Hans Colonius

Curriculum Vitae

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Education and Qualifications

1972	Psychology & Mathematics (pre-Diploma/BSc)	Braunschweig Tech. U.
1973	Psychology (Diploma/Master)	Göttingen U., Braunschweig Tech. U.
1976	Ph.D. (Dr. rer. nat.)	Braunschweig Tech. U.
1982	Habilitation (Dr. rer. nat. habil., Psychology)	Braunschweig Tech. U.

Research Areas

Main: mathematical psychology, cognitive psychology, choice and decision making
Specific: multisensory perception, cognitive control, reaction time modeling, psychophysics, random utility theory, dissimilarity measurement,

I have authored 135 papers, chapters or books on my research topics. A list of these appears on pages 4–11.

Career

1974-78	Research Assistant, Department of Psychology, Braunschweig TU
1978-79	Visiting Research Fellow, Department of Psychology, New York University
1980-83	Research Assistant, Department of Psychology, Braunschweig TU
1983-87	Professor, Department of Psychology, Oldenburg University
1988-91	Associate Prof. (Full Prof. declined), Dept. of Psychol. Sciences, Purdue U.
1991-17	Prof. of Psychology, Oldenburg University
2016-	Adjunct Professor, Department of Psych. Sciences, Purdue University
2017-	Prof.(em.) Oldenburg University

I held *visiting professorships*: U. of Montpellier (France), Purdue U. (Indiana), Northwestern U. (Illinois) , Trento U. (Italy)

Honors and Awards

1971-74	Graduate Scholarship, *Studienstiftung des Deutschen Volkes*
1983	Heisenberg Professorship, *German Science Foundation* (DFG)
1987	Fellowship, *German Academic Exchange Service* (DAAD)
1987-88	Sabbatical Fellowship Volkswagen-Foundation
1996 & 2003	host to 2 awardees of the *Humboldt Research Award*: Thomas S. Wallsten, Ehtibar N. Dzhafarov
2020	Betreuungspreis für besonders engagierte Promotionsbetreuung (prize for excellent dissertation supervision) (*Uni Oldenburg*)
2022	Fellowship from Center for Advanced Studies (*LMU Munich*) Research Group "Handling Visual Distraction"

Administrative Experience

2001-2003 Dean, School of Philosophy, Psychology, and Sports, Oldenburg University
2003-2004 Vice Dean, Fakultaet IV, Oldenburg University
2012-2017 Program director, Cognitive Psychology, Oldenburg University
and chairperson of numerous departmental committees

Editorial Activity

1985–1998 *Psychological Research* (editorial board member)
1995–2000 *Journal of Mathematical Psychology*, Editor-in-Chief
2001–2013 *Journal of Mathematical Psychology*, Editorial Board member
2014–pres. *Journal of Mathematical Psychology*, Editorial Advisory Board member
2011–pres. *Frontiers in Quantitative Psychology and Measurement* (associate editor)
2010–pres *Frontiers in Integrative Neuroscience* (consulting editor)
2004–pres. *Advanced Book Series on Mathematical Psychology* (co-editor, World Sci. Publ.)
2013–2023 Co-editor, *New Handbook of Mathematical Psychology, Volumes 1 - 3* (Cambridge U. Press)

Reviewer for Journals

Acta Psychologica, Attention, Perception and Performance, Behavior Research Methods, Biological Cybernetics, Brain Research, Brain Topography, British Journal of Mathematical and Statistical Psychology, Cognitive Psychology, Current Biology, European Journal of Neuroscience, Experimental Brain Research, Journal of the Acoustical Society of America, Journal of Cognitive Neuroscience, Journal of Neuroscience, Journal of Experimental Psychology: Human Perception & Performance, Neuropsychologia, PNAS, Psychological Bulletion and Review, Psychological Review, Psychological Science, Psychometrika, Vision Research, and others

Grant/Award reviewer for

APA, German Science Foundation (DFG), Humboldt Foundation, National Science Foundation, NSERC, National Science Centre Poland, Australian Science Foundation, Human Brain Project (panel member), SMP awards, AFOSR, Netherlands Organisation for Scientific Research (NWO)

Tenure/Promotion Review for

University of Sydney, University of Bern (Switzerland), UC Irvine, Purdue University, Indiana University, Ohio State U., and various German universities

Habilitation and external committee membership

Profs. Ulf Boeckenholt (Northwestern U.), Martin Lages (U. Glasgow), Ali Uenlue (LMU Munich), Francis Tuerlinckx (Leuven U.)

Higher degree supervision

I supervised 17 doctoral students and 4 postdocs.

Teaching Experience (lectures/seminars)

(i) at Braunschweig University	Experimental psychology (sensation/perception, attention, learning, memory)
	Test theory and test construction
(ii) at Oldenburg University	Introductory statistics
	Multivariate statistics
	Philosophy of science
	Experimental design
	Specialty seminars: neural networks, multisensory integration psychophysics, dynamical systems, response time modeling, etc.
(iii) at Purdue University	Undergraduate and graduate courses in statistics
	Measurement & scaling
	Cognitive psychology

Membership in professional societies

American Psychological Association, American Psychological Society, Society for Mathematical Psychology (Executive Board), European Mathematical Psychology Group (Executive Board), Acoustical Society of America, American Statistical Association, British Psychological Society, Classification Society of North America, European Society for Cognitive Psychology, International Society for Psychophysics, Institute of Mathematical Statistics, Psychometric Society, Psychonomic Society, Society for Industrial and Applied Mathematics, Society for Judgment and Decision Making

Grant support (since 1997)

2021–2023	Probing race models for the stop-signal paradigm: copula approach, DFG (German Science Foundation)	€ 241k
2018–2019	Hearing Industry Research Consortium (IRC) Grant 2017	€ 184k
2013–2017	Cluster of Excellence Hearing4All, DFG (German Science Foundation)	€ 320k
2005–2017	Sonderforschungsbereich TRR31 Active Listening (DFG)	€ 600k
2013–2016	Critical Systems Engineering (Interdisciplinary Research Center)	€ 99k
2006–2009	Fechnerian Scaling, NSF (SES-0620446), with EN Dzhafarov	USD 250k
2006–2008	Regular Minimality, AFOSR (FA9550-06-1-0288), with EN Dzhafarov	USD 330k
2003–2005	Multisensory Integration, DFG, with A. Diederich	€ 300k
2006–2018	Sokrates/Erasmus Intensive Program (IP-project28629), per year about	€ 32k
2001–2003	Multidimensional Fechnerian Scaling, Humboldt Foundation	DM 53.7k
1999–2001	Fechnerian Psychophysics. DFG	DM 160k
1999–2001	Psychophysics of visual-auditory interaction, SFB Neurokognition	DM 418,2k
1996–1998	Visual–auditory interaction, DFG/SFB Neurokognition	DM 395k
1997–1999	Psychoacoustics and Noise, DFG	DM 148k

Recent Talks/Posters (selection)

1. Some results on random utility theory, *European Mathematical Psychology Group Meeting*, Tübingen, September 2024
2. A new stochastic model for the sound-induced flash illusion, *22nd International Multisensory Research Forum*, Reno (NV), June 2024
3. Generalized time-window-of-integration (TWIN) models of multisensory integration (invited), *Sino-German Multisensory Symposium*, Beijiing, September 2023

4. Twenty years of modeling multisensory integration (invited key talk), *Meeting of the European Mathematical Psychology Group*, Rovereto (TN), Italy, 5-7 September 2022
5. Some observations on modeling (guided) search *Handling Visual Distraction, Munich/ Ammersee*, July 22nd-25th, 2022
6. New measures of multisensory integration in reaction times based on relative entropy *20th International Multisensory Research Forum*, Ulm University, July 04-07, 2022
7. A representation theorem for finite best-worst random utility models. *Ann. Meeting Soc. Math. Psychology*, August 2021 (virtual)
8. On the interplay of hearing aid use, audiovisual integration, and speech comprehension *(47th Annual Scientific & Technology Conference, The American Auditory Society)*, Scottsdale, AZ, March 5-7 2020
9. Characterizing dependency in the time-window-of-integration model. *60th Ann. Meeting Psychonomic Soc.*, Montréal, November 2019
10. The copula approach to response inhibition modeling. *Ann. Meeting Soc. Math. Psychology*, Montréal, July 2019
11. Paradox resolved: Dependent stop signal race model. *Psychonomic Society Meeting*, New Orleans, November 2018
12. Copulas for neural and behavioral parallel systems *Purdue Winer Memorial Lectures: Probability and Contextuality, Purdue University, W. Lafayette IN, November 2018* (invited)
13. STOP IT! From Neurons to Behavior and Back *Glasgow Science Center, Glasgow, March 2018* (invited)
14. The stop-signal race model revisited: Paradox resolved *Gordon Research Conference, The Oculomotor System as Model of Mind and Brain, Bates College, Lewiston ME, July 2017*

Publications

Books

1. **Colonius, H.** (1984). *Stochastische Theorien individuellen Wahlverhaltens [in German]*. Springer-Verlag.
2. Wender, K. F., **Colonius, H.**, and H.-H. Schulze (1980). *Modelle des menschlichen Gedächtnisses [Models of human memory]*. Kohlhammer.
3. **Colonius, H.** (in prep.). *Stochastic theories of individual choice: the random utility approach*. Springer-Verlag.

Edited Books

1. Ashby, F. G., **Colonius, H.**, and E. N. Dzhafarov (2023). *New Handbook of Mathematical Psychology Vol. III Perceptual and Cognitive Processes*. Cambridge University Press.
2. Batchelder, W., **Colonius, H.**, and E. N. Dzhafarov (2018). *New Handbook of Mathematical Psychology Vol. II Modeling and Measurement*. Cambridge University Press.
3. Batchelder, W. H., **Colonius, H.**, E. N. Dzhafarov, and J. Myung, eds. (2017). *New Handbook of Mathematical Psychology Vol. I Foundations and Methodology*. Cambridge University Press.
4. **Colonius, H.** and E. N. Dzhafarov (2006). *Measurement and representation of sensations*. Psychology Press.

Refereed research papers/chapters

1. **Colonius, H.** and A. Diederich (2025). Measuring multisensory integration in reaction time: relative entropy approach. *Multisensory Research*.
2. **Colonius, H.**, M. Regenwetter, and J. Swait (2024). Editorial: A celebration of A. A. J. Marley. *Journal of Mathematical Psychology* **122**, 102871.
3. Liesefeld, H. R. et al. (2024). Terms of debate: Consensus definitions to guide the scientific discourse on visual distraction. *Attention, Perception, & Psychophysics*.
4. **Colonius, H.** and A. Diederich (2023). "Modeling response inhibition in the stop signal task". In: *New Handbook of Mathematical Psychology Vol. III*. Cambridge University Press.
5. **Colonius, H.**, P. Jahansa, H. Joe, and A. Diederich (2023). Towards dependent race models for the stop-signal paradigm. *Computational Brain & Behavior* **7**(doi.org/10.1007/s42113-023-00184-3), 255–267.
6. Diederich, A. and **Colonius, H.** (2023). "Measuring multisensory integration". In: *New Handbook of Mathematical Psychology Vol. III*. Cambridge University Press.
7. Dzhafarov, E. and **Colonius, H.** (2023). "Fechnerian Scaling: Dissimilarity Cumulation Theory". In: *New Handbook of Mathematical Psychology Vol. III*. Cambridge University Press.
8. **Colonius, H.** (2021). A representation theorem for finite best-worst random utility models. *Journal of Mathematical Psychology* **104**, 102596.
9. Diederich, A. and **Colonius, H.** (2021). A two-stage diffusion model approach to the compelled-response task. *Psychological Review* **128**(4), 787–802.
10. Rosemann, S., A. Gieseler, M. Tahden, **Colonius, H.**, and C. Thiel (2021). Treatment of age-related hearing loss alters audiovisual integration and resting-state functional connectivity: A randomized controlled pilot trial. *eNeuro*, 10.1523/ENEURO.0258–21.2021.
11. **Colonius, H.** and A. Diederich (2020). Formal models and quantitative measures of multisensory integration: A selective overview. *European Journal of Neuroscience* **51**, 1161–1178.
12. Stoep. N., van der, **Colonius, H.**, J.-P. Noel, M. T. Wallace, and A. Diederich (2020). Audiovisual integration in depth: Modeling the effect of distance and stimulus effectiveness using the TWIN model. *Journal of Mathematical Psychology* **99**(102443).
13. **Colonius, H.** and A. Diederich (2019). Dependency in multisensory integration: a copula-based analysis. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* **377**(2157), http://doi.org/10.1098/rsta.2018.0364.
14. Diederich, A. and **Colonius, H.** (2019). Multisensory integration and exogenous spatial attention: a time-window-of-integration analysis. *Journal of Cognitive Neuroscience* **31**(5), 699–710.
15. Lombardi, L. and **Colonius, H.** (2019). A new nonparametric procedure to evaluate the race model inequality. *Behavior Research Methods* **51**, 2290–2301.
16. Verbruggen, F. et al. (2019). A consensus guide to capturing the ability to inhibit actions and impulsive behaviors in the stop-signal task. eng. *Elife* **8**.
17. **Colonius, H.** and A. Diederich (2018). Paradox resolved: stop signal race model with negative dependence. *Psychological Review* **125**(6), 1051–1058.
18. Gieseler, A., M. Tahden, C. Thiel, and **Colonius, H.** (2018). Does hearing aid use affect audiovisual integration in mild hearing impairment? *Experimental Brain Research* **236**(4), 1161–1179.
19. Tahden, M., A. Gieseler, M. Meis, K. Wagener, and **Colonius, H.** (2018). What keeps hearing-impaired older adults from using hearing aids? *Trends in Hearing* **22**, 1–17.
20. **Colonius, H.** (2017). "Selected concepts from probability". In: *New Handbook of Mathematical Psychology Vol. I*. Ed. by W. Batchelder, H. Colonius, E. N. Dzhafarov, and J. Myung. Cambridge University Press. Chap. 1, pp.1–84.
21. **Colonius, H.** and A. Diederich (2017). Measuring multisensory integration: from reaction times to spike counts. *Scientific Reports* **7**(1). http://dx.doi.org/10.1038/s41598-017-03219-5, 3023.

22. **Colonius, H.**, F. Wolff, and A. Diederich (2017). Trimodal race model inequalities in multisensory integration: I. Basics. *Frontiers in Psychology*. doi: 10.3389/fpsyg.2017.01141, 10.3389.
23. Gieseler, A., M. Tahden, C. Thiel, K. Wagener, M. Meis, and **Colonius, H.** (2017). Auditory and non-auditory contributions for unaided speech recognition in noise as a function of hearing aid use. *Frontiers in Psychology* **8:219**. doi: 10.3389/fpsyg.2017.00219.
24. Baum, S., **Colonius, H.**, A. Thelen, C. Micheli, and M. Wallace (2016). Above the mean: Examining variability in behavioral and neural responses to multisensory stimuli. *Multisensory Research* **29**, 663–678.
25. **Colonius, H.** (2016). An invitation to coupling and copulas, with applications to multisensory modeling. *Journal of Mathematical Psychology* **74**. dx.doi.org/10.1016/j.jmp.2016.02.004, 2–10.
26. **Colonius, H.** (2016). "Stochastic orders of variability". In: *Mathematical Models of Perception and Cognition Volume I: A Festschrift for James T. Townsend*. Ed. by J. Houpt and L. Blaha. Scientific Psychology Series. UK. London: Taylor and Francis, pp.37–46.
27. Diederich, A., **Colonius, H.**, and F. I. Kandil (2016). Prior knowledge of spatiotemporal configuration facilitates crossmodal saccadic response : A TWIN analysis. *Experimental Brain Research* **234**(7), 2059–2076.
28. **Colonius, H.** (2015). Behavioral measures of multisensory integration: bounds on bimodal detection probability. *Brain Topography* **28**(1), 1–4.
29. **Colonius, H.** (2015). "From coupling to copula". In: *Contextuality from Quantum Physics to Psychology*. Ed. by E. N. Dzhafarov, S. Jordan, R. Zhang, and V. Cervantes. Vol. 6. Advanced Series on Mathematical Psychology. World Scientic Publ., pp.51–62.
30. **Colonius, H.** and A. Marley (2015). "Decision and choice: random utility models of choice and response time." In: *International Encyclopedia of the Social & Behavioral Sciences*. Ed. by J. Wright. second edition. Vol. 5. Oxford University Press, pp.901–905.
31. Diederich, A. and **Colonius, H.** (2015). The time window of multisensory integration: Relating reaction times and judgments of temporal order. *Psychological Review* **122**(2), 232–241.
32. Medina, J. M., W. Wong, J. A. Díaz, and **Colonius, H.** (2015). Advances in modern mental chronometry. *Frontiers in Human Neuroscience* **9**, 256.
33. Mendonça, C., S. van de Par, and **Colonius, H.** (2015). On recent findings and clarifications regarding the ventriloquist aftereffect. *Experimental Brain Research*. DOI 10.1007/s00221-015-4410-x.
34. Mendonça, C., A. Escher, S. van de Par, and **Colonius, H.** (2015). Predicting auditory space calibration from recent multisensory experience. *Experimental Brain Research* **233**, 1983–1991.
35. Gulberti, A., P. A. Arndt, and H. Colonius (2014). Stopping eyes and hands: evidence for non–independence of stop and go processes and for a separation of central and peripheral inhibition. *Frontiers in Human Neuroscience* **8**, 61.
36. Kandil, F. I., A. Diederich, and **Colonius, H.** (2014). Parameter recovery for the time-window-of-integration (TWIN) model of multisensory integration in focused attention. *Journal of Vision* **14**(11), 1–20.
37. Steenken, R., L. Weber, **Colonius, H.**, and A. Diederich (2014). Designing driver assistance systems with crossmodal signals: multisensory integration rules for saccadic reaction times apply. *PloS One* **9**(5), e92666.
38. Spreckelmeyer, K. N., E. Altenmüller, **Colonius, H.**, and T. F. Münte (2013). Preattentive processing of emotional musical tones: a multidimensional scaling and ERP study. *Frontiers in Psychology* **4**, 656, 1–11.
39. **Colonius, H.** and A. Diederich (2012). Focused attention vs. crossmodal signals paradigm: deriving predictions from the time-window-of-integration model. *Frontiers in Integrative Neuroscience* **6**, 62.
40. **Colonius, H.** and A. Diederich (2012). "Intersensory Facilitation". In: *Encyclopedia of the Sciences of Learning*. Springer, pp.1635–1638.

41. **Colonius, H.** and E. N. Dzhafarov (2012). "Ultrametric Fechnerian Scaling of discrete object sets". In: *The Mathematics of Distances and Applications*. Ed. by M. Deza, M. Petitjean, and K. Markov. Sofia. Bulgaria: ITHEA Publisher, pp.129–132.
42. Diederich, A. and **Colonius, H.** (2012). "Modeling Multisensory Processes in Saccadic Responses". In: *The Neural Bases of Multisensory Processes*. Ed. by M. M. Murray and M. T. Wallace. Boca Raton (FL): CRC Press.
43. Diederich, A., A. Schomburg, and **Colonius, H.** (2012). Saccadic reaction times to audiovisual stimuli show effects of oscillatory phase reset. *PloS One* **7**(10), e44910.
44. **Colonius, H.** and A. Diederich (2011). Computing an optimal time window of audiovisual integration in focused attention tasks: illustrated by studies on effect of age and prior knowledge. *Experimental Brain Research* **212**(3), 327–337.
45. **Colonius, H.** and A. Diederich (2011). "The Multisensory Driver: Contributions from the Time-Window-of-Integration Model". In: *Human Modelling in Assisted Transportation*. Springer, pp.363–371.
46. Dzhafarov, E. N. and **Colonius, H.** (2011). The Fechnerian idea. *American Journal of Psychology* **124**(2), 127–140.
47. Dzhafarov, E. N., A. Ünlü, M. Trendtel, and **Colonius, H.** (2011). Matrices with a given number of violations of Regular Minimality. *Journal of Mathematical Psychology* **55**(3), 240–250.
48. Rach, S., A. Diederich, and **Colonius, H.** (2011). On quantifying multisensory interaction effects in reaction time and detection rate. *Psychological Research* **75**(2), 77–94.
49. **Colonius, H.** and A. Diederich (2010). The optimal time window of visual-auditory integration: a reaction time analysis. *Frontiers in Integrative Neuroscience* **4**, 11–11.
50. Rach, S., A. Diederich, R. Steenken, and **Colonius, H.** (2010). The race model inequality for censored reaction time distributions. *Attention, Perception, & Psychophysics* **72**(3), 839–847.
51. **Colonius, H.**, A. Diederich, and R. Steenken (2009). Time-window-of-integration (TWIN) model for saccadic reaction time: effect of auditory masker level on visual–auditory spatial interaction in elevation. *Brain Topography* **21**(3-4), 177–184.
52. Diederich, A. and **Colonius, H.** (2009). Crossmodal interaction in speeded responses: time window of integration model. *Progress in Brain Research* **174**, 119–135.
53. Diederich, A. and **Colonius, H.** (2008). Crossmodal interaction in saccadic reaction time: separating multisensory from warning effects in the time window of integration model. *Experimental Brain Research* **186**(1), 1–22.
54. Diederich, A. and **Colonius, H.** (2008). When a high-intensity "distractor" is better then a low-intensity one: modeling the effect of an auditory or tactile nontarget stimulus on visual saccadic reaction time. *Brain Research* **1242**, 219–230.
55. Diederich, A., **Colonius, H.**, and A. Schomburg (2008). Assessing age-related multisensory enhancement with the time-window-of-integration model. *Neuropsychologia* **46**(10), 2556–2562.
56. Steenken, R., **Colonius, H.**, A. Diederich, and S. Rach (2008). Visual–auditory interaction in saccadic reaction time: Effects of auditory masker level. *Brain Research* **1220**, 150–156.
57. Steenken, R., A. Diederich, and **Colonius, H.** (2008). Time course of auditory masker effects: Tapping the locus of audiovisual integration? *Neuroscience Letters* **435**(1), 78–83.
58. **Colonius, H.** and A. Diederich (2007). A measure of auditory-visual integration efficiency based on Fechnerian Scaling. In: *Audio-Visual Speech Processing (AVSP2007)*. Hilvarenbeek, The Netherlands, pp.1–5.
59. Diederich, A. and **Colonius, H.** (2007). Modeling spatial effects in visualtactile saccadic reaction time. *Perception & Psychophysics* **69**(1), 56–67.
60. Diederich, A. and **Colonius, H.** (2007). Why two "distractors" are better than one: modeling the effect of non-target auditory and tactile stimuli on visual saccadic reaction time. *Experimental Brain Research* **179**(1), 43–54.

61. Dzhafarov, E. N. and **Colonius, H.** (2007). Dissimilarity cumulation theory and subjective metrics. *Journal of Mathematical Psychology* **51**(5), 290–304.
62. Åkerfelt, A., **Colonius, H.**, and A. Diederich (2006). Visual-tactile saccadic inhibition. *Experimental Brain Research* **169**(4), 554–563.
63. **Colonius, H.** and A. Diederich (2006). The race model inequality: interpreting a geometric measure of the amount of violation. *Psychological Review* **113**(1), 148–154.
64. Dzhafarov, E. N. and **Colonius, H.** (2006). "Reconstructing distances among objects from their discriminability". In: ed. by **Colonius, H.** and E. N. Dzhafarov. Psychology Press, pp. 47–88.
65. Dzhafarov, E. N. and **Colonius, H.** (2006). Reconstructing distances among objects from their discriminability. *Psychometrika* **71**(2), 365–386.
66. Dzhafarov, E. N. and **Colonius, H.** (2006). "Regular Minimality: A fundamental law of discrimination". In: ed. by **Colonius, H.** and E. N. Dzhafarov. Psychology Press, pp. 1–46.
67. Dzhafarov, E. N. and **Colonius, H.** (2005). Psychophysics without physics: A purely psychological theory of Fechnerian Scaling in continuous stimulus spaces. *Journal of Mathematical Psychology* **49**(1), 1–50.
68. Dzhafarov, E. N. and **Colonius, H.** (2005). Psychophysics without physics: Extension of Fechnerian scaling from continuous to discrete and discrete-continuous stimulus spaces. *Journal of Mathematical Psychology* **49**(2), 125–141.
69. Kirchner, H. and **Colonius, H.** (2005). Cognitive control can modulate intersensory facilitation: speeding up visual antisaccades with an auditory distractor. *Experimental Brain Research* **166**(3-4), 440–444.
70. Kirchner, H. and **Colonius, H.** (2005). Interstimulus contingency facilitates saccadic responses in a bimodal go/no-go task. *Cognitive Brain Research* **25**(1), 261–272.
71. Townsend, J. T. and **Colonius, H.** (2005). Variability of the MAX and MIN Statistic: A Theory of the Quantile Spread as a Function of Sample Size. *Psychometrika* **70**(4), 759–772.
72. **Colonius, H.** and A. Diederich (2004). Multisensory interaction in saccadic reaction time: a time-window-of-integration model. *Journal of Cognitive Neuroscience* **16**(6), 1000–1009.
73. **Colonius, H.** and A. Diederich (2004). Why aren't all deep superior colliculus neurons multisensory? A Bayes' ratio analysis. *Cognitive, Affective, & Behavioral Neuroscience* **4**(3), 344–353.
74. Diederich, A. and **Colonius, H.** (2004). Bimodal and trimodal multisensory enhancement: effects of stimulus onset and intensity on reaction time. *Perception & Psychophysics* **66**(8), 1388–1404.
75. Diederich, A. and **Colonius, H.** (2004). "Modeling the time course of multisensory interaction in manual and saccadic responses". In: *The handbook of multisensory processes*. Ed. by G. Calvert, C. Spence, and B. E. Stein. MIT Press. Chap. 24, pp.395–408.
76. Kirchner, H. and **Colonius, H.** (2004). Predictiveness of a visual distractor modulates saccadic responses to auditory targets. *Experimental Brain Research* **155**(2), 257–260.
77. Arndt, P. A. and **Colonius, H.** (2003). Two stages in crossmodal saccadic integration: evidence from a visual-auditory focused attention task. *Experimental Brain Research* **150**(4), 417–426.
78. Diederich, A., **Colonius, H.**, D. Bockhorst, and S. Tabeling (2003). Visual-tactile spatial interaction in saccade generation. *Experimental Brain Research* **148**(3), 328–337.
79. Özyurt, J., **Colonius, H.**, and P. A. Arndt (2003). Countermanding saccades: Evidence against independent processing of go and stop signals. *Perception & Psychophysics* **65**(3), 420–428.
80. **Colonius, H.** and A. Diederich (2002). A maximum-likelihood approach to modeling multisensory enhancement. *Advances in neural information processing systems* **14**, 181–188.
81. **Colonius, H.** and A. Diederich (2002). "A stochastic model of multimodal integration in saccadic responses". In: ed. by R. P. Würtz and M. Lappe, pp. 321–326.
82. **Colonius, H.** and P. Arndt (2001). A two-stage model for visual-auditory interaction in saccadic latencies. *Perception & Psychophysics* **63**(1), 126–147.
83. **Colonius, H.**, J. Özyurt, and P. A. Arndt (2001). Countermanding saccades with auditory stop signals: testing the race model. *Vision Research* **41**(15), 1951–1968.

84. Dzhafarov, E. N. and **Colonius, H.** (2001). Multidimensional Fechnerian Scaling: Basics. *Journal of Mathematical Psychology* **45**(5), 670–719.
85. Heuermann, H. and **Colonius, H.** (2001). Spatial and temporal factors in visual-auditory interaction. In: *Proceedings of the Seventeenth Meeting of the International Society for Psychophysics*. Ed. by E. Sommerfeld, R. Kompass, and T. Lachmann. Lengerich: Pabst Science Publishers, pp.118–123.
86. Van Zandt, T., **Colonius, H.**, and R. W. Proctor (2000). A comparison of two response time models applied to perceptual matching. *Psychonomic Bulletin & Review* **7**(2), 208–256.
87. **Colonius, H.** (1999). A theorem on parallel processing models with a generalized stopping rule. *Mathematical Social Sciences* **38**(3), 247–258.
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