A Bibliography of Publications of Brad Bell

Brad Bell
University of Washington
Applied Physics Laboratory
Seattle, Washington, 98105
USA

Tel: +1 206 543 6855
FAX: +1 206 543 6785

E-mail: brad@apl.washington.edu (Internet)

13 October 2017
Version 1.09

Abstract

This bibliography records publications of Brad Bell.

Title word cross-reference

ℓ_1 [ABBP11].

-Laplace [ABBP11].

1 [Oce83]. **1724120** [Bel10]. **1981** [Oce81]. **1983** [Oce83].

'83 [Oce83].

acoustic [BBO81, BBM83]. **age** [BF13]. **Algorithm** [BP91]. **Algorithmic** [BB08]. **applications** [Bel10]. **Approximating** [Bel01]. **Approximation** [KNB+15]. **arrival** [BR91]. **Asilomar** [Che91]. **August** [Oce83]. **Automatic** [KNB+15].

baseline [BBO81, BHMS91]. **Bayes** [PB07, PB07]. **Bayesian** [PB05, ABBP13b, PBF13]. **between** [ABBP13b]. **blind** [PB07]. **block** [ABBP13a]. **book** [Bel10]. **Boston** [Oce81]. **Bucy** [BBP09]. **Burg** [BP91].

Calculating [BPW93]. **California** [Che91]. **Carlo** [PB08]. **chains** [PB08]. **codes** [BBM83, Bel83]. **Computers** [Che91]. **Conference** [Che91, Oce81, Che91]. **connection** [ABBP13b]. **connections** [ABBP13a]. **constrained** [BBP09]. **convergence** [Bel90]. **correcting** [Bel83]. **correction** [BBM83]. **covariance** [PB07].

data [BBM83, BBS94, BBS96]. **Deconvolution** [PB04, PB05, PB07]. **deep** [BBO81]. **depth** [BHMS91]. **detection** [BBM83]. **Differentiation** [KNB+15, BB08]. **disease** [BF13]. **Distributed** [PBF13]. **dynamic** [PB08].

eigenfunctions [PB07]. **empirical** [PB07]. **error** [BBM83, Bel83]. **estimate** [Bel01]. **Estimating** [BP04, BR91, BBS94, BBS96]. **estimation** [ABBP13b, Bel88, BF13]. **evaluation** [Bel88].

field [ABBP13b]. **fifth** [Che91]. **filter** [BE86, BR91, BC93]. **filtering** [BHMS91, Bel10]. **Francisco** [Oce83]. **functions** [BP04, BB08, BF13, PB05].

gamma [Bel88]. **Gauss** [BC93, Bel94]. **Gaussian** [ABBP13b]. **Generalized** [Bel88]. **Global** [Bel90, BE86]. **GPS** [BHMS91, DB94]. **Grove** [Che91].

Implementation [BBM83]. **implicit** [BB08]. **inequality** [BBP09]. **infinite** [Bel90]. **insulin** [PB04]. **interior** [BBP09]. **international** [Oce81]. **inverse** [BPW93]. **iterated** [BC93, Bel94]. **iteration** [BPW93].

Kalman [ABBP11, ABBP13a, BHMS91, BC93, Bel94, BBP09, Bel10, PBF13].

Laplace [ABBP11, KNB+15]. **likelihood** [Bel01, BBP09]. **linear** [PB08]. **Long** [BBO81, BHMS91]. **long-baseline** [BHMS91].

marginal [Bel01]. **Markov** [PB08]. **Massachusetts** [Oce81]. **matched** [BE86, BR91]. **maximization** [BBP09]. **MCMC** [PB05]. **measurement** [BP04]. **measurements** [BHMS91]. **Method** [DB94, Bel90, BC93, Bel94, BBS94, BBS96]. **model** [BF13, PB04]. **models** [Bel01, BP04]. **moment** [Bel88]. **Monte** [PB08]. **MR** [Bel10]. **multidimensional** [BE86]. **multipaths** [BE86]. **multiple** [BBS94, BBS96]. **multitapers** [BPW93].

network [BR91]. **networks** [PBF13]. **Newton** [BC93, Bel94]. **non** [PB04, PB08]. **non-linear** [PB08]. **non-stationary** [PB04]. **Nonlinear** [BHMS91, BP04, BBP09]. **Nonsmooth** [Bel84]. **November** [Che91]. **numerical** [ABBP13a].

ocean [BBO81, Oce81]. **Oceans** [Oce81, Oce83]. **one** [BP04]. **Optimal** [PB08, BB08]. **optimization** [Bel84, BE86, Bel90].

Pacific [Che91]. **parameter** [Bel88]. **parameters** [BBS94, BBS96, Bel01, BP04]. **physical** [PB04]. **point** [BBP09]. **Positioning** [DB94]. **prior** [PB07]. **Proceedings** [Oce83]. **programming** [Bel84]. **pulse** [BR91].

quadratic [Bel84].

random [ABBP13b, Bel01]. **rate** [PB04]. **rates** [BF13]. **real** [Bel10]. **real-time** [Bel10]. **record** [Che91, Oce81]. **relative** [BBS94, BBS96]. **results** [ABBP13a]. **review** [Bel10]. **RKHS** [ABBP13b, PB05]. **robust** [ABBP11].

San [Oce83]. **secretion** [PB04]. **semi** [Bel90, PB07]. **semi-blind** [PB07]. **semi-infinite** [Bel90]. **Separating** [BE86]. **September** [Oce81, Oce83]. **sets** [BBS94, BBS96]. **short** [BHMS91]. **short-baseline** [BHMS91]. **Signals** [Che91, PB04]. **smooth** [PB04]. **smoother** [ABBP11, Bel94, BBP09]. **smoothing** [ABBP13a, PB08, PBF13]. **Software** [Bel83]. **spectral** [BPW93]. **stability** [ABBP13a]. **static** [PBF13]. **stationary** [PB04]. **statistical** [BF13]. **step** [BP91]. **stochastic** [BP04]. **successive** [Bel84]. **system** [BBO81]. **Systems** [Che91, ABBP13a, PB08].

techniques [Bel83, PB05]. **telemetry** [BBO81, BBM83]. **Thomson** [BPW93].

time [Bel10, BF13]. **times** [BR91]. **TMB** [KNB+15]. **tracking** [BBO81]. **tridiagonal** [ABBP13a]. **Twenty** [Che91]. **Twenty-fifth** [Che91]. **two** [BP91].

update [BC93]. **using** [BP04, PB05, PB07].

values [BB08]. **variable** [BP04]. **variance** [PB04]. **variances** [BBS94, BBS96]. **via** [PB08].

weighting [BBS94, BBS96]. **workplace** [Oce81].

References

Aravkin:2011:LRK

[ABBP11] Aleksandr Y. Aravkin, Bradley M. Bell, James V. Burke, and Gianluigi Pillonetto. An ℓ_1-Laplace robust Kalman smoother. *IEEE Transactions on Automatic Control*, 56(12):2898–2911, 2011. CODEN IETAA9. ISSN 0018-9286 (print), 1558-2523 (electronic).

Aravkin:2013:KSB

[ABBP13a] A. Y. Aravkin, B. B. Bell, J. V. Burke, and G. Pillonetto. Kalman smoothing and block tridiagonal systems: new connections and numerical stability results. *arXiv.org*, March 2013. URL `http://arxiv.org/abs/1303.5237`.

Aravkin:2013:CBB

[ABBP13b] A. Y. Aravkin, B. M. Bell, J. V. Burke, and G. Pillonetto. The connection between Bayesian estimation of a Gaussian random field and RKHS. *arXiv.org*, January 2013. URL `http://arxiv.org/abs/1301.5288v3`.

Bell:2008:ADI

[BB08] Bradley M. Bell and James V. Burke. Algorithmic differentiation of implicit functions and optimal values. In *Advances in automatic differentiation*, volume 64 of *Lect. Notes Comput. Sci. Eng.*, pages 67–77. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2008.

Backes:1983:IED

[BBM83] J. L. Backes, B. M. Bell, and J. B. Miller. Implementation of error detection and correction codes for acoustic data telemetry. In Oceans'83 [Oce83], pages 167–175. LCCN TC 1505 O331945 1983. Three volumes. IEEE publication number 83CH1972-9.

Backes:1981:LBD

[BBO81] J. L. Backes, B. M. Bell, and L. O. Olson. Long baseline deep ocean acoustic tracking and telemetry system. In Oceans '81 [Oce81], pages 1–8. LCCN TC1505 .O33193. Two volumes. IEEE publication number 81CH1685-7.

Bell:2009:ICN

[BBP09] Bradley M. Bell, James V. Burke, and Gianluigi Pillonetto. An inequality constrained nonlinear Kalman–Bucy smoother by interior point likelihood maximization. *Automatica J. IFAC*, 45 (1):25–33, 2009. CODEN AT-

CAA9. ISSN 0005-1098 (print), 1873-2836 (electronic).

Bell:1994:RWM

[BBS94] B. M. Bell, J. V. Burke, and A. Schumitzky. A relative weighting method for estimating parameters and variances, in multiple data sets. *Computational Statistics & Data Analysis*, 1994. CODEN CSDADW. ISSN 0167-9473 (print), 1872-7352 (electronic). Submitted.

Bell:1996:RWM

[BBS96] Bradley M. Bell, James V. Burke, and Alan Schumitzky. A relative weighting method for estimating parameters and variances in multiple data sets. *Computational Statistics & Data Analysis*, 22(2):119–135, 1996. CODEN CSDADW. ISSN 0167-9473 (print), 1872-7352 (electronic).

Bell:1993:IKF

[BC93] Bradley M. Bell and Frederick W. Cathey. The iterated Kalman filter update as a Gauss–Newton method. *IEEE Transactions on Automatic Control*, 38(2):294–297, 1993. CODEN IETAA9. ISSN 0018-9286 (print), 1558-2523 (electronic).

Bell:1986:SMG

[BE86] B. M. Bell and T. E. Ewart. Separating multipaths by global optimization of a multidimensional matched filter. *IEEE Speech and Signal Processing*, ASSP-34 (5):1029–1037, 1986.

Bell:1983:STE

[Bel83] B. M. Bell. Software techniques for error correcting codes. Technical Report APL-UW TM-4-83, University of Washington Applied Physics Laboratory, Seattle, WA, USA, 1983.

Bell:1984:NOS

[Bel84] B. M. Bell. *Nonsmooth optimization by successive quadratic programming*. PhD thesis, University of Washington, 1984.

Bell:1988:GGP

[Bel88] Bradley M. Bell. Generalized gamma parameter estimation and moment evaluation. *Communications in Statistics: Theory and Methods*, 17(2):507–517, 1988. CODEN CSTMDC. ISSN 0361-0926 (print), 1532-415X (electronic).

Bell:1990:GCS

[Bel90] Bradley M. Bell. Global convergence of a semi-infinite optimization method. *Applied Mathematics and Optimization*, 21(1):69–88, 1990. CODEN AMOMBN. ISSN 0095-4616 (print), 1432-0606 (electronic).

Bell:1994:IKS

[Bel94] Bradley M. Bell. The iterated Kalman smoother as a Gauss–Newton method. *SIAM Journal on Optimization*, 4(3):626–636, 1994. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Bell:2001:AML

[Bel01] Bradley M. Bell. Approximating the marginal likelihood estimate for models with random parameters. *Applied Mathematics and Computation*, 119(1):57–75, 2001. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Bell:2010:KFR

[Bel10] Bradley M. Bell. Kalman filtering with real-time applications [book review of MR 1724120]. *SIAM Review*, 52(2):390–392, 2010. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Bell:2013:SME

[BF13] Bradley M. Bell and Abraham D. Flaxman. A statistical model and estimation of disease rates as functions of age and time. *SIAM Journal on Scientific Computing*, 35(2):B511–B528, 2013. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Bell:1991:NKF

[BHMS91] B. M. Bell, B. M. Howe, J. A. Mercer, and R. C. Spindel. Nonlinear Kalman filtering of long-baseline, short-baseline, GPS, and depth measurements. In Chen [Che91], pages 131–136. ISBN 0-8186-2470-1 (paperback), 0-8186-2471-X (microfiche), 0-8186-2472-8 (hardback). LCCN TK 5102.5 A78 1991. IEEE catalog number 91CH31120.

Bell:1991:TSB

[BP91] B. M. Bell and D. B. Percival. A two step Burg Algorithm. *IEEE Transactions on Signal Processing*, 39(1), 1991.

Bell:2004:EPS

[BP04] Bradley M. Bell and Gianluigi Pillonetto. Estimating parameters and stochastic functions of one variable using nonlinear measurement models. *Inverse Problems*, 20(3):627–646, 2004. CODEN INPEEY. ISSN 0266-5611 (print), 1361-6420 (electronic).

Bell:1993:CTS

[BPW93] B. M. Bell, D. B. Percival, and A. T. Walden. Calculating Thomson's spectral multitapers by inverse iteration. *Journal of Computational and Graphical Statistics*, 2(1):119–130, 1993. ISSN 1061-8600 (print), 1537-2715 (electronic).

Bell:1991:MFN

[BR91] B. M. Bell and S. A. Reynolds. A matched filter network for estimating pulse arrival times. *IEEE Transactions on Signal Processing*, 39(2), 1991.

Chen:1991:CRT

[Che91] Ray R. Chen, editor. *Conference record of the Twenty-fifth Asilomar Conference on Signals, Systems and Computers: November 4–6, 1991, Pacific Grove, California*. IEEE Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD

20910, USA, 1991. ISBN 0-8186-2470-1 (paperback), 0-8186-2471-X (microfiche), 0-8186-2472-8 (hardback). LCCN TK 5102.5 A78 1991. IEEE catalog number 91CH31120.

Dailey:1994:MGP

[DB94] D. J. Dailey and B. M. Bell. A method for GPS positioning. *IEEE Transactions on Aerospace and Electronics*, 1994. Submitted.

Kristensen:2015:TAD

[KNB+15] K. Kristensen, A. Nielsen, C. W. Berg, H. Skaug, and B. Bell. TMB: Automatic differentiation and Laplace approximation. *arXiv.org*, September 2015. URL `http://arxiv.org/abs/1509.00660v1`.

IEEE:1981:OOI

[Oce81] *Oceans 81: The ocean ... an international workplace conference record, Boston, Massachusetts, September 16–18, 1981.* IEEE Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1981. LCCN TC1505 .O33193. Two volumes. IEEE publication number 81CH1685-7.

IEEE:1983:POS

[Oce83] *Proceedings, Oceans '83: San Francisco, August 29–September 1, 1983.* IEEE Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1983. LCCN TC 1505 O331945 1983. Three volumes. IEEE publication number 83CH1972-9.

Pillonetto:2004:DNS

[PB04] Gianluigi Pillonetto and Bradley M. Bell. Deconvolution of non-stationary physical signals: a smooth variance model for insulin secretion rate. *Inverse Problems*, 20(2):367–383, 2004. CODEN INPEEY. ISSN 0266-5611 (print), 1361-6420 (electronic).

Pillonetto:2005:BDF

[PB05] Gianluigi Pillonetto and Bradley M. Bell. Bayesian deconvolution of functions in RKHS using MCMC techniques. In *System modeling and optimization*, volume 166 of *IFIP Int. Fed. Inf. Process.*, pages 257–268. Kluwer Acad. Publ., Boston, MA, 2005.

Pillonetto:2007:BEB

[PB07] Gianluigi Pillonetto and Bradley M. Bell. Bayes and empirical Bayes semi-blind deconvolution using eigenfunctions of a prior covariance. *Automatica J. IFAC*, 43(10):1698–1712, 2007. CODEN ATCAA9. ISSN 0005-1098 (print), 1873-2836 (electronic).

Pillonetto:2008:OSN

[PB08] Gianluigi Pillonetto and Bradley M. Bell. Optimal smoothing of non-linear dynamic systems via Monte Carlo Markov chains. *Automatica J. IFAC*, 44(7):1676–1685, 2008. CODEN ATCAA9. ISSN 0005-1098 (print), 1873-2836 (electronic).

Pillonetto:2013:DKS

[PBF13] Gianluigi Pillonetto, Bradley M. Bell, and Simone Del Favero. Dis-

tributed Kalman smoothing in static Bayesian networks. *Automatica J. IFAC*, 49(4):1001–1011, 2013. CODEN ATCAA9. ISSN 0005-1098 (print), 1873-2836 (electronic).