

Dan Mønster — Curriculum Vitae

August 2017

I AM ASSOCIATE PROFESSOR at Aarhus University, affiliated with Department of Economics and Business Economics, Department of Management, Interacting Minds Centre, and Cognition and Behavior Lab. My research interests can be summarized as *studying and quantifying interpersonal dynamics of individuals in cooperation and conflict*. I mainly do basic research, but I hope that my results can contribute to improving organizations and society over the long run. I use controlled laboratory experiments in my research, combined with modeling and simulation. Part of my work also contributes to the development of new data analysis methods.



Personal details

Full name: Dan Mønster

Born: 24 March 1969

E-mail: danm@econ.au.dk

Nationality: Danish

Family: My wife, Linda, and children: Sofie, Gustav, Anna and Tilde.

Academic positions

2017– Associate Professor, Department of Economics and Business Economics, Aarhus University.

2017– Associate Professor, Department of Management, Aarhus University.

2013–2016 Assistant Professor, Department of Economics and Business Economics, Aarhus University.

2013– Lab Manager, Cognition and Behavior Lab, Aarhus University.

2012– Researcher, Interacting Minds Centre, School of Culture and Society, Aarhus University.

2011–2016 Faculty, Interdisciplinary Center for Organizational Architecture, Aarhus University.

2010–2012 Postdoctoral Researcher, Department of Business Administration, Aarhus University.

Visiting positions

1997 (*April–May*) TRACS visitor at Edinburgh Parallel Computing Centre, The University of Edinburgh.

1995 (*June–September*) Visiting researcher, Physics Department, Brookhaven National Laboratory, New York.

Short visits

2016 (*July*) Santa Fe Institute. Host: Simon DeDeo.

2015 (*June/July*) Santa Fe Institute. Host: Simon DeDeo.

2013 (*January*) Duke University, Fuqua School of Business. Host: Richard M. Burton.

1997 – 2000 Frequent visits to Risø National Laboratory. Hosts: Niels Hessel Andersen & Per-Anker Lindgård

Professional experience

2008–2010 Chief Technology Officer, Danish Research Network.

2002–2007 Specialist consultant, Danish Research Network.

1996–2001 Research consultant, Danish Computing Centre for Research and Education.

Education

1996 PhD in Science, Aarhus University.

1994 MSc in Physics, Aarhus University.

Other skills and qualifications

Certifications and courses Software Carpentry Instructor (2017), Teacher Training Programme – Aarhus University (2013), Lecturing (2011), Protecting Human Research Participants – NIH Office of Extramural Research (2010), BIOPAC Basic training (2010), Cisco Certified Networking Professional (2001), IDL Programming techniques (1998), PADI Open Water Diver (1994), Driver’s license (1987).

Online courses Model Thinking by University of Michigan on Coursera (2013, with distinction), Computing for Data Analysis by Johns Hopkins University on Coursera (2013, with distinction), Data Analysis by Johns Hopkins University on Coursera (2014, with distinction), Game Theory by Stanford University and University of British Columbia on Coursera (2014, with distinction).

Languages Danish (native speaker), English (near native), Norwegian (very good command), Swedish (very good command), German (good working knowledge), Spanish (basic communication skills).

Programming and computing R, Python, MATLAB, C, Fortran, IDL, L^AT_EX, HTML, Unix, Mac, Networking.

Funding

Behavior, Cognition and Interaction Labs (BICLabs) is a DKK 70,160,113 proposal for a new national Danish research infrastructure for experimental research in the social sciences and humanities. I coordinate the proposal which includes five universities and several other partner institutions. The proposal is among 22 projects selected for the National Roadmap for Research Infrastructure.

Grants as PI

Year	Role	Title	Amount
2017	co-PI	The role of information in structured conflict	USD 350,698
2017	PI	Trustful Environments	DKK 30,000
2016	PI	Networked Architecture for Interacting Minds Experiments	DKK 33,000
2015	PI	Rank Emergence through Conflict	DKK 67,300
2015	PI	Heart rate synchronization in social interactions	DKK 40,067
2015	PI	Validation of the Cortrium C3 Device	DKK 12,089

Grants as collaborator

Year	Title	PI	Amount
2017	SafeconsumE (Horizon 2020)	Solveig Langsrud	EUR 9,500,000
2016	The role of social networks in exploration/exploitation dynamics of problem solving	Riccardo Fusaroli	DKK 69,000
2014	Computational Modeling of Complex Interactions	Jacob F. Sherson	DKK 590,000
2014	How do people deal with commitments involving groups?	John Michael	DKK 30,000
2013	ScareCom	Nina Veflen & Joachim Scholderer	NOK 8,000,000
2012	Interacting Minds Centre	Andreas Roepstorff	DKK 8,100,000

Teaching

Year	Title of course	Role	Type	# Students	Tasks	Levels taught	Exam
2016 –	Mathematics	Lecturer	5 ECTS, lectures, excercises	150	Lectures, grading exam assignments	BA 1st semester	2h written exam
2015 –	Matematik	Lecturer	5 ECTS, lectures, excercises	225	Lectures, grading exam assignments	BA 1st semester	2h written exam
2015	Computational Modelling of Complex Interactions	Supervisor	5 ECTS, Lectures, 1 week project	20	Participated in 5 workshops, supervised 2 students	PhD	Written report, oral presentation
2013 – 2015	Principles of Organizations and Management	Course responsible, lecturer	10 ECTS, lectures, excercises	300	Course responsible, lectures (50%), exams	BA 1st semester	15 min oral exam
2012	Advanced Experimental Tools for Political Science	Lecturer	5 ECTS, 1 week workshop	10	Presentations and excercises, 2 full days	PhD	Written report, experimental design
2011 – 2012	Organisational Behaviour	Lecturer	5 ECTS, lectures, excercises	250	2 lecture classes each semester	BA 4th semester	3h written exam
2011 – 2012	Adfærd i organisationer	Lecturer	5 ECTS, lectures, excercises	165	Lectures	BA 2nd semester	3h written exam
2011	Organizational Theory	Lecturer	10 ECTS, lectures	120	50% of lectures	MA 1st semester	12 h take home assignment
2010	Experimental Toolbox	Lecturer	5 ECTS, 1 week workshop	12	Presentations and excercises, 2 full days	PhD	–
2010 – 2011	Innovation	Lecturer	5 ECTS, 14 full-day workshops	15	1 full-day workshop	PhD and MA	Oral
2010	Humanistisk innovation	Lecturer	5 ECTS	50	1 full-day workshop	BA	Written

Conference presentations (2010–2017)

Presenter is indicated in bold.

Hobson, E.; Mønster, D. and DeDeo, S.: The hidden structure of dominance hierarchies. Presented at 54th Annual Conference of the Animal Behavior Society, Toronto, Canada, June 2017.

Mønster, D.. Participation in panel *Current status and future perspectives for complexity* at COMPLEXIS 2017, Porto, Portugal, April 2017.

Wallot, S.; Roepstorff, A. and **Mønster, D.**: Multidimensional Recurrence Quantification Analysis (MdrQA). Presented at High Quality Journal Forum, COMPLEXIS 2017, Porto, Portugal, April 2017.

Mønster, D.: Studying Complex Interactions in Real Time. Presented at COMPLEXIS 2017, Porto, Portugal, April 2017.

Wallot, S.; Roepstorff, A. and Mønster, D.: Multidimensional Recurrence Quantification Analysis (MdrQA) for the analysis of multidimensional time-series and its application to group-level data in joint action. Presented at TeaP 2017 - 59th Conference of Experimental Psychologists, Dresden, Germany, March 2017.

Mønster, D. Physiological measures of arousal in teams performing a team task. Invited talk presented at Interacting Minds Centre Bootcamp on Stress, Aarhus, Denmark, August, 2016.

Mønster, D.; Fusaroli, R.; Tylén, K.; Roepstorff, A. and J. Sherson. Inferring causality from noisy time series data: A test of Convergent Cross-Mapping. Presented at 1st International Conference on Complex Information Systems (COMPLEXIS 2016), Rome, Italy, April 2016.

Mønster, D.; Håkonsson, D. D.; Eskildsen, J. K.; Argote, L.; Burton, R. M. and Obel, B. Variations in the Circumplex Model of Affect Across Contexts. Presented at PMA (Performance Management Association) conference 2014, Aarhus, Denmark, June 2014.

Mønster, D.; Håkonsson, D. D.; Eskildsen, J. K.; Argote, L.; Burton, R. M. and Obel, B. MINDLab Organizations project. What did we learn? Opportunities for future collaboration. Presented at MINDLab Retreat 2014, Sandbjerg, Denmark, May 2014.

Mønster, D.; Eskildsen, J. K.; and Håkonsson, D. D. Robustness of cross-recurrence results in a social interaction experiment. Presented at Fifth International Symposium on Recurrence Plots, Chicago, U.S.A., August, 2013.

Mønster, D. and Håkonsson, D. D. Emotions and Decision Making in Cooperating Teams. Presented at Cooperation: Why, How, and With Whom? Aarhus, Denmark, April, 2013.

Mønster, D. Convergent Cross Mapping: a new Tool for Analyzing Social Interactions. Invited talk presented at Information and Predictability in Social Interactions, Aarhus, Denmark, April, 2013.

Håkonsson, D. D. and **Mønster, D.**. Emotions in Groups: Same, Same, but Different. Poster presented at The Neurobiology of Emotion, Stresa, Italy, November, 2012.

Mønster, D. HRV and other physiological measures of emotional state in group interactions. Invited talk presented at Heart Rate variability in Neuroscience: Concepts, Methods, applications and pitfalls. Aarhus, Denmark, June, 2010.

Michael, J.; Håkonsson, D. D. and **Mønster, D.**. How do shared emotions influence team creativity? Invited talk presented at Cognition in the Laboratory and Cognition in the Wild : Methodologies for the study of human cognition and interaction in the cross section between social science and experimental cognitive science. Aarhus, Denmark, September 2010.

Committees and working groups

- 2016-2017 Co-chair of the 2nd International Conference on Complexity, Future Information Systems and Risk (COMPLEXIS 2017), Porto, Portugal.
- 2016 Member of the committee to meet with the accreditation panel from the Danish Accreditation Institution, Aarhus BSS, Aarhus University, Denmark.
- 2016 Member of the program committee for 1st International Conference on Complex Information Systems (COMPLEXIS 2016), Rome, Italy.
- 2013 Member of working group on responsible research practice, Aarhus BSS, Aarhus University, Denmark.
- 2013 Organizer and host of opening reception for Cognition and Behavior Lab, Aarhus University, Denmark.
- 2011 Member of the program committee for MINDLab Synchronization Workshop, Aarhus University, Denmark.
- 2009 Chair of the program committee for the 25th NORDUnet Conference, Copenhagen, Denmark.
- 2007 Member of the program committee for TERENA Networking Conference 2007, Lyngby, Denmark.
- 2006 Member of the program committee for 23rd NORDUnet Conference, Gothenburg, Sweden.
- 2003–2004 Chair of the TF-NETCAST task force under the auspices of the TERENA Technical Programme, Amsterdam, The Netherlands.

Publications

- 2017 Mønster, Dan (2017). "Studying Complex Interactions in Real Time: An XMPP-based Framework for Behavioral Experiments". *Proceedings of the 2nd International Conference on Complexity, Future Information Systems and Risk*, pp. 130–138. DOI: 10.5220/0006375201300138.
- Mønster, Dan, Riccardo Fusaroli, Kristian Tylén, Andreas Roepstorff, and Jacob F. Sherson (2017). "Causal inference from noisy time-series data — Testing the Convergent Cross-Mapping algorithm in the presence of noise and external influence". *Future Generation Computer Systems*. DOI: 10.1016/j.future.2016.12.009.
- 2016 Håkonsson, Dorthe Døjbak, Jacob Kjær Eskildsen, Linda Argote, Dan Mønster, Richard M. Burton, and Børge Obel (2016). "Exploration versus exploitation: Emotions and performance as antecedents and consequences of team decisions". *Strategic Management Journal* 37.6, pp. 985–1001. DOI: 10.1002/smj.2380.
- Mønster, Dan, Riccardo Fusaroli, Kristian Tylén, Andreas Roepstorff, and Jacob F. Sherson (2016). "Inferring Causality from Noisy Time Series Data - A Test of Convergent Cross-Mapping:" *Proceedings of the 1st International Conference on Complex Information Systems (COMPLEXIS 2016)*. SCITEPRESS - Science, pp. 48–56. DOI: 10.5220/0005932600480056.

- Mønster, Dan, Dorthe Døjbak Håkonsson, Jacob Kjær Eskildsen, and Sebastian Wallot (2016). "Physiological evidence of interpersonal dynamics in a cooperative production task". *Physiology & Behavior* 156, pp. 24–34. DOI: 10.1016/j.physbeh.2016.01.004.
- Wallot, Sebastian, Andreas Roepstorff, and Dan Mønster (2016). "Multidimensional Recurrence Quantification Analysis (MdRQA) for the Analysis of Multidimensional Time-Series: A Software Implementation in MATLAB and Its Application to Group-Level Data in Joint Action". *Frontiers in Psychology* 7, p. 1835. DOI: 10.3389/fpsyg.2016.01835.
- 2014 Mønster, Dan, Jacob Kjær Eskildsen, Dorthe Døjbak Håkonsson, Børge Obel, Richard M. Burton, and Linda Argote (2014). "Variations in the Circumplex Model of Affect Across Contexts". *PMA2014 Conference Proceedings*. Aarhus: PMA (Performance Management Association), pp. 958–986.
- 2013 Dale, Rick, Riccardo Fusaroli, Dorthe Døjbak Håkonsson, Patrick Healey, Dan Mønster, John J. McGraw, Panagiotis Mitkidis, and Kristian Tylén (2013). "Beyond synchrony: complementarity and asynchrony in joint action". *Psychological science* 23, p. 8.
- Eskildsen, Jacob, Rick Edgeman, Dan Mønster, and John Vestergaard Olesen (2013). "Evaluating response based segmentation in PLS path modeling". *59th World Statistics Congress*.
- Håkonsson, Dorthe Døjbak and Dan Mønster (2013). "Affective Coordination: The Role of Team Emotional Interconnectedness". *Academy of Management Proceedings* 2013.1, p. 15690. DOI: 10.5465/AMBPP.2013.15690abstract.
- 2005 Mønster, Dan (2005). "Real-Time Communication". *Internet User's Research Guide: 4th*. 4 edition. Harlow, England: Prentice Hall.
- 2004 Falaschi, Alessandro, Dan Mønster, Ivan Doležal, and Michal Krsek (2004). "Academic Streaming in Europe: Report on TF-Netcast". *Selected Papers from the TERENA Networking Conference*. TERENA – Trans-European Research and Education Networking Association.
- Mønster, Dan (2004). "Videokonference i forskningsnettet - muligheder, erfaringer og teknologi". *Tidsskrift for Universiteternes Efter- og Videreuddannelse (UNEV)* 2.3. DOI: 10.7146/unev.v2i3.4975.
- 2001 Mønster, Dan, Per-Anker Lindgård, and Niels Hessel Andersen (2001). "Oxygen ordering in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ using Monte Carlo simulation and analytic theory". *Physical Review B* 64.22, p. 224520. DOI: 10.1103/PhysRevB.64.224520.
- 1999 Andersen, N.H., M. Von Zimmermann, T. Frello, M. Käll, Mønster D., P.-A. Lindgård, J. Madsen, T. Niemöller, H.F. Poulsen, O. Schmidt, J.R. Schneider, T. Wolf, P. Dosanjh, R. Liang, and W.N. Hardy (1999). "Superstructure formation and the structural phase diagram of $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ ". *Physica C: Superconductivity and its Applications* 317-318, pp. 259–269. DOI: 10.1016/S0921-4534(99)00066-0.
- Mønster, Dan, Per-Anker Lindgård, and Niels Hessel Andersen (1999a). "Monte Carlo Study of Oxygen Ordering in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ ". *Computer Simulation Studies in Condensed-Matter Physics XI*. Ed. by Professor David P. Landau and Professor Heinz-Bernd Schüttler. Springer Proceedings in Physics 84. Springer Berlin Heidelberg, pp. 150–154.
- Mønster, Dan, Per-Anker Lindgård, and Niels Hessel Andersen (1999b). "Simple solution to problems concerning oxygen ordering in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ ". *Physical Review B* 60.1, pp. 110–113. DOI: 10.1103/PhysRevB.60.110.
- 1996 Jensen, D. Mønster and J. Madsen (1996). "Strangelets with finite entropy". *Physical Review D - Particles, Fields, Gravitation and Cosmology* 53.9.
- Jensen, Dan Mønster, Jes Madsen, and Michael B. Christiansen (1996). "Color singlet strangelets". *Acta Physica Hungarica New Series Heavy Ion Physics* 4.1-4, pp. 387–394. DOI: 10.1007/BF03155635.

Madsen, J., D. Mønster Jensen, and M.B. Christiansen (1996). "Color singlet suppression of quark-gluon plasma formation". *Physical Review C - Nuclear Physics* 53.4, pp. 1883–1891. DOI: 10.1103/PhysRevC.53.1883.