Dr. Juliane E. Kämmer CV

Curriculum Vitae

Dr. Juliane Eva Kämmer

Marie Skłodowska-Curie fellow, Senior Scientist <u>Diagnostic Decision Making Lab</u> Universitäres Notfallzentrum, Inselspital Bern University of Bern Freiburgstrasse, 3010 Bern, Switzerland Juliane.Kaemmer@med.unibe.ch ORCID: 0000-0001-6042-8453 <u>Linkedin</u>

RESEARCH STATEMENT & SHORT BIO

My research contributes to better understanding and improving team decision making in high-risk environments such as emergency medicine. I combine insights and methods from cognitive, social and organizational psychology, and medical education. I also work on applications of the wisdom of crowds in medicine as a means to improve diagnostic quality. I am co-leading the *Diagnostic Decision Making Lab*, where we conduct empirical studies on confidence calibration, diagnostic decision support, and collaborative decision-making.

The methods I use range from experiments, over computational modeling, simulations and reviews to large-scale field studies. Often, I combine quantitative analyses with behavior observations or qualitative analyses.

Currently, I am a Marie Skłodowska-Curie fellow at the Dept. of Emergency Medicine, University of Bern. After receiving my PhD in psychology from the Humboldt University Berlin and the Max Planck Institute for Human Development (MPIB) in 2013, I spent my Postdocs at the Center for Adaptive Rationality (ARC) at the MPIB in Berlin, the FernUniversität in Hagen and the Charité — Universitätsmedizin Berlin. I spent a research visit at Roehampton University, London, UK with Prof. Karin Moser and another at Purdue University, West Lafayette, IN, USA with Prof. Torsten Reimer.

REPRESENTATIVE PUBLICATIONS

Collabor	ative
decision	making

Hautz, W. E.*, **Kämmer, J. E.***, Schauber, S. K., Spies, C. D., & Gaissmaier, W. (2015). Diagnostic performance by medical students working individually or in teams. *JAMA*, *313*, 303–4. doi:10.1001/jama.2014.15770. * equal contribution

Wisdom of crowds

Kämmer, J. E., Hautz, W. E., Herzog, S. M., Kunina-Habenicht, O., & Kurvers, R. H. J. M. (2017). The potential of collective intelligence in emergency medicine: Pooling medical students' independent decisions improves diagnostic performance. *Medical Decision Making*, *37*, 715-24. https://doi.org/10.1177/0272989X17696998

Confidenceaccuracy relation **Kämmer, J. E.**, Hautz, W. E., & März, M. (2020). Self-monitoring accuracy does not increase throughout undergraduate medical education. *Medical Education*, *54*(4), 320–3. https://doi.org/10.1111/medu.14057

Judgment and decision making

Kämmer, J. E., Gaissmaier, W., Reimer, T., & Schermuly, C.C. (2014). The adaptive use of recognition in group decision making. *Cognitive Science*, *38*, 911–42. doi: 10.1111/cogs.12110.

Applied research

Freytag, J., Stroben, F., Hautz, W. E., Schauber, S. K., & Kämmer, J. E. (2019). Rating the quality of teamwork—a comparison of novice and expert ratings using the Team Emergency Assessment Measure (TEAM) in simulated emergencies. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, *27*, *12*. https://doi.org/10.1186/s13049-019-0591-9

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ACADEMIC QUALIFICATIONS

10/2013 **Dr. rer. nat. (Ph.D.) Psychology** (summa cum laude / with highest praise)

Dissertation: "How people make adaptive decisions with (the help of) others:

Studies from an ecological rationality perspective" Supervisor: Prof. Gigerenzer, Dr. Gaissmaier

Department of Psychology, Humboldt University Berlin

11/2009 **Diplom (M.Sc.) in Psychology** (Dipl.-Psych.; final grade: 1.2)

Diploma thesis: "Recognition in economic group decisions—is it special?"

Department of Psychology, Humboldt University Berlin

07/2004 Vordiplom (BA) in Psychology (final grade: 1.5)

Department of Psychology, Humboldt University Berlin

VISITS ABROAD

03/2011 – 05/2011 Research visit with Prof. Torsten Reimer, Associate Professor of

Communication and Psychology

Purdue University, West Lafayette, IN, USA

05/2009 – 08/2009 Research internship with Prof. Karin Moser, Professor of Organisational

Behaviour

Roehampton University, London, UK

09/2007 – 12/2007 Study abroad (BA Sociology)

Manchester Metropolitan University, Manchester, UK

AWARDS & PRIZES

10/2021 Poster Prize, first prize

Wespi, R., Birrenbach, T., Kämmer, J. E., Manser, T., Schauber, S. K., Hautz W. E., & Sauter, T. C., MED1stMR TRAIN-[SKILLS.RESILIENCE.PERFORMANCE]-SAVE

LIVES

Deutsche Gesellschaft zur Förderung der Simulation in der Medizin e.V.

03/2017 Best Research Protocol, first prize (€ 1,500)

Freytag, J., Stroben, F., Kämmer, J. E., Hautz, W. E., Eisenmann, D., Teamwork-related debriefings in undergraduate emergency-medicine simulations: Evaluation of the "TeamTAG" using a prospective-randomized pilot-study

design

German Association for Medical Education

03/2017 Best Research Protocol, second prize

Hautz, S. C., Kämmer, J. E., Schauber, S., & Hautz, W. E., Does group decision making in the workplace result in higher diagnostic accuracy and better

learning? The group-DX-study

German Association for Medical Education

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GRANTS	&	FELLOWSHIPS
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06/2022 – 06/2023 **BeLEARN Association** (CHF 51,015): Project funding for "INTEAM – Interprofessional team training in Virtual Reality", with co-applicants S. Hautz, T. Birrenbach, R. Wespi, & T. Sauter University of Bern 05/2021 – 02/2022 **University of Bern** (CHF 3,500): Participation fellowship for the university's career program COMET – Coaching, Mentoring and Trainings for postdoctoral researchers University of Bern 04/2020 - 05/2022 Marie Skłodowska-Curie Actions of the European Union's Horizon 2020 research and innovation programme (€ 203,149): Marie Skłodowska-Curie grant agreement, No. 894536, "TeamUp: Understanding and improving team decision making in uncertain environments" (https://cordis.europa.eu/project/id/894536) University of Bern 03/2019 - 12/2020 Charité – Universitätsmedizin Berlin (€ 4,850): Lydia-Rabinowitsch-grant Charité – University Hospital, Berlin 01/2015 - 02/2016 **Max Planck Society:** Scholarship as Postdoctoral research fellow Max Planck Institute for Human Development, Berlin 12/2012 – 03/2014 **Max Planck Society:** Scholarship as Postdoctoral research fellow Max Planck Institute for Human Development, Berlin 07/2011 - 05/2012 Volkswagen Foundation, European Platform for Life Sciences, Mind Sciences and the Humanities (€10,000): Funding for "Personal and shared intentionality—An interdisciplinary workshop", with co-applicants Gerhard Bos, Anika Fiebich, & Michael von Grundherr Max Planck Institute for Human Development, Berlin 04/2011 – 12/2012 **Humboldt University Berlin:** Participation fellowship of the Graduate Program Adlershof for women PhD students **Humboldt University Berlin** 03/2011 - 05/2011 **Max Planck Society:** Travel grant for research visit with Prof. Torsten Reimer Purdue University, West Lafayette, IN, USA 12/2009 – 11/2012 Max Planck Society, International Max Planck Research School on Adapting **Behavior in a Fundamentally Uncertain World:** Scholarship as PhD candidate Max Planck Institute for Human Development, Berlin 05/2009 - 08/2009 **European Union:** Leonardo scholarship for a research internship Roehampton University, London, UK 09/2007 – 12/2007 **European Union:** Erasmus scholarship for studying abroad Manchester Metropolitan University, UK

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ORGANIZATION OF INTERNATIONAL CONFERENCES

2023	3rd European Conference on Diagnostic Error in Medicine , member of the scientific committee <i>University of Padova</i>
2020 – 2021	Diagnostic error symposium (postponed due to Covid-19), member of the scientific committee and abstract selection committee <i>Inselspital Bern</i>
2018	2 nd European Conference on Diagnostic Error in Medicine , member of the scientific committee and abstract selection committee <i>Inselspital Bern</i>
2012	Personal and shared intentions—An interdisciplinary workshop , member of the scientific committee Max Planck Institute for Human Development, Berlin
2010 – 2011	9 th and 10 th Summer Institutes on Bounded Rationality , member of the selection committee <i>Max Planck Institute for Human Development, Berlin</i>

MEMBERSHIPS

DGPs (Deutsche Gesellschaft für Psychologie),

INGRoup (interdisciplinary network for group research),

EAWOP (European Association of Work and Organizational Psychology)

REVIEWING & CONTRIBUTIONS TO SCIENCE

2015 – 2020	Mentoring of PhD students Max Planck Institute for Human Development, Berlin
01/2010 – 01/2015	WiBB—Wissenschaftlerinnen in Berlin/Brandenburg , an initiative to promote female junior scientists by organizing monthly meetings and annual panel discussions; Co-organizer with Anke Hübenthal and Laura Hartmann
since 2010	Ad-hoc reviewer for Journal of Experimental Psychology: Applied, Cognition and Emotion, European Psychologist, BMJ Quality & Safety, Medical Education, GMS Journal for Medical Education

Publications

Google scholar https://scholar.google.de/citations?hl=de&user=S56rRf8AAAAJ

Research gate https://www.researchgate.net/profile/Juliane_Kaemmer

PEER-REVIEWED PUBLICATIONS

* equal contribution / shared authorship

revise and resubmit Kämmer, J. E., Choshen-Hillel, S., Müller-Trede, J., Black, S., & Weibler, J.

(revise and resubmit). A systematic review of advice-based decisions in

behavioral and organizational research. Decision.

2021 Freytag, J., Stroben, F., Hautz, W. E., Penders, D., & Kämmer, J. E. (2021).

Einfluss eines Leitfadens auf Inhalt und Durchführbarkeit von CRM-Debriefings nach simulierten Notfällen [Effect of using a cognitive aid on content and feasibility of debriefings of simulated emergencies]. GMS Journal for Medical

Education, 38(5), Doc95. https://doi.org/10.3205/zma001491

Jürgens, J., März, M., **Kämmer, J. E.**, Quandt, C., Johanning, K., Hahnenkamp, K., & Koppert, W. (2021). Der Progresstest zur Evaluierung der Weiterbildung im Fach Anästhesiologie [A progress test to evaluate the professional training in anaesthesiology]. *Anästhesiologie und Intensivmedizin*, *62*, 278-292.

https://doi.org/10.19224/ai2021.278

Kämmer, J. E. & Ewers, M. (2021). Stereotypes of experienced health professionals in an interprofessional context—Results from a semi-structured survey. *Journal of Interprofessional Care, ahead-of-print,* 1-12.

https://doi.org/10.1080/13561820.2021.1903405

Kämmer, J. E., & Hautz, W. E. Beyond competence: Towards a more holistic perspective in medical education. *Medical Education*.

https://doi.org/10.1111/medu.14692

Kämmer, J. E., Schauber, S. K., Hautz, S. C., Stroben, F., & Hautz, W. E. (2021). Differential diagnosis checklists reduce diagnostic error differentially: a randomized experiment. *Medical Education*.

https://doi.org/10.1111/medu.14596

Schauber, S. K., Hautz, S. C., **Kämmer, J. E.**, Stroben, F., & Hautz, W. E. (2021). Do different response formats affect how test takers approach a clinical reasoning task? An experimental study on antecedents of diagnostic accuracy using a constructed response and a selected response format. *Advances in*

Health Sciences Education. https://doi.org/10.1007/s10459-021-10052-z

Hautz, S., Oberholzer, D., Freytag, J., Exadaktylos, A., **Kämmer, J. E.**, Sauter, T. C., & Hautz, W. E. (2020). An observational study of self-monitoring in ad hoc

health care teams. *BMC Medical Education* 20, 201.

https://doi.org/10.1186/s12909-020-02115-3

Hautz, W. E., Hautz, S. C., & **Kämmer, J. E**. (2020). Whether two heads are better than one is the wrong question (though sometimes they are). *Advances in Health Sciences Education*. *Advance online publication*.

https://doi.org/10.1007/s10459-020-09956-z

Hautz, W. E. & **Kämmer, J. E.** (2020). A plea for contrastive instructions. *Medical Education*, *54*(8), 682-684. https://doi.org/10.1111/medu.14191

2020

Hautz, W. E., Sauter, T. C., Hautz, S. C., **Kämmer, J. E.**, Schauber, S. K., Birrenbach, T., Exadaktylos, A. K., Stock, S., & Müller, M. (2020). What determines diagnostic resource consumption in emergency medicine: patients, physicians or context? *Emergency Medicine Journal*, *37*, *546-551*. https://doi.org/10.1136/emermed-2019-209022

Kämmer, J. E., Hautz, W. E., & März, M. (2020). Self-monitoring accuracy does not increase throughout undergraduate medical education. *Medical Education*, 54(4), 320–327. https://doi.org/10.1111/medu.14057

Krockow, E. M., Kurvers, R. H. J. M., Herzog, S. M., **Kämmer, J. E.**, Hamilton, R. A., Thilly, N., Macheda, G., & Pulcini, C. (2020). Harnessing the wisdom of crowds can improve guideline compliance of antibiotic prescribers and support antimicrobial stewardship. *Scientific Reports*, *10*(1):18782. https://doi.org/10.1038/s41598-020-75063-z

Schüttpelz-Brauns, K., Hecht, M., Hardt, K., Karay, Y., Zupanic, M., & **Kämmer J. E.** (2019): Institutional strategies related to test-taking behavior in low stakes assessment. *Advances in Health Sciences Education, published online ahead of print*. https://doi.org/10.1007/s10459-019-09928-y.

Freytag, J., Stroben, F., Hautz, W. E., Schauber, S. K., & **Kämmer, J. E.** (2019). Rating the quality of teamwork—a comparison of novice and expert ratings using the Team Emergency Assessment Measure (TEAM) in simulated emergencies. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, *27:12*. https://doi.org/10.1186/s13049-019-0591-9

Hautz, W. E., **Kämmer, J. E.**, Hautz, S. C., Sauter, T. C., Zwaan, L., Exadaktylos, A. K., Birrenbach, T., Maier, V. Müller, M., & Schauber, S. (2019). Diagnostic error increases mortality and length of hospital stay in patients presenting through the emergency room. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, *27*:54. https://doi.org/10.1186/s13049-019-0629-z

Hautz, W. E., Schubert, S., Schauber, S. K., Kunina-Habe nicht, O., Hautz, S. C., **Kämmer, J. E.**, & Eva, K. W. (2019). Accuracy of self-monitoring: Does experience, ability, or case difficulty matter? *Medical Education, Early View*. https://doi.org/10.1111/medu.13801

Sauter, T. C., Capaldo, G., Hoffmann, M., Birrenbach, T., Hautz, S. C., **Kämmer, J. E.**, Exadaktylos, A. K., & Hautz, W. E. (2018). Non-specific complaints at emergency department presentation result in unclear diagnoses and lengthened hospitalization: a prospective observational study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine, 26:60.* https://doi.org/10.1186/s13049-018-0526-x.

Schüttpelz-Brauns, K., Kadmon, M., Kiessling, C., Karay, Y., Gestmann, M., & Kämmer, J. E. (2018). Identifying low test-taking effort during low-stakes tests with the new Test-taking Effort Short Scale (TESS) – development and psychometrics. *BMC Medical Education*, *18*:101. https://doi.org/10.1186/s12909-018-1196-0.

Analytis, P. P., Delfino, A., **Kämmer, J. E.**, Moussaïd, M., & Joachims, T. (2017). Ranking with social cues: Integrating online review scores and popularity information. *arXiv*. arXiv:1704.01213.

Freytag, J., Stroben, F., Hautz, W. E., Eisenmann, D., & **Kämmer, J. E.** (2017). Improving patient safety through better teamwork: How effective are different methods of simulation debriefing? Protocol for a pragmatic, prospective and randomised study. *BMJ Open, 7*, e015977. https://doi.org/10.1136/bmjopen-2017-015977.

2019

2018

2017

	Kämmer, J. E. , Hautz, W. E., Herzog, S. M., Kunina-Habenicht, O., & Kurvers, R. H. J. M. (2017). The potential of collective intelligence in emergency medicine: Pooling medical students' independent decisions improves diagnostic performance. <i>Medical Decision Making</i> , <i>37</i> , 715-724. https://doi.org/10.1177/0272989X17696998.
	Moser, K. S. & Kämmer, J. E. (2017). Collaboration time influences information-sharing at work. <i>Team Performance Management: An International Journal, 24,</i> 2-16. https://doi.org/10.1108/TPM-10-2016-0043.
	Moussaïd, M., Herzog, S. M., Kämmer, J. E. , & Hertwig, R. (2017). Reach and speed of judgment propagation in the laboratory. <i>Proceedings of the National Academy of Sciences of the United States of America, 114,</i> 4117-4122. https://doi.org/10.1073/pnas.1611998114.
2016	Hautz, W. E., Kämmer, J. E. , Exadaktylos, A., & Hautz, S. C. (2016). How thinking about groups is different from groupthink. <i>Medical Education, 51,</i> 229. https://doi.org/10.1111/medu.13137.
	Hautz, S. C., Schuler, L., Kämmer, J. E. , Schauber, S. K., Ricklin, M. E., Sauter, T. C., Maier, V., Birrenbach, T., Exadaktylos, A., & Hautz, W. E. (2016). Factors predicting a change in diagnosis in patients hospitalised through the emergency room: A prospective observational study. <i>BMJ Open, 6</i> , e011585. https://doi.org/10.1136/ bmjopen-2016-011585.
	McMahon, K., Ruggeri, A., Kämmer, J. E. , Katsikopoulos, K. V. (2016). Beyond idea generation: The power of groups in developing ideas. <i>Creativity Research Journal</i> , <i>28</i> , 247-257. https://doi.org/10.1080/10400419.2016.1195637.
2015	Hautz, W. E.*, Kämmer, J. E.*, Schauber, S. K., Spies, C. D., & Gaissmaier, W. (2015). Diagnostic performance by medical students working individually or in teams. <i>JAMA</i> , <i>313</i> , 303–304. https://doi.org/10.1001/jama.2014.15770.
2014	Analytis, P. P., Moussaïd, M., Artinger, F., Kämmer, J. E. , & Gigerenzer, G. (2014). "Big data" needs an analysis of decision processes. <i>Behavioral and Brain Sciences</i> , <i>37</i> , 76–78. https://doi.org/10.1017/S0140525X13001659.
	Kämmer, J. E., Gaissmaier, W., Reimer, T., & Schermuly, C.C. (2014). The adaptive use of recognition in group decision making. <i>Cognitive Science, 38</i> , 911–942. https://doi.org/10.1111/cogs.12110.
2013	Kämmer, J. E. , Gaissmaier, W., & Czienskowski, U. (2013). The environment matters: Comparing individuals and dyads in their adaptive use of decision strategies. <i>Judgment and Decision Making</i> , <i>8</i> , 299–329.
	Moussaïd, M., Kämmer, J. E. , Analytis, P. P., & Neth, H. (2013). Social influence and the collective dynamics of opinion formation. <i>PLoS One 8</i> (11): e78433. https://doi.org/10.1371/journal.pone.0078433.
MONOGRAPHS	
2013	Kämmer, J. E. (2013). How people make adaptive decisions with (the help of) others: Studies from an ecological rationality perspective. <i>Doctoral dissertation, Humboldt University Berlin, Germany</i> .
2009	Kämmer, J. E. (2009). Recognition in economic group decisions—is it special? <i>Unpublished diploma thesis, Humboldt University Berlin, Germany.</i>
INVITED TALKS	
2021	Kämmer, J. E. (2021). Better decisions in emergency. <i>Colloquium of the Institute of Psychology</i> , University of Bern, Switzerland.

Kämmer, J. E. & Hautz, W. E. (2018). Diagnostic error in emergency medicine.
 2nd European Conference on Diagnostic Error in Medicine, Bern, Switzerland.
 Kämmer, J. E. & Moser, K. S. (2013). Effects of time perspective on cooperation intentions in an information-sharing dilemma. Conference on Cooperation: Why, How, and With Whom?, Aarhus, Denmark.

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SELECTED CC	INFERENCE PRESENTATIONS
2022	Kämmer, J. E. , Ernst, K., Grab, K., & Hautz, W. E. (2022). Information interpretation and synthesis in complex decision-making. Locating performance benefits of small groups. <i>Paper presented at the 64th Conference of Experimental Psychologists (TeaP online)</i> , Köln, Germany.
2021	Kämmer J. E. , Schauber, S. K., Hautz, S. C., Stroben, F., & Hautz, W. E. (2021). Can checklists enhance diagnostic reasoning and accuracy? <i>Paper presented at the 63th Conference of Experimental Psychologists (TeaP@Home)</i> , Ulm, Germany.
2019	Kämmer J. E. , Ewers M (2019). Auto- and heterostereotypes of experienced health professionals in an interprofessional context. <i>Paper presented at the International IPE Symposium "The next steps"</i> , Berlin, Germany.
2018	Kämmer, J.E. , Verba, M., Werner, S., & März, M. (2018). Wie entwickelt sich im Medizinstudium die Fähigkeit, das eigene Wissen adäquat einzuschätzen? [How does the self-monitoring ability of medical students develop during medical study?] Paper presented at the <i>GMA Jahrestagung 2018 (Annual Meeting of the Society for Medical Education)</i> in Vienna, Austria.
2017	Hautz, S. C., Kämmer, J. E. , Schauber, S., & Hautz, W. E. (2017). Does group decision making in the workplace result in higher diagnostic accuracy and better learning? The group-DX-study. <i>Paper presented at the 5th International Conference for Research in Medical Education RIME</i> , Düsseldorf, Germany.
	Kämmer, J. E. , Schauber, S. K., Hautz, S. C., Stroben, F., & Hautz, W. E. (2017). Simple interventions can increase the diagnostic performance of young physicians. <i>Paper presented at the 59th Conference of Experimental Psychologists (TeaP)</i> , Dresden, Germany.
2016	Kämmer, J. E. , Kurvers, R. H. J. M., Herzog, S. M., & Hautz, W. E. (2016). Combining independent decisions increases diagnostic accuracy in the emergency room. <i>Paper presented at the 50th Conference of the German Society for Psychology</i> , Leipzig, Germany.
	Kämmer, J. E. , Kurvers, R. H. J. M., Herzog, S. M., & Hautz, W. E. (2016). The wisdom of simulated crowds in emergency medicine. <i>Paper presented at the 58th Conference of Experimental Psychologists (TeaP)</i> , Heidelberg, Germany.
2014	Kämmer, J. E., Pachur, T., & Gaissmaier, W. (2014). Shall we risk it? How group decision making impacts risky choice. <i>Paper presented at the 56th Conference of Experimental Psychologists (TeaP)</i> , Gießen, Germany.
2013	Kämmer, J. E. , Analytis, P. P., Moussaïd, M., & Neth, H. (2013). Navigating the social environment: An ecological rationality perspective on advice taking behavior. <i>Poster presented at The Annual Meeting of the Cognitive Science Society (CogSci) 2013</i> , Berlin, Germany.
	Kämmer, J. E. , Analytis, P. P., Moussaïd, M., & Neth, H. (2013). Navigating the social environment: An ecological rationality perspective on advice taking behavior. <i>Paper presented at the 24th Subjective Probability, Utility, and</i>

Decision Making Conference (SPUDM 24), Barcelona, Spain.

