learn from synaesthesia research. Centre de Recherche Cerveau et Cognition (CerCo), Toulouse, France.

Rothen, N. (2014, June). Perceptual functioning and memory performance: How synaesthesia can inform theories in cognitive science. University of Amsterdam, Netherlands.

Rothen, N. (2009, July). Synaesthesia: Memory advantages, implicit bidirectionality, and training of synaesthetic experiences. University of Amsterdam, Netherlands.

### **Prizes and Awards**

Highly Cited Research Award received from Journal of Neuroscience Methods (2017, January) for the following publication: **Rothen, N.**, Seth, A. K., Witzel, C., & Ward, J. (2013). Diagnosing synaesthesia with online colour pickers: Maximising sensitivity and specificity. Journal of Neuroscience Methods, 215(1), 156–160.

# **Editorial Tasks and Reviewing Activities**

2021 – current
2019 – 2020
2015 – 2018
2014 – 2015
Editor in Chief: Swiss Psychology Open
Editor in Chief: Swiss Journal of Psychology
Associate Editor: Swiss Journal of Psychology
Guest Editor: Frontiers in Human Neuroscience

Ad hoc reviewer for: Acta Psychologica / Aging and Psychology / Annals of Neurology / Behavioural Brain Research / Cognition / Cognitive Neuroscience / Consciousness and Cognition / Current Biology / Deutsche Forschungsgemeinschaft (DFG) / Encyclopedia of Human Behaviour - 2nd Edition / Frontiers in Cognitive Science / Frontiers in Human Neuroscience / Frontiers in Perception Science / Frontiers in Psychology / Human Brain Mapping / iPerception / The Israel Science Foundation / Journal of Experimental Psychology: Human Perception Performance / Journal of Experimental Psychology: Learning, Memory, and Cognition / Journal of Neuropsychology / Journal of Visualized Experiments / Perception / Memory / Memory Cognition / Neuropsychologia / Philosophical Transactions B / PLoS one / Psychology and Aging / Psychopharmacology / Quarterly Journal of Experimental Psychology / Science

## **Active Memberships**

since 2019	Swiss Psychological Society (SPS)
since 2016	Fellow of the Psychonomic Society (PsyS)
since 2013	European Society for Cognitive Psychology (ESCOP)
since 2008	United Kingdom Synaesthesia Association (UKSA)

### **Institutional Responsibilities**

Co-Dean ("Studiengangsleiter") of the German Master course-programme, Faculty of Psychology, Swiss Distance University Institute, Switzerland

Member of the academic council, Swiss Distance University Institute, Switzerland

Full Member of KPSYCH (formerly KDIPS: Konferenz der Direktorinnen und Direktoren der Institute für Psychologie der Schweiz) representing Swiss Distance University Institute

Local Node Leader of Swiss Reproducibility Network at Swiss Distance University Institute

# Supervision (since 2015)

#### **Ongoing**

Postdoc: Ms Alodie Rey-Mermet

PhD: Ms Mariela Mihaylova, Ms Sandy Marca, Ms Nicole Skieresz, Mr Nik Hunziker, Ms Esther Brill (co-referee)

MAs: Ms Carmen Schreier, Mr Dominique Kuster

#### Completed

PhD: Ms Rebecca Ovalle Fresa

MAs: Mr Felix Häsler, Mr Christopher Ritter, Mr Sinan Arif Uslu, Ms Eleonora Balbi, Ms Esther Brill, Mr Dieter Studer

BAs: Ms Adriana Frei, Mr Simon Aebli, Ms Annika Wyss, Ms Laura Schmid

## **Teaching (since 2015)**

**Experimentelle Übungen** [Experimental Practice] (bachelor course, Swiss Distance University Institute, Switzerland): autumn term 2020

**Wissenschaftliches Arbeiten** [Scientific Practice] (master course, Swiss Distance University Institute, Switzerland): spring term 2019, spring term 2020, spring term 2021

**Neurokognition** [Cognitive Neuroscience] (master course, Swiss Distance University Institute, Switzerland): spring term 2018, spring term 2019, spring term 2020, spring term 2021

Datenanalyse mit R [Data Analysis with R] (summer course, University of Bern, Switzerland): summer 2018

**Lernen und Gedächtnis** [Learning and Memory] (Lecture on Bachelor level, University of Bern, Switzerland): spring term 2018

**Computergestützte Versuchsdurchführung** [Computer Assisted Data Collection] (master course, University of Bern, Switzerland): autumn term 2016, spring term 2017, autumn term, 2017, spring term 2018