STK 9200: the Journal Papers Reading Club Course
Autumn 2021

Game Plan (tentative, so far)
by Nils Lid Hjort

– This version: as of 25/x/2021 –

Papers, during the course and on our Reading List, which will be updated several times as we go along, are somewhat tentatively sorted into categories

A, 'classics', from methodological statistics;
B, papers related to the PhD projects of the participants;
C, statistics in society;
D, those we might detect under way and perhaps briefly summarise and discuss in passing.

To the first order of organisational approximation, I'm hoping that each participant can present one **A** (or **C**) and one **B** in the course of the semester.

Participants: also other PhD candidates than those needing to take the exam are welcomed here, but the Most Real Candidates, those taking the exam in December, are given priority, when it comes to organising our list of presenters. According to Nils's notes, as of 25/x/2021, the Most Real Candidates are:

Fabian Bull, Dennis Christensen, Ingrid Dæhlen, Haris Fawad, Lars Henry Berge Olsen, Per August Moen, Adam Austin Rogers, Haifeng Xu,

whereas Thomas Minotto, Kristine Baluka Hein, Riccardo Parviero, Fredrik Lundvall Wollbraaten are taking part, but do not (have to) take the exam.

Exam: will be held in the first half of December, and consists in candidates presenting *another paper*, i.e. not the one he or she has already presented in class; the paper in question could be one of the other papers seen in the course, or a fully new one.

Tue Aug 31:

* Dennis Christensen: presents Breiman (2001), **A**.

Tue Sep 7:

* Adam Rogers: presents Hayes and Rockwood (2017), **B**.
* Per August Moen: presents Fearnhead (2006), **B**.

Tue Sep 14:

* Ingrid Dæhlen: presents Mikosch (2006), **A, B** (and also says something about Genest)
* Fabian Bull: presents Hastings (1970), **A, B**.

Tue Sep 21:

* Haris Fawad: presents Holland (1986), **A, B**.
* Lars Olsen: presents Aas, Jullum, Løland (2021), **B**.

Tue Sep 28:

* Haifeng Xu: presents Santoro et al. (2016), **B**.
* Fredrik Wollbraaten: presents Tibshirani (1996), **A, B**.

Tue Oct 5:

* Thomas Minotto: presents Ruczinski, Kooperberg, Leblanc (2003), **B**.
* Kristina Baluka Hein: presents Ribeiro, Singh, Guestrin (2016), **B**.

Tue Oct 12:

* Haris Fawad: presents Ryalen, Stensrud, Røysland (2019), **B**.
* Nils LH: talks about 'Stability and Change', the CAS project,
  mid August '22 to mid June '23.

Tue Oct 19:

* Lars Olsen: presents Efron (1979), **A**.
* Dennis Christensen: presents Ferguson (1973), **A, B**.

Tue Oct 26:

* Ingrid Dæhlen: presents Efron (1975), **A, B**.
* Per August Moen: presents Angrist, Imbens, Rubin (1996), **A, B**,
  cf. Nobel Prize of Economics October 2021!

Tue Nov 2:

* Adam Rogers: presents Montoya (2019), **B**.
* Fabian Bull: presents Welling and Teh (2011), **B**.

Tue Nov 9:

* Haifeng Xu: presents Liu, Wang, Genchev, Lu (2017), **B**.
* Riccardo Parviero: presents Wasserstein, Schirm, Lazar (2019), **A, C**.

Tue Nov 16:

* Kristina B:
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Tue Nov 23:

Reading List

Here papers are tentatively and not precisely sorted into categories **A**, classics; **B**, related to PhD projects; **C**, statistics in society; **D**, papers we detect as we go along and perhaps discuss in passing.

Angrist, J.D., Imbens, G.W., Rubin, D.B. (1996). Identification of causal effects using instrumental variables. *Journal of the American Statistical Association* **91**, 444–455.

Breiman, L. (2001), **A**. Statistical modeling: the two cultures [with discussion]. *Statistical Science* **16**, 199-231. – There are several discussion contributions; read in particular those of D.R. Cox and B. Efron.

Cunen, C., Hermansen, G.H., Hjort, N.L. (2021), **D**. Confidence distributions for change-points and regime shifts. *Journal of Statistical Planning and Inference* **195**, 14–34.

Cunen, C., Hjort, N.L. (2021), **B**. Combining information across diverse sources: The II-CC-FF paradigm. *Scandinavian Journal of Statistics* **xx**, 11–32.

Cunen, C., Hjort, N.L., Nygård, H.M. (2020), **D**. Statistical sightings of better angels: Analysing the distribution of battle-deaths in interstate conflict over time. *Journal of Peace Research* **57**, 221–234.

Dienes, A. (2011), **B**. Bayesian Versus Orthodox Statistics: Which Side Are You On? Perspectives on Psychological Science **6**, 274–290.

Efron, B. (1975), **B, D**. The efficency of logistic regression compared to *Journal of the American Statistical Association* **70**, 892–898.

Efron, B. (1979), **A**. Bootstrap methods: another look at the jackknife. *Annals of Statistics* **7**, 1–26.

Fearnhead, P. (2006), **B**. Exact and efficient Bayesian inference for multiple changepoint problems. *Statistics and Computing* **16**, 203–213.

Ferguson, T.S. (1973), **A**. A Bayesian analysis of some nonparametric problems. *Annals of Statistics* **1**, 209–230.

Ferguson, T.S. (1974), **A**. Prior distributions on spaces of probability measures. *Annals of Statistics* **2**, 615–629.

Fryer, D., Strümke, I., Nguyen, H. (2021), **B**. Shapley values for feature selection: The good, the bad, and the axioms. *arXiv*.

Genest, C., Rémillard, B. (2006), **B**. Discussion of Mikosch's paper. *Extremes* **9**, 27–36.

Grønneberg, S., Hjort, N.L. (2014). The Copula Information Criterion. *Scandinavian Journal of Statistics* **41**, 436–459.

Hastings, W.K. (1970), **A, B**. Monte Carlo sampling methods using Markov chains and their applications. *Biometrika* **57**, 97–100.

Hayes, A.F., Rockwood, N.J. (2017), **B**. Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Threrapy* **98**, 39–57.

Hernán, M.A., Taubman, S.L. (2008), **D**. Does obesity shorten life? The importance of well-defined interventions to answer causal questions. *Journal of Obesity* **32**, 8–14.

Hellton, K., Hjort, N.L. (2018), **D**. Fridge: Focused Finetuning of Ridge Regression for Personalized Predictions. *Statistics in Medicine* **37**, 1290–1303.

Hjort, N.L. (1994), **D**, perhaps also **C**, since it changed the Olympics. Should the Olympic sprint skaters run the 500 meter twice? Statistical Research Report, Department of Mathematics, University of Oslo.

Hjort, N.L. (2019a), **D**. The magic square of 33. *FocuStat Blog Post.*

Hjort, N.L. (2019b), **D**. Sudoku solving by probability modelling and Markov chains. *FocuStat Blog Post.*

Hjort, N.L. (1976, 2021), **D**. Dirichlet processes are discrete: yet another proof. This work spent 45 years in Norwegian. Two-page note, to be submitted to *Statistics and Probabiity Letters*.

Hjort, N.L., Glad, I.K. (1995), **A**. Nonparametric density estimation with a parametric start. *Annals of Statistics* **23**, 882–904.

Hjort, N.L., Jones, M.C. (1996), **D**. Locally parametric nonparametric density estimation. *Annals of Statistics* **23**, 1619–1647.

Holland, P.W. (1985), **A**. Statistics and causal inference. *Biometrika* **81**, 945–960.

Ko, V., Hjort, N.L. (2019a), **D**. Copula Information Criterion for model selection with two-stage maximum likelihood estimation. *Econometrics and Statistics* **xx**, xx–xx.

Ko, V., Hjort, N.L. (2019b), **D**. Focused Information Criteria for copulae. *Scandinavian Journal of Statistics* **46**, 1117–1140.

Liu, C., Wang, X., Genchev, G.Z., Lu, H. (2017). Multi-omics facilitated variable selection in Cox-regression model for cancer prognosis prediction. *Methods* **124**, 100–107.

Mikosch, T. (2006), **A, B**. Copulas: Tales and facts [with discussion]. *Extremes* **9**, 3–20. – There are several discussion contributions; read in particualr those of C. Genest & B. Rémillard, pages 27–36, and of P. Embrechts, pages 45–47.

Montoya, A.K. (2019). Moderation analysis in two-instance repeated measures designs: Probing methods and multiple moderator models. *Behaviour Research Methods* **51**, 61–82-

Ribeiro, M.T., Singh, S., Guestrin, C. (2016). **B**. "Why should I trust you?" Explaining the prediction of any classifier. *arXiv*.

Ruczinski, I., Charles Kooperberg, C., Leblanc, M. (2003), **B**. Logic regression. *Journal of Computational and Graphical Statistics* **12**, 475–511.

Rudin, C. (2018), **D**. Stop explaining black box machine learning models for high stakes decisions and use interpretable models instead. *Nature Machine Intelligence* **1**, 206–215.

Ryalen, P.C., Stensrud, M.J., Røysland, K. (2019). The additive hazard estimator is consistent for continuous-time marginal structural models. *Lifetime Data Analysis* **25**, 611–638.

Santoro, A., Bartunov, S., Botvinick, M., Wierstam D., Lillicrap, T. (2016), **B**. Meta-learning with memory-augmented neural networks. *Proceedings of the 33rd International Conference on Machine Learning*, New York.

Stensrud, M.J., Hernán, M.A. (2020). Why test for proportional hazards? *JAMA*.

Tibshirani, R. (1996), **A, B**. Regression shrinkage and selection with the Lasso. *Journal of the Royal Statistical Society* **B 58**, 267–288.

Tibshirani, R. (2011), **D**. Regression shrinkage and selection via the lasso: a retrospective. *Journal of the Royal Statistical Society* **B 73**, 273–282.

Wasserstein, R.L., Schirm, A.L., Lazar, N.A. (2019). Moving to a world beyond '$p < 0.05$'. *American Statistician* **73**, 1–19.

Welling, M., Teh, Y.W. (2011). Bayesian learning via stochasttc gradient Langevin dynamics, **B.** *Proceedings of the 28th Conference on ...*, xx–xx.

Aas, K., Jullum, M., Løland, A. (2021). Explaining individual predictions when features are dependent: more accurate approximations to Shapley values. *Artificial Intelligence* **298**, xx–xx.