Henry D. Pfister

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EDUCATION

04/2000–03/2003 **Ph.D., University of California, San Diego, California**
Department of Electrical and Computer Engineering
Dissertation: *"On the capacity of finite-state channels and the analysis of convolutional accumulate-m codes"* under Professor Paul H. Siegel.

09/1997–03/2000 **M.S., University of California, San Diego, California**
Department of Electrical and Computer Engineering
under Professor Paul H. Siegel.

09/1990–03/1995 **B.S., University of California, San Diego, California**
Department of Physics.

ACADEMIC EXPERIENCE

08/2014–present **Associate Professor** in the Department of Electrical and Computer Engineering of Duke University in Durham, NC.

06/2012–07/2014 **Associate Professor** in the Department of Electrical and Computer Engineering of Texas A&M University in College Station, TX.

08/2006–05/2012 **Assistant Professor** in the Department of Electrical and Computer Engineering of Texas A&M University in College Station, TX.

01/2005–12/2005 **Post-Doctoral Researcher** in the School of Computer and Communication Sciences in the Swiss Federal Institute of Technology, Lausanne.
Under the supervision of Professor Rüdiger Urbanke.

INDUSTRIAL EXPERIENCE

05/2003–12/2004 **Senior Engineer** at Qualcomm, Inc. in San Diego, CA.
Conducted research on practical methods for interference cancellation and multiuser detection in CDMA systems.

RESEARCH INTERESTS

Information Theory, Error-Correcting Codes, and Iterative Information Processing for Wireless Communication, Data Storage, Compressed Sensing, and Machine Learning.

HONORS AND AWARDS

2016 STOC Best Paper Award at the 2016 Symposium on the Theory of Computing (STOC)

2016 Invited Lecturer for European School of Information Theory

2015-2016 Distinguished Lecturer for the IEEE Information Theory Society

2014 Invited Lecturer for North American School of Information Theory

2010 Outstanding Professor Award
Electrical and Computer Engineering Department, Texas A&M University

National Science Foundation CAREER Award 2008

IEEE COMSOC 2007 Best Paper in Signal Processing and Coding for Data Storage

TEACHING EXPERIENCE

Undergraduate	Graduate
Probability (2011)	Advanced Channel Coding (2012,2014)
Digital Communications (2008-2010,2012)	Information Theory (2011)
Digital Signal Processing (2009)	Vector Space Methods (2008,2009,2016)
Signals and Systems (2013)	Channel Coding (2006,2007,2012,2013)
Digital Audio Processing (2015)	Graphical Models and Inference (2014)

SUPERVISED STUDENTS

Student	Degree	Thesis Title
Naraynanan Rengaswamy	Ph.D. ~2018	TBD
Mengke Lian	Ph.D. ~2017	TBD
Mohammad Reza Sanatkar	Ph.D. 12/16	The Dynamics of Polarized Beliefs in Networks Governed by Viral Diffusion and Media Influence
Santhosh Kumar	Ph.D. 12/15	Capacity-Achieving Coding Mechanisms: Spatial Coupling and Group Symmetries
Fatemeh Hamidi-Sepehr	Ph.D. 05/14	On the Performance Analysis of Block Codes over Unreliable Channels in Delay-Sensitive Communications
Yung-Yih Jian	Ph.D. 08/13	On the Analysis of Spatially-Coupled GLDPC Codes and the Weighted Min-Sum Algorithm
Arvind Yedla	Ph.D. 08/12	Universality for Multi-Terminal Problems via Spatial Coupling
Phong Nguyen	Ph.D. 05/12	Advanced Coding Techniques with Applications to Storage Systems

Byung-Hak Kim	Ph.D. 05/12	Joint Equalization and Decoding via Convex Optimization
Fan Zhang	Ph.D. 05/10	LDPC Codes over Large Alphabets and their Applications to Compressed Sensing and Flash Memory
Aparna Khare	M.S. 12/10	Capacity and Coding for 2D Channels
Sirish Boddikurapati	M.S. 12/09	Sequential Monte Carlo Methods with Applications to Communication Channels
Chia-Wen Wang	M.S. 07/08	Bounds on the MAP Threshold of Iterative Decoding Systems with Erasure Noise

INVITED SEMINARS

"Graphical Models and Inference: Insights from Spatial Coupling,"
IEEE Information Theory Society Distinguished Lecture
Lund University, Sweden, September 16th, 2016.

"Capacity Achieving Codes: There and Back Again,"
European School of Information Theory, Chalmers University, Gothenburg, Sweden, April 6th, 2016.

"Reed-Muller Codes Achieve Capacity on Erasure Channels,"
ECE Department, University of Illinois, Urbana Champaign, Nov. 16, 2015
Science of Information Day, Princeton University, Sept. 25, 2015.

"A Brief Introduction to Spatially-Coupled Codes and Threshold Saturation,"
Chinese University of Hong Kong, June 22, 2015.

"Symmetric Product Codes,"
Coding: From Practice to Theory Workshop, Simons Institute, UC Berkeley, Feb. 13, 2015.

"A Brief Introduction to Spatially-Coupled Codes and Threshold Saturation,"
North American School of Information Theory, University of Toronto, June 18-21, 2014.

"Graphical Models and Inference: Breakthroughs and Insight from Spatial Coupling,"
Duke University, March 17th, 2014.

"From BP to MAP via Spatial Coupling,"
Wireless Networking and Communication Seminar, University of Texas, Austin, Nov. 9th, 2012.

"A Simple Proof of Threshold Saturation for Coupled Scalar Recursions,"
Stanford University, August 17th, 2012,
Summer Research Institute, École Polytechnique Fédérale de Lausanne, June 7th, 2012.

"Applications of spatial coupling in communications, computer science, signal processing, and statistical physics – an overview," CAACT Workshop: Aspects of Coding Theory,
Centre Interfacultaire Bernoulli, École Polytechnique Fédérale de Lausanne, July 25-29, 2011.

"Information Theory and Coding for Compressed Sensing,"
Center for Wireless Communications Ericsson Seminar Series, UC San Diego, March 2009.

"The Derivatives of Entropy Rate and Capacity for Finite-State Channels,"
Workshop on Entropy of Hidden Markov Processes and Connections to Dynamical Systems,

Banff International Research Station (BIRS), Banff, Canada, October 2007.

"Interleaved and Lifted Reed-Solomon Codes: New Perspectives and Constructions,"
Swiss Federal Institute of Technology, Zurich, July 2007.

"Capacity-Achieving Codes for the BEC with Bounded Complexity,"
Texas A&M University, April 2006.

"Modulation and Coding for Satellite Communications,"
SatNEx Summer School, Pisa, Italy, August 2005.

"On the Capacity of Finite-State Channels,"
Technion Institute, Haifa, Israel, March 2005.

PROFESSIONAL SERVICE

General Chair, IEEE ITSOC North American School of Information Theory, Duke University, 2016

Associate Editor in Coding Theory, IEEE Transactions on Information Theory, 2013-2016

Technical Program Committee, *IEEE Intl. Symp. on Inform. Theory*, Hong Kong, China, 2015

Technical Program Committee, *8th Intl. Symposium on Turbo Codes*, Bremen, Germany, 2014

Technical Program Committee, *IEEE Intl. Symp. on Inform. Theory*, Istanbul, Turkey, 2013

Technical Program Committee, *7th Intl. Symposium on Turbo Codes*, Gothenburg, Sweden, 2012

Technical Program Committee, *IEEE Intl. Symp. on Inform. Theory*, Cambridge, MA, 2012

Technical Program Committee, *IEEE GLOBECOM*, Houston, TX, 2011

Co-Chair *IEEE GLOBECOM* Workshop on Emerging Memory Technologies, Miami, FL, 2010

Technical Program Committee, *IEEE Intl. Symp. on Inform. Theory*, Austin, TX, 2010

Co-Chair General Symposium, *IEEE GLOBECOM*, New Orleans, 2008

Technical Program Committee, *5th Intl. Symposium on Turbo Codes*, Lausanne, Switzerland, 2008

Technical Program Committee, *IEEE Inform. Theory Workshop*, Lake Tahoe, 2007

Technical Program Committee, *IEEE Intl. Symp. on Inform. Theory*, Nice, France, 2007

RESEARCH GRANTS

National Science Foundation ECCS Program, PI, 2016-2019
"Advanced Coding Techniques for Next-Generation Optical Communications"

National Science Foundation CISE CCF Program, PI, 2013-2016
"Design and Analysis of Spatially-Coupled Coding Systems"

National Science Foundation CISE CCF Program, PI, 2012-2015
"Design and Analysis of Novel Compressed Sensing Algorithms via Connections with Coding Theory"

National Science Foundation CISE CCF Program, co-PI, 2008-2011
"Fundamental Limits in Delay-Constrained Wireless Communication"

Texas Higher Education Coordinating Board ARP, co-PI, 2008-2010
"Enabling Delay-Sensitive Multihop Wireless Communications"

National Science Foundation ECCS GOALI Program, co-PI, 2008-2011
"Advanced Coding and Signal Processing for Magnetic Recording: From Theory to Implementation"

National Science Foundation CAREER Award, PI, 2008-2013
"Information Theory and Iterative Decoding for Finite-State Channels"

Qatar National Research Fund, co-PI, 2007-2010
"Universal Signaling Schemes for Multimedia Transmission over Wireless Networks"

PATENTS AND PUBLISHED PATENT APPLICATIONS

US 2006/0142041	Adaptation of transmit subchannel gains in a system with int. cancellation
US 2006/0141935	Joint interference cancellation of pilot, overhead and traffic channels
US 2006/0141934	Traffic interference cancellation
US 2006/0141933	Channel estimation for interference cancellation
US 2006/0007895	Method and apparatus for canceling pilot int. in a wireless comm. system
US 2005/0207384	Signal acquisition in peer-to-peer spread-spectrum communications
US 2005/0135262	Low-complexity, capacity-achieving code for communication systems
US 2005/0111383	Peer-to-peer communications

BOOK CHAPTERS AND THESES

[B1] H. D. Pfister, *On the Capacity of Finite State Channels and the Analysis of Convolutional Accumulate-m Codes*. PhD thesis, University of California, San Diego, CA, USA, March 2003.

PEER-REVIEWED JOURNAL PAPERS

[J1] F. Hamidi-Sepehr*, J.-F. Chamberland, and H. D. Pfister, "On the performance of block codes over finite-state channels in the rare-transition regime," *IEEE Trans. Commun.*, vol. 63, pp. 3974–3990, Nov. 2015.

[J2] F. Hamidi-Sepehr*, H. D. Pfister, and J.-F. Chamberland, "Delay-sensitive communication over fading channels: Queueing behavior and code parameter selection," *IEEE Trans. Vehicular Technology*, vol. 64, pp. 3957–3970, Sept. 2015.

[J3] S. Kumar*, A. J. Young*, N. Macris, and H. D. Pfister, "Threshold saturation for spatially-coupled LDPC and LDGM codes on BMS channels," *IEEE Trans. Inform. Theory*, vol. 60, pp. 7389–7415, Dec. 2014.

*Denotes coauthors advised during research.

[J4] A. Yedla*, Y.-Y. Jian*, P. S. Nguyen*, and H. D. Pfister, "A simple proof of Maxwell saturation for coupled scalar recursions," *IEEE Trans. Inform. Theory*, vol. 60, pp. 6943–6965, Nov. 2014.

[J5] Y.-Y. Jian* and H. D. Pfister, "Convergence of weighted min-sum decoding via dynamic programming on trees," *IEEE Trans. Inform. Theory*, vol. 60, pp. 943–963, Feb. 2014.

[J6] S. Kumar*, J.-F. Chamberland, and H. D. Pfister, "First-passage time and large-deviation analysis for erasure channels with memory," *IEEE Trans. Inform. Theory*, vol. 59, pp. 5547–5565, Sept. 2013.

[J7] A. Yedla*, H. D. Pfister, and K. R. Narayanan, "Code design for the noisy Slepian-Wolf problem," *IEEE Trans. Commun.*, vol. 61, pp. 2535–2545, June 2013.

[J8] P. Parag, J.-F. Chamberland, H. D. Pfister, and K. R. Narayanan, "Code-rate selection, queueing behavior, and the correlated erasure channel," *IEEE Trans. Inform. Theory*, vol. 59, pp. 397–407, Jan. 2013.

[J9] F. Zhang* and H. D. Pfister, "Verification decoding of high-rate LDPC codes with applications in compressed sensing," *IEEE Trans. Inform. Theory*, vol. 58, pp. 5042–5048, Aug. 2012.

[J10] B.-H. Kim* and H. D. Pfister, "Joint decoding of LDPC codes and finite-state channels via linear-programming," *IEEE J. Select. Topics in Signal Processing*, vol. 5, pp. 1563–1576, Dec. 2011.

[J11] F. Zhang* and H. D. Pfister, "Analysis of verification-based decoding on the q-ary symmetric channel for large q," *IEEE Trans. Inform. Theory*, vol. 57, pp. 6754–6770, Oct. 2011.

[J12] P. S. Nguyen*, H. D. Pfister, and K. R. Narayanan, "On multiple decoding attempts for Reed-Solomon codes: A rate-distortion approach," *IEEE Trans. Inform. Theory*, vol. 57, pp. 668–691, Feb. 2011.

[J13] H. D. Pfister, "The capacity of finite-state channels in the high-noise regime," in *Entropy of Hidden Markov Processes and Connections to Dynamical Systems: Papers from the Banff International Research Station Workshop* (B. Marcus, K. Petersen, and T. Weissman, eds.), London Mathematical Society Lecture Note Series, Cambridge University Press, 2011.

[J14] M. P. Wilson, K. Narayanan, H. D. Pfister, and A. Sprintson, "Joint physical layer coding and network coding for bi-directional relaying," *IEEE Trans. Inform. Theory*, vol. 56, pp. 5641–5654, Nov. 2010.

[J15] H. D. Pfister and P. H. Siegel, "Joint iterative decoding of LDPC codes for channels with memory and erasure noise," *IEEE J. Select. Areas Commun.*, vol. 26, pp. 320–337, Feb. 2008.

[J16] H. D. Pfister and I. Sason, "Accumulate–repeat–accumulate codes: Capacity-achieving ensembles of systematic codes for the erasure channel with bounded complexity," *IEEE Trans. Inform. Theory*, vol. 53, pp. 2088–2115, June 2007.

[J17] J. B. Soriaga, H. D. Pfister, and P. H. Siegel, "Determining and approaching achievable rates of binary intersymbol interference channels using multistage decoding," *IEEE Trans. Inform. Theory*, vol. 53, pp. 1416–1429, April 2007. **IEEE COMSOC 2007 Best Paper in Data Storage**.

[J18] J. Hou, J. E. Smee, H. D. Pfister, and S. Tomasin, "Implementing interference cancellation to increase the EV-DO rev A reverse link capacity," *IEEE Commun. Magazine*, vol. 44, pp. 96–102, Feb. 2006.

[J19] H. D. Pfister, I. Sason, and R. Urbanke, "Capacity-achieving ensembles for the binary erasure channel with bounded complexity," *IEEE Trans. Inform. Theory*, vol. 51, pp. 2352–2379, July 2005.

[J20] J. B. Soriaga, H. D. Pfister, and P. H. Siegel, "On the low-rate Shannon limit for binary intersymbol interference channels," *IEEE Trans. Commun.*, vol. 51, pp. 1962–1964, Dec. 2003.

[J21] J. Hou, P. H. Siegel, L. B. Milstein, and H. D. Pfister, "Capacity-approaching bandwidth-efficient coded modulation schemes based on low-density parity-check codes," *IEEE Trans. Inform. Theory*, vol. 49, pp. 2141–2155, Sept. 2003.

[J22] H. D. Pfister and P. H. Siegel, "The serial concatenation of rate-1 codes through uniform random interleavers," *IEEE Trans. Inform. Theory*, vol. 49, pp. 1425–1438, June 2003.

PEER-REVIEWED CONFERENCE PAPERS

[C1] S. Kumar*, R. Calderbank, and H. D. Pfister, "Reed-Muller codes achieve capacity on the quantum erasure channel," in *Proc. IEEE Int. Symp. Inform. Theory*, (Barcelona, Spain), pp. 1750–1754, 2016.

[C2] S. Kumar*, R. Calderbank, and H. D. Pfister, "Beyond double transitivity: Capacity-achieving cyclic codes on erasure channels," in *Proc. IEEE Inform. Theory Workshop*, pp. 241–245, Sept 2016.

[C3] G. Reeves and H. D. Pfister, "The replica-symmetric prediction for compressed sensing with Gaussian matrices is exact," in *Proc. IEEE Int. Symp. Inform. Theory*, (Barcelona, Spain), pp. 665–669, 2016.

[C4] H. D. Pfister and R. Urbanke, "Near-optimal finite-length scaling for polar codes over large alphabets," in *Proc. IEEE Int. Symp. Inform. Theory*, (Barcelona, Spain), pp. 215–219, 2016.

[C5] C. Häger, H. D. Pfister, A. Graell i Amat, and F. Brännström, "Deterministic and ensemble-based spatially-coupled product codes," in *Proc. IEEE Int. Symp. Inform. Theory*, (Barcelona, Spain), pp. 2114–2118, 2016.

[C6] O. Sabag, H. H. Permuter, and H. D. Pfister, "A single-letter upper bound on the feedback capacity of unifilar finite-state channels," in *Proc. IEEE Int. Symp. Inform. Theory*, (Barcelona, Spain), pp. 310–314, 2016.

[C7] S. Kudekar, S. Kumar*, M. Mondelli, H. D. Pfister, and R. L. Urbanke, "Comparing the bit-MAP and block-MAP decoding thresholds of Reed-Muller codes on BMS channels," in *Proc. IEEE Int. Symp. Inform. Theory*, (Barcelona, Spain), pp. 1755–1759, 2016.

[C8] S. Kudekar, S. Kumar*, M. Mondelli, , H. D. Pfister, E. Şaşoğlu, and R. Urbanke, "Reed-Muller codes achieve capacity on erasure channels," in *Proc. of the Annual ACM Symp. on Theory of Comp.*, 2016.

[C9] C. Häger, H. D. Pfister, A. Graell i Amat, and F. Brännström, "Density evolution and error floor analysis for staircase and braided codes," in *Proc. OSA Optical Fiber Commun. Conf.*, 2016.

[C10] M. Mondelli, S. Kudekar, S. Kumar*, H. Pfister, E. Şaşoğlu, and R. Urbanke, "Reed-Muller codes: Thresholds and weight distribution," in *Proc. IEEE Intl. Zurich Seminar on Commun.*, (Zurich, Switzerland), p. 50, 2016.

[C11] C. Häger, H. D. Pfister, A. Graell i Amat, F. Brännström, and E. Agrell, "A deterministic construction and density evolution analysis for generalized product codes," in *Proc. IEEE Intl. Zurich Seminar on Commun.*, (Zurich, Switzerland), 2016.

[C12] N. Rengaswamy* and H. D. Pfister, "Cyclic polar codes," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 1287–1291, June 2015.

[C13] S. Li, Y.-C. Huang, T. Liu, and H. D. Pfister, "On the limits of treating interference as noise for two-user symmetric Gaussian interference channels," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 1711–1715, June 2015.

[C14] C. Häger, A. Amat, H. D. Pfister, A. Alvarado, F. Brännström, and E. Agrell, "On parameter optimization for staircase codes," in *Proc. OSA Optical Fiber Commun. Conf.*, pp. 1–3, March 2015.

[C15] H. D. Pfister, S. Emmadi, and K. Narayanan, "Symmetric product codes," in *Proc. Annual Workshop on Inform. Theory and its Appl.*, pp. 282–290, Feb. 2015.

[C16] A. Vem, Y.-C. Huang, K. R. Narayanan, and H. D. Pfister, "Multilevel lattices based on spatially-coupled LDPC codes with applications," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 2336–2340, 2014.

[C17] S. Kumar*, A. Vem, K. Narayanan, and H. D. Pfister, "Spatially-coupled codes for side-information problems," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 516–520, 2014.

[C18] Y.-Y. Jian*, H. D. Pfister, K. R. Narayanan, R. Rao, and R. Mazahreh, "Iterative hard-decision decoding of braided BCH codes for high-speed optical communication," in *Proc. IEEE Global Telecom. Conf.*, (Atlanta, GA, USA), 2013.

[C19] N. E. Tunali, K. R. Narayanan, and H. D. Pfister, "Spatially-coupled low density lattices based on construction A with applications to compute-and-forward," in *Proc. IEEE Inform. Theory Workshop*, (Sevilla, Spain), 2013.

[C20] N. Obata, Y.-Y. Jian*, K. Kasai, and H. D. Pfister, "Spatially-coupled multi-edge type LDPC codes with bounded degrees that achieve capacity on the BEC under BP decoding," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 2433–2437, July 2013.

[C21] H. D. Pfister and P. O. Vontobel, "On the relevance of graph covers and zeta functions for the analysis of SPA decoding of cycle codes," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 3000–3004, July 2013.

[C22] S. Kumar*, A. J. Young*, N. Macris, and H. D. Pfister, "A proof of threshold saturation for spatially-coupled LDPC codes on BMS channels," in *Proc. Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), pp. 176–184, Oct. 2012.

[C23] A. Yedla*, Y.-Y. Jian*, P. S. Nguyen*, and H. D. Pfister, "A simple proof of threshold saturation for coupled vector recursions," in *Proc. IEEE Inform. Theory Workshop*, pp. 25–29, Sept. 2012.

[C24] K. R. Narayanan and H. D. Pfister, "Iterative collision resolution for slotted ALOHA: An optimal uncoordinated transmission policy," in *Proc. Int. Symp. on Turbo Codes & Iterative Inform. Proc.*, pp. 136–139, Aug. 2012.

[C25] A. Yedla*, Y.-Y. Jian*, P. S. Nguyen*, and H. D. Pfister, "A simple proof of threshold saturation for coupled scalar recursions," in *Proc. Int. Symp. on Turbo Codes & Iterative Inform. Proc.*, pp. 51–55, Aug. 2012.

[C26] Y.-Y. Jian*, H. D. Pfister, and K. R. Narayanan, "Approaching capacity at high rates with iterative hard-decision decoding," in *Proc. IEEE Int. Symp. Inform. Theory*, pp. 2696–2700, July 2012.

[C27] P. S. Nguyen*, A. Yedla*, H. D. Pfister, and K. R. Narayanan, "On the maximum a posteriori decoding thresholds of multiuser systems with erasures," in *Proc. IEEE Int. Symp. Inform. Theory*, (Cambridge, MA, USA), pp. 2711–2715, July 2012.

[C28] P. S. Nguyen*, A. Yedla*, H. D. Pfister, and K. R. Narayanan, "Threshold saturation of spatially-coupled codes on intersymbol-interference channels," in *Proc. IEEE Int. Conf. Commun.*, (Ottawa, Canada), pp. 2209–2214, June 2012.

[C29] F. Hamidi-Sepehr*, H. D. Pfister, and J. F. Chamberland, "On the queueing behavior of Gilbert-Elliott channels in the rare-transition regime," in *Proc. Conf. on Inform. Sciences and Systems*, 2012.

[C30] S. Kumar*, J.-F. Chamberland, and H. D. Pfister, "Large deviations on empirical service for erasure channels with memory," in *Proc. Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), Sept. 2011.

[C31] A. Yedla*, P. S. Nguyen*, H. D. Pfister, and K. R. Narayanan, "Universal codes for the Gaussian MAC via spatial coupling," in *Proc. Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), Sept. 2011.

[C32] A. Yedla*, H. D. Pfister, and K. R. Narayanan, "Universality for the noisy Slepian-Wolf problem via spatial coupling," in *Proc. IEEE Int. Symp. Inform. Theory*, (St. Petersburg, Russia), pp. 2567–2571, July 2011.

[C33] F. Hamidi-Sepehr*, Y. Cai, H. D. Pfister, and J. F. Chamberland, "Queueing behavior of the Gilbert-Elliott channel: BCH codes and Poisson arrivals," in *Proc. IEEE Int. Symp. Inform. Theory*, (St. Petersburg, Russia), pp. 1806–1810, July 2011.

[C34] B.-H. Kim* and H. D. Pfister, "An iterative joint linear-programming decoding of LDPC codes and finite-state channels," in *Proc. IEEE Int. Conf. Commun.*, (Kyoto, Japan), pp. 1–6, June 2011.

[C35] S. Kudekar and H. D. Pfister, "The effect of spatial coupling on compressive sensing," in *Proc. Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), pp. 347–353, Oct. 2010.

[C36] A. Yedla*, H. D. Pfister, and K. R. Narayanan, "LDPC code design for transmission of correlated sources across noisy channels without CSIT," in *Proc. Int. Symp. on Turbo Codes & Iterative Inform. Proc.*, (Brest, France), pp. 474–478, Sept. 2010.

[C37] B.-H. Kim*, A. Yedla*, and H. D. Pfister, "IMP: A message-passing algorithm for matrix completion," in *Proc. Int. Symp. on Turbo Codes & Iterative Inform. Proc.*, (Brest, France), pp. 469–473, Sept. 2010.

[C38] Y.-Y. Jian* and H. D. Pfister, "Convergence of weighted min-sum decoding via dynamic programming on coupled trees," in *Proc. Int. Symp. on Turbo Codes & Iterative Inform. Proc.*, (Brest, France), Sept. 2010.

[C39] P. Parag, J.-F. Chamberland, H. D. Pfister, and K. R. Narayanan, "On the queueing behavior of random codes over a Gilbert-Elliott erasure channel," in *Proc. IEEE Int. Symp. Inform. Theory*, (Austin, TX, USA), pp. 1798–1802, June 2010.

[C40] B.-H. Kim* and H. D. Pfister, "On the joint decoding of LDPC codes and finite-state channels via linear programming," in *Proc. IEEE Int. Symp. Inform. Theory*, (Austin, TX, USA), pp. 754–758, June 2010.

[C41] F. Zhang* and H. D. Pfister, "LDPC codes for rank modulation in flash memories," in *Proc. IEEE Int. Symp. Inform. Theory*, (Austin, TX, USA), pp. 859–863, June 2010.

[C42] P. S. Nguyen*, H. D. Pfister, and K. R. Narayanan, "A rate-distortion exponent approach to multiple decoding attempts for Reed-Solomon codes," in *Proc. IEEE Int. Symp. Inform. Theory*, (Austin, TX, USA), pp. 1798–1802, June 2010.

[C43] P. Parag, J.-F. Chamberland, H. D. Pfister, and K. R. Narayanan, "Code rate, queueing behavior and the correlated erasure channel," in *Proc. IEEE Inform. Theory Workshop*, (Cairo, Egypt), Jan. 2010.

[C44] F. Zhang* and H. D. Pfister, "Modulation codes for flash memory based on load-balancing theory," in *Proc. 47th Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), Sept. 2009.

[C45] A. Yedla*, H. D. Pfister, and K. R. Narayanan, "Can iterative decoding for erasure correlated sources be universal?," in *Proc. 47th Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), Sept. 2009.

[C46] P. S. Nguyen*, H. D. Pfister, and K. R. Narayanan, "A rate-distortion perspective on multiple decoding attempts for Reed-Solomon codes," in *Proc. 47th Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), pp. 1235–1242, Sept. 2009.

[C47] C. Wang* and H. D. Pfister, "Upper bounds on the MAP threshold of iterative decoding systems with erasure noise," in *Proc. Int. Symp. on Turbo Codes & Related Topics*, (Lausanne, Switzerland), pp. 7–12, Sept. 2008.

[C48] F. Zhang* and H. D. Pfister, "On the iterative decoding of high rate LDPC codes with applications in compressed sensing," in *Proc. 46th Annual Allerton Conf. on Commun., Control, and Comp.*, (Monticello, IL, USA), Sept. 2008.

[C49] F. Zhang* and H. D. Pfister, "Compressed sensing and linear codes over real numbers," in *Proc. 3rd Annual Workshop on Inform. Theory and its Appl.*, (San Diego, CA, USA), Feb. 2008.

[C50] F. Zhang* and H. D. Pfister, "List-message passing achieves capacity on the q-ary symmetric channel for large q," in *Proc. IEEE Global Telecom. Conf.*, (Washington, D.C., USA), pp. 283–287, Nov. 2007.

[C51] S. Diggavi, M. Mitzenmacher, and H. D. Pfister, "Capacity upper bounds for the deletion channel," in *Proc. IEEE Int. Symp. Inform. Theory*, (Nice, France), June 2007.

[C52] I. Sason and H. D. Pfister, "Capacity-achieving ensembles of accumulate-repeat-accumulate codes for the erasure channel with bounded complexity," in *Proc. 1st Annual Workshop on Inform. Theory and its Appl.*, (San Diego, CA, USA), Feb. 2006.

[C53] H. D. Pfister, "Finite-length analysis of a capacity-achieving ensemble for the binary erasure channel," in *Proc. IEEE Inform. Theory Workshop*, (Rotorua, New Zealand), pp. 160–164, Sept. 2005.

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