



Random Rambling Room-mate Research Reminiscences: 3 ± 1 Rs

Richard Lockhart

for Peter, with pictures from Thomas

BIRS 2017

July 10, 2017



- ▶ Lemmas
- ▶ Proofs.
- ▶ Point of the talk: only if time permits.





I-House



What have Peter and I done together

- 4 P. Guttorp, R. Kulperger and R. A. Lockhart (1985): A coupling proof of weak convergence. *J Appl Prob* **22**: 447-453.
- 17 P. Guttorp and R. A. Lockhart (1988): On finding the location of a signal: a Bayesian analysis. *JASA* **83**: 322-330.
- 18 P. Guttorp and R. A. Lockhart (1988): On the asymptotic distribution of quadratic forms in uniform order statistics. *Ann Stat* **16**: 433-449.
- 20 P. Guttorp and R. A. Lockhart (1989): Estimation in sparsely sampled random walks. *Stoch Proc Appl* **31**: 315-320.
- 21 P. Guttorp and R. A. Lockhart (1989): On the asymptotic distribution of high order spacings statistics. *Can J Stat* **17**: 419-426.



- ▶ Bienaymé-Galton-Watson processes (cf my tenure case).
- ▶ The offset normal distribution.
- ▶ Bayesian density estimation.
- ▶ Uniform approximations in the Local CLT
- ▶ Bayes inference in non-decreasing Lévy processes.





Doonesbury, 1978 February 14. Zonker and his Uncle Duke.





Doonesbury, 1978 February 14. Zonker and his Uncle Duke.

You can see the theme running through that work





Doonesbury, 1978 February 14. Zonker and his Uncle Duke.

You can see the theme running through that work
That's enough research, right?



TO Richard with warm thanks *pete*

Asymptotic Tests for Discrimination

By

Peter Malte Guttorp

Grad. (University of Lund, Sweden) 1974

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF ARTS

in

Statistics

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, BERKELEY

Not real sure why
I got thanked but
look at the signatures.

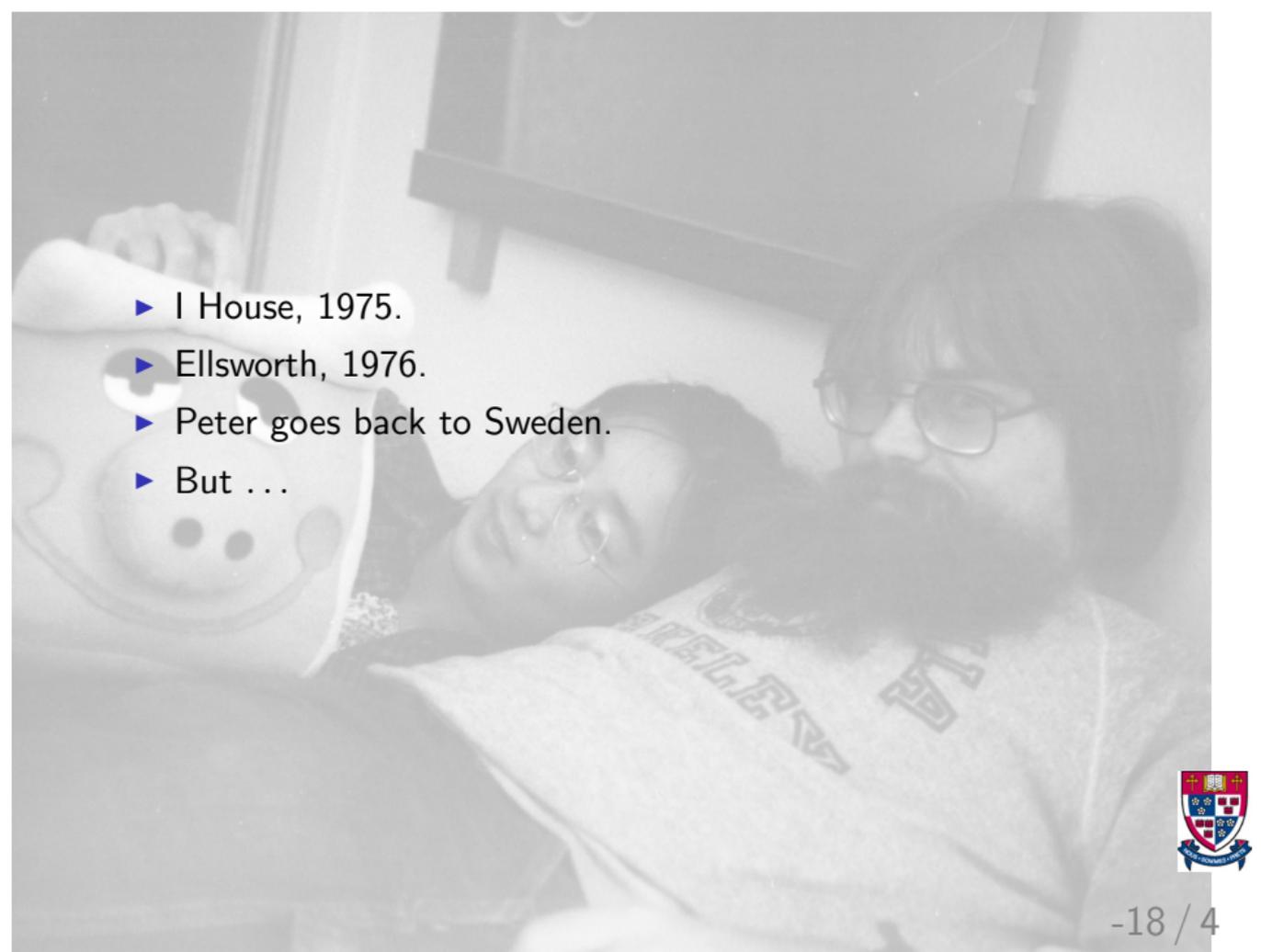
Approved:

V. Neyman
Peter J. Bickel
John D. Kalbfleisch

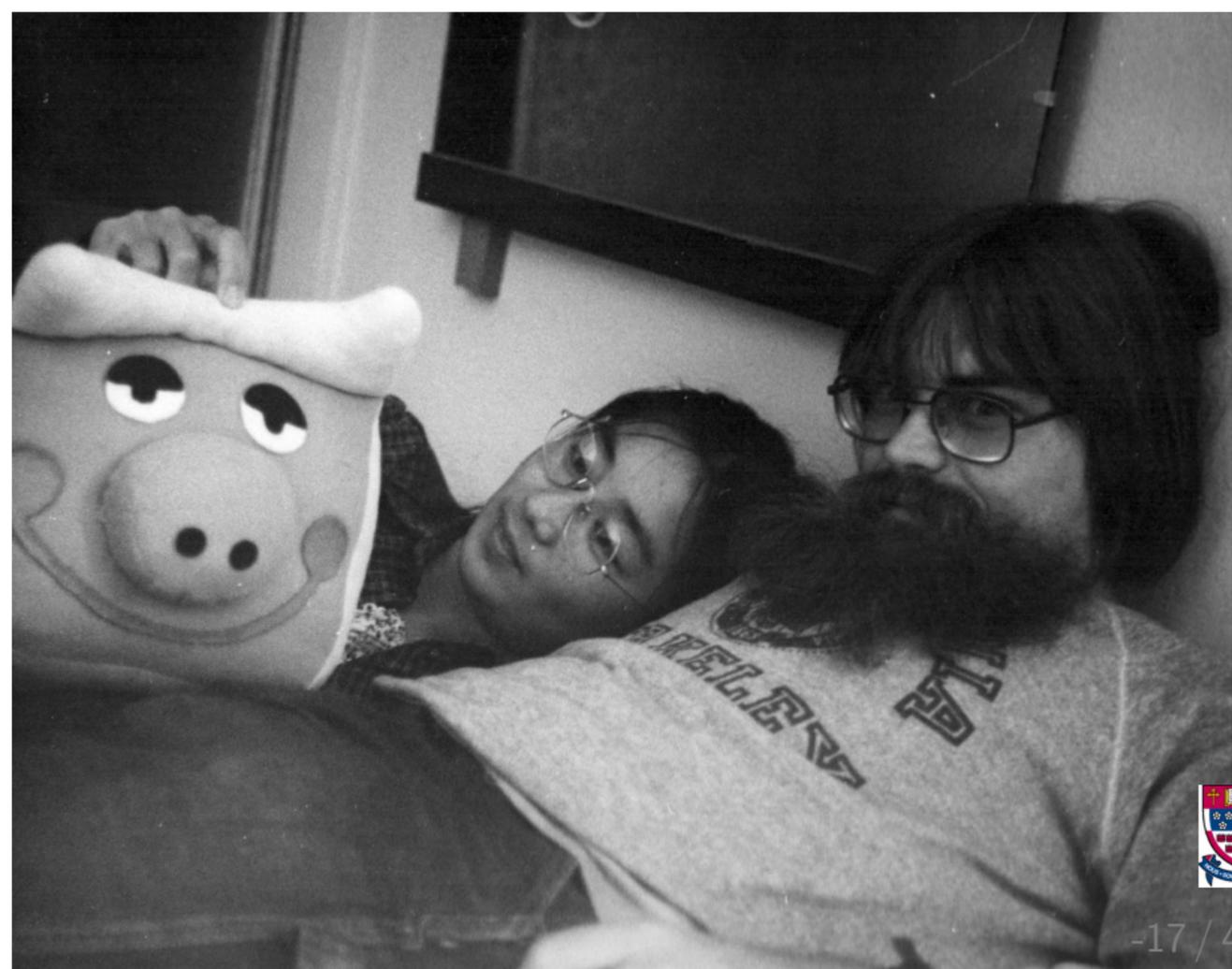
Committee in Charge

.....



- 
- ▶ I House, 1975.
 - ▶ Ellsworth, 1976.
 - ▶ Peter goes back to Sweden.
 - ▶ But ...





The A, the D, the C

- ▶ From the Apartment to the Department usually via the C.
- ▶ Peter taught me to drink espresso coffee at the C.
- ▶ Napkin usage very high.
- ▶ Now called Strada; no name then?



More history

- ▶ SFU, Washington (79-80)
- ▶ Peter, Reg Kulperger, and I worked together early 80s.
- ▶ Peter and June came to Vancouver for 84/85.



Memorabilia I

- ▶ PDP 11/45. 96KB RAM, 5 MB pizza box.
- ▶ Teletypes
- ▶ Undocumented UNIX; weird RSTS.
- ▶ Paper tape archiving system.
- ▶ BASIC.
- ▶ troff, nroff



troff

.ps 10

.vs 12p

.nr PS 10

.nr VS 12p

.ll 6.5i

.po 1i

.nr LL 6.5i

.nr PO 1i

.EQ

.EN

.sp 1.0i

.B

.tl" \ s+20n finding the location of a signal: a Bayesian analysis\ s-2

.R .sp 0.8i

.TS

center;

c c.

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Memorabilia II: a poem (edited)

- ▶ Erich Lehmann, Juliet Shaffer lived downstairs

*The people upstairs all practice ballet
Their living room is a bowling alley
Their bedroom is full of conducted tours.
Their radio is louder than yours,
They celebrate week-ends all the week.
When they take a shower, your ceilings leak.
I would love the people upstairs wondrous
If instead of above us, they just lived under us.*

Ogden Nash



Dear Peter:

26 January 1988

Do you remember the mixing convergence stuff in our paper? I've recently discovered the following:

Theorem: Suppose U_1, U_2, \dots are iid Uniform $[0, 1]$.
Suppose $Y_n \in \mathcal{O}\{U_1, \dots, U_n\}$ and $Y_n \rightarrow Y$ in probability.
Let $(U_{1:n}, \dots, U_{n:n})$ be the ordered values of U_1, \dots, U_n . Let
 $T_n = g_n(U_{1:n}, \dots, U_{n:n})$ be some function of the order statistics.
Suppose T_n converges in distribution to T . (It doesn't matter what distribution T has.) Then

(Y_n, T_n) converges in distribution to (Y, T)
when we take ~~the limit~~ Y independent of T to define the joint distribution.

I think this is cute but I don't know any real applications yet. Maybe we can think some up. I don't think Uniform $[0, 1]$ is important either.

See you in February?

Richard

We wrote letters.

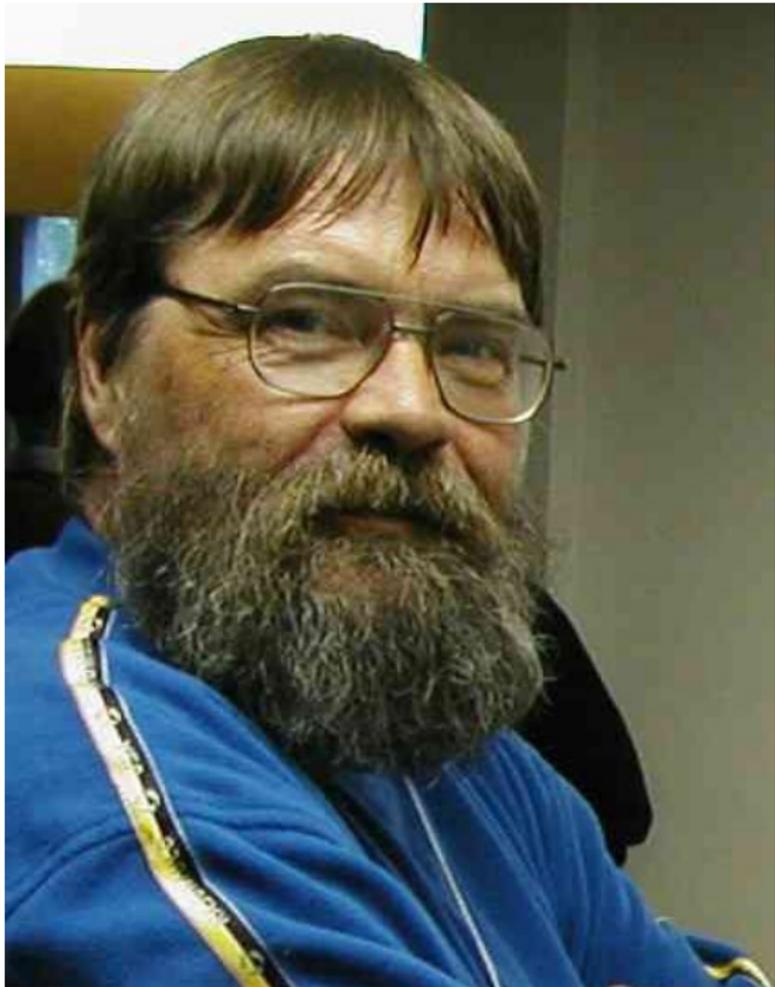


Memorabilia III: stories, some untold

- ▶ Brownies
- ▶ See the poem above
- ▶ Babysitting while writing papers.
- ▶ Now just pictures, I think.







Banff, 2003





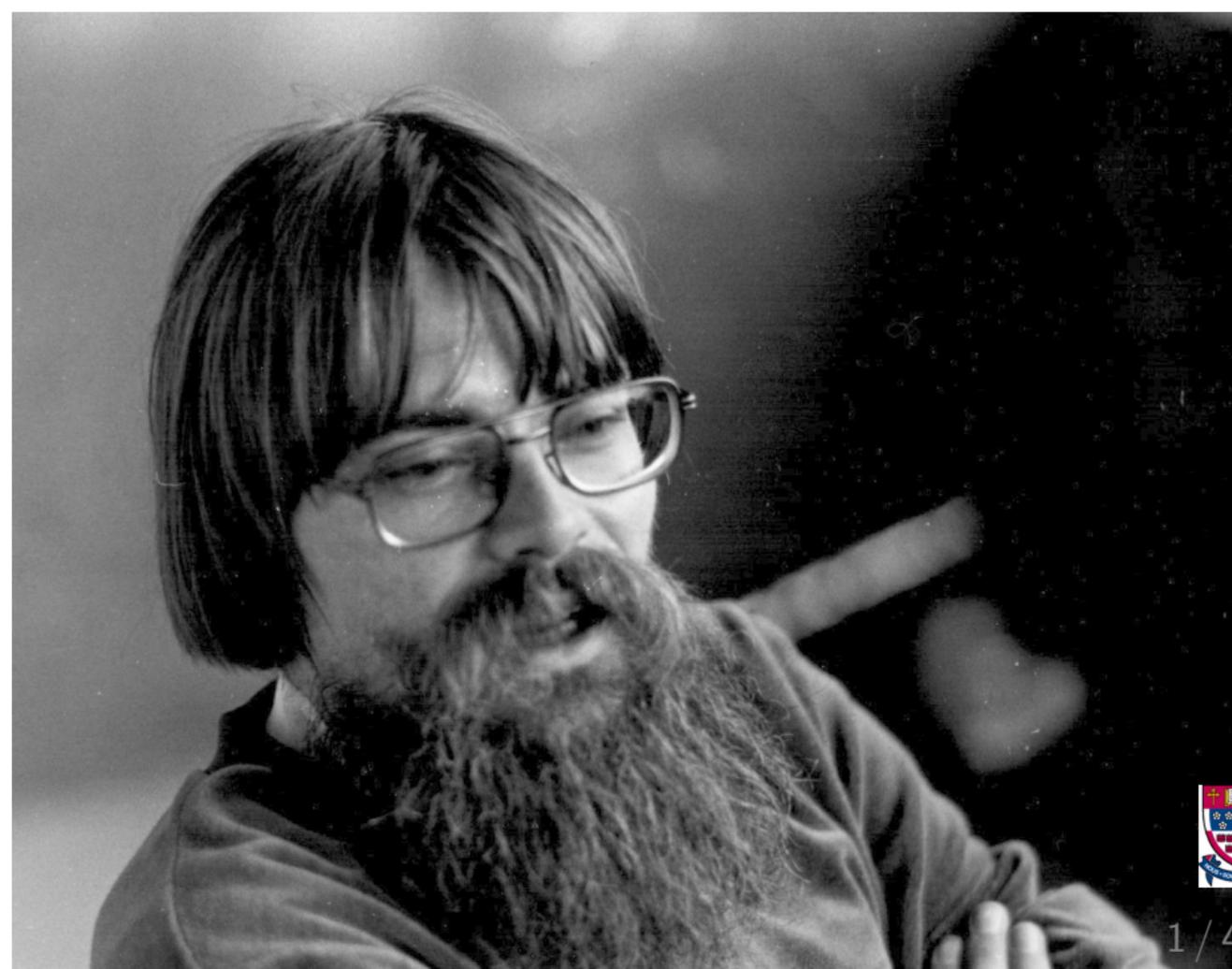












Conclusions

- ▶ Peter has done just about everything
- ▶ I owe Peter for getting me started (and tenure).
- ▶ Peter and June have been wonderful friends for more than 40 years; let's keep going.



