

Curriculum Vitae - Hagit Messer-Yaron

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Contacts:

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Educational Background

From Year	To Year	Institution	Specialization	Degree
1973	1977	Tel Aviv University	Electrical Eng. (EE)	B.Sc.
1977	1979	Tel Aviv University	EE - Signal Processing	M.Sc.
1979	1984	Tel Aviv University	EE - Signal Processing	PhD.
1985	1986	Yale University	EE - Source localization	Post. Doc.

Major Research Interests

- 1977-present: Statistical signal processing
- 1985-2000: Sensor array processing, passive source localization
- 2000-present: Signal processing for wireless communication
- 2003-present: Signal processing for basic science: (a) signal processing in high energy physics; (b) study and modeling of DNA repair mechanism
- 2004-present: environmental sensor networks

Employment History

From Year	To Year	Institution	Area of research	Title
2008	present	The Open University	Administration	President
1986	present	Tel Aviv University	Electrical Eng.	Professor, and: * 2005-2008 : VP for Research & Development * 2004-5 : Head, the Porter School of Environmental Studies * 1999-2000 & 2003-4: head of undergraduate EE program
2000	2003	Ministry of Science	Science Policy	Chief Scientist and head, directorate of science
1996	1999	Public Utilities Authorities - Electricity	Regulation	Commissioner
1991	1992	NJIT, USA	Electrical Eng.	Visiting professor
1985	1986	Yale Univ., USA	Electrical Eng.	Post Doc. Fellow

¹ On leave from the School of Electrical Engineering, Tel Aviv University

International visiting and collaboration

- University of Pennsylvania (US) – summer 1980
- Drexel Univ. (US) – summer 1981
- Yale Univ. (US) - 1985-6, summer 1994
- NJIT (US) – 1991-2, summer 1994
- ENST (France) – summer 1997
- CERN (CH) – winter 2004,2005,2006,2007,2009

Academic and Professional Awards and Recognition

- **WIPO Medal**, 2009, "for the best invention to predict floods using cellular networks" (with N. David and P. Alpert).
- **GRSL Best Reviewer Recognition for 2009**
- **General co-Chair**, IEEE SAM-2010, IEEE HOS-1999 Workshops
- **Member of the Editorial Board**, Overview Articles in IEEE Signal Processing Transactions (since 2009)
- **Member of the Editorial Board**, IEEE Journal on Selected Topics in Signal Processing (since 2006)
- **Fellow of the IEEE** (2001): for contributions to statistical signal processing, time delay estimation and sensor array processing.
- **Associate Editor**, IEEE Signal Processing Letters (1996-9)
- **Associate Editor**, IEEE Trans. On Signal Processing (1994-6)
- **Member**, IEEE Signal Processing Society Technical Committees (SPTM, SAM) – 1994-2010.
- **Best Teacher Award**, Faculty of Engineering (1997)
- **Plenary Talks** (SPAWC 2007, SAM 2008)

Recent Grants and Contracts

From Year	To Year	Title of Project	Source	Grant
2009	2011	PROCEAMA	BMBF	\$100K
2008	2010	Environmental sensor networks using existing wireless communication	ISF	\$120K
2007	2009	Rehabilitation of a discrete sensory-motor learning function	Converging Technology (ISF)	\$100K
2007	2010	ReNaChip	FP7	\$400K
1999	2010	Projects in telecommunication	Ministry of industry (MAGNET)	\$1,000k
1997	present	Topics in underwater acoustics	Ministry of defense	~\$20K per year
2005	2007	Brain –machine hybrid for the rehabilitation of a discrete motor learning function.	The Center for Complexity Science	\$30K
1998	2001	Detection & Localization of Scattered Sources	ISF	\$100K

Patents

Messer Yaron H, Alpert P, Zinevich A, Goldshtein O, MONITORING AND MAPPING OF ATMOSPHERIC PHENOMENA, WIPO Patent Application WO/2007/007312, 2006

Ph.D Students

Dr. Moti Frisch (awarded in 1992)
Dr. Joseph Tabrikian (awarded in 1996)
Dr. Nadav Bezer (awarded in 2001)
Dr. Eran Fishler (awarded in 2001)
Dr. Jonathan Friedmann (awarded in 2002)
Dr. Itsik Bergel (awarded in 2005)
Dr. David Primor (awarded in 2007)
Dr. Lev Smolyar (awarded in 2009)
Dana Lahat (since 2005)
Dr. Artem Zinevich (awarded in 2010)
Yair Noam (submitted in 2010)
Noam David (since 2007)
Nir Nisanson (since 2009)

Also, supervised more than 70 M.Sc. students.

Recent public service:

2007- Member, Board of Directors, the Center for Educational Technology (CET), Israel
2009- Member, the National Council of Museums, Israel
2008- Member, Executive committee, HAKOL HINUCH ("it's all education ")
2003- Member, Executive committee, BASHAAR - Academic Community for Israeli Society
2010- Chair, COMEST – UNESCO committee for ethics in science and technology, Israel
2009- Consultant, WIPO World Intellectual Property Organization
2010 Chair, Ad-Hoc committee governmental for the evaluation of regional R&D centers in Israel
2010 Member, Ad-Hoc governmental committee on the status of Chief Scientists in Israel.

LIST OF PUBLICATIONS: HAGIT MESSER-YARON

Journal papers

Competitive Spectrum Management with Incomplete Information

Noam, Y.; Leshem, A.; Messer, H.;
IEEE Transactions on Signal Processing, 2010

Prediction of rainfall intensity measurement errors using commercial microwave communication links

Zinevich, A; Messer, H; Alpert, P
Atmospheric Measurement Techniques Atmos. Meas. Tech., 3, Pages: 1385-1402, 2010

Optimal Performance of Second-Order Multidimensional ICA

D. Lahat, J-F Cardoso and H. Messer
Independent Component Analysis and Signal Separation Lecture Notes in Computer Science, Volume 5441/2009,
P. 50-57, 2009.

Unified Approach to Joint Power Allocation and Base Assignment in Nonorthogonal Networks

Smolyar, L; Bergel, I; Messer, H
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY Volume: 58 Issue: 8 Pages: 4576-4586, 2009

Frontal Rainfall Observation by a Commercial Microwave Communication Network

Zinevich, A; Messer, H; Alpert, P
JOURNAL OF APPLIED METEOROLOGY AND CLIMATOLOGY Volume: 48 Issue: 7 Pages: 1317-1334, 2009

Notes on the Tightness of the Hybrid Cramer-Rao Lower Bound

Noam, Y; Messer, H
IEEE TRANSACTIONS ON SIGNAL PROCESSING Volume: 57 Issue: 6 Pages: 2074-2084, 2009

Technical Note: Novel method for water vapour monitoring using wireless communication networks measurements

David, N; Alpert, P; Messer, H
ATMOSPHERIC CHEMISTRY AND PHYSICS Volume: 9 Issue: 7 Pages: 2413-2418, 2009

Rain Rate Estimation Using Measurements From Commercial Telecommunications Links

Goldshstein, O; Messer, H; Zinevich, A
IEEE TRANSACTIONS ON SIGNAL PROCESSING Volume: 57 Issue: 4 Pages: 1616-1625, 2009

Estimation of rainfall fields using commercial microwave communication networks of variable density

Zinevich, A; Alpert, P; Messer, H
ADVANCES IN WATER RESOURCES Volume: 31 Issue: 11 Pages: 1470-1480, 2008

Optimization of CDMA Systems with Respect to Transmission Probability, Part II: Signal to Noise Plus Interference Ratio Optimization

Bergel, I.; Messer, H.;
Wireless Communications, IEEE Transactions on, Volume 7, Issue 6, June 2008 Page(s):2084 - 2093

Optimization of CDMA Systems with Respect to Transmission Probability, Part I: Mutual Information Rate Optimization

Bergel, I.; Messer, H.;
Wireless Communications, IEEE Transactions on, Volume 7, Issue 6, June 2008 Page(s):2075 – 2083

Iterative Track Fitting Using Cluster Classification in Multi Wire Proportional Chamber

Primor, D.; Mikenberg, G.; Etzion, E.; Messer, H.;
Nuclear Science, IEEE Transactions on, Volume 54, Issue 5, Part 2, Oct. 2007 Page(s):1758 - 1766

Muon Detection in the ATLAS CSC Detector

Primor, D.; Mikenberg, G.; Messer, H.;
Nuclear Science, IEEE Transactions on, Volume 54, Issue 3, Part 2, June 2007 Page(s):635 - 642

Rainfall Monitoring Using Cellular Networks

Messer, H.;
Signal Processing Magazine, IEEE, Volume 24, Issue 3, 2007 Page(s):144 – 142

A novel approach to track finding in a drift tube chamber

Primor, D., Kortner, O., Mikenberg, G., and Messer, H. .
Journal of Instrumentation (JINST), P01009, 30/1/2007

Multi-user sum-rate capacity for ultra-wideband radio

Smolyar, L.; Bergel, I.; Messer, H.;
Wireless Communications, IEEE Transactions on, Volume 5, Issue 7, July 2006 Page(s):1818 – 1826

Environmental monitoring by wireless communication networks

Messer, H; Zinevich, A; Alpert, P

SCIENCE, 312 (5774): 713-713 MAY 5 2006

SNR Estimation in time-varying Fading Channels,

Wiesel, A, J. Goldberg and H. Messer-Yaron,
IEEE Trans. on Communications, Vol. 54, Issue 5, pages 841-848, May 2006.

Narrowband Interference Mitigation in Impulse Radio

Bergel, I.; Fishler, E.; Messer, H.;
Communications, IEEE Transactions on
Volume 53, Issue 8, Aug. 2005 Page(s):1278 – 1282

Determining the Number of Discrete Alphabet Sources from Sensor Data,

Fishler, E; Grosman, M; Messer, H;
EURASIP Journal on Applied Signal Processing 2005:1,4–12, JAN 2005.

Training-based time-delay estimation for CPM signals over time-selective fading channels

Dabora, R.; Goldberg, J.; Messer, H.;
Communications, IEEE Transactions on, Volume 52, Issue 7, July 2004 Page(s):1169 – 1177

Bearing estimation for a distributed source of nonconstant modulus bounds and analysis

Friedmann, J.; Raich, R.; Goldberg, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 51, Issue 12, Dec. 2003 Page(s):3027 – 3035

General asymptotic analysis of the generalized likelihood ratio test for a Gaussian point source under statistical or spatial mismodeling

Friedmann, J.; Fishler, E.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 50, Issue 11, Nov. 2002 Page(s):2617 – 2631

Inherent limitations in data-aided time synchronization of continuous phase-modulation signals over time-selective fading channels

Dabora, R.; Goldberg, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 50, Issue 6, June 2002 Page(s):1470 – 1482

Consistent CFAR detection of a linear signal based on partially consistent observations

Friedmann, J.; Messer, H.;
Signal Processing Letters, IEEE, Volume 9, Issue 8, Aug. 2002 Page(s):237 – 240

Detection of signals by information theoretic criteria: general asymptotic performance analysis

Fishler, E.; Grosman, M.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 50, Issue 5, May 2002 Page(s):1027 - 1036

Bearing estimation in a Ricean channel .I. Inherent accuracy limitations

Fuks, G.; Goldberg, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 49, Issue 5, May 2001 Page(s):925 – 937

Underwater source detection using a spatial stationarity test

Ephraty, A; Tabrikian, J; Messer, H;
JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, 109 (3): 1053-1063, MAR 2001.

Robust mixed-order root-MUSIC

Gershman, AB; Messer, H;
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, 19 (5): 451-466 2000.

On the use of order statistics for improved detection of signals by the MDL criterion

Fishler, E.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 48, Issue 8, Aug. 2000 Page(s):2242 – 2247

Source localization in shallow water in the presence of sensor location uncertainty

Jakoby, A.; Goldberg, J.; Messer, H.;
Oceanic Engineering, IEEE Journal of, Volume 25, Issue 3, July 2000 Page(s):331 – 336

Bearing estimation for a distributed source: modeling, inherent accuracy limitations and algorithms

Raich, R.; Goldberg, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 48, Issue 2, Feb. 2000 Page(s):429 – 441

Detection and parameter estimation of a transient signal using order statistics

Fishler, E.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 48, Issue 5, May 2000 Page(s):1455 – 1458

Robust parameter estimation of a deterministic signal in impulsive noise

Friedmann, J.; Messer, H.; Cardoso, J.-F.;
Signal Processing, IEEE Transactions on Volume 48, Issue 4, April 2000 Page(s):935 – 942

Detection of environmental mismatch in a shallow water waveguide

Tabrikian, J.; Fostick, G.S.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 47, Issue 8, Aug. 1999 Page(s):2181 - 2190

Order statistics approach for determining the number of sources using an array of sensors

Fishler, E.; Messer, H.;
Signal Processing Letters, IEEE, Volume 6, Issue 7, July 1999 Page(s):179 - 182

Almost efficient estimation of the parameters of a stable distribution using order statistics

Maymon S; Friedmann J; Messer H :
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS 1999, Vol 53, Iss 6, pp 355-363

Performance of linear MMSE multiuser detection combined with a standard IS-95 uplink

Zaidel BM; Shitz SS; Messer H
WIRELESS NETWORKS 1998, Vol 4, Iss 6, pp 429-445.

Passive time delay estimation in non-Gaussian noise

Messer, H.; Shor, G.; Schultheiss, P.M.;
Signal Processing, IEEE Transactions on Volume 47, Issue 9, Sept. 1999 Page(s):2531 - 2534

On the effect of nuisance parameters on the threshold SNR value of the Barankin bound

Reuven, I.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 47, Issue 2, Feb. 1999 Page(s):523 - 527

Lower bound on the achievable DSP performance for localizing step-like continuous signals in noise

Bartov, A.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 46, Issue 8, Aug. 1998 Page(s):2195 - 2201

Highlights of statistical signal and array processing

Hero, A.; Messer, H.; Goldberg, J.; Thomson, D.J.; Amin, M.G.; Giannakis, G.; Swami, A.; Tugnait, J.K.; Nehorai, A.; Swindlehurst, A.L.; Cardoso, J.-F.; Lang Tong; Krolik, J.;
Signal Processing Magazine, IEEE, Volume 15, Issue 5, Sept. 1998 Page(s):21 - 64

Extracting information from noisy measurements of periodic signals propagating through random media

Furst, M.; Messer, H.; Shaaya-Segal, I.;
Signal Processing, IEEE Transactions on Volume 46, Issue 7, July 1998 Page(s):2047 – 2053

Inherent limitations in the localization of a coherently scattered source

Goldberg, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 46, Issue 12, Dec. 1998 Page(s):3441 – 3444

Maximum likelihood time delay estimation in non-Gaussian noise

Schultheiss, P.M.; Messer, H.; Shor, G.;
Signal Processing, IEEE Transactions on Volume 45, Issue 10, Oct. 1997 Page(s):2571 - 2575

A Barankin-type lower bound on the estimation error of a hybrid parameter vector

Reuven, I.; Messer, H.;
Information Theory, IEEE Transactions on, Volume 43, Issue 3, May 1997 Page(s):1084 – 1093

Robust maximum-likelihood source localization in an uncertain shallow-water waveguide,

Tabrikian J; Krolik JL; Messer H
JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA 1997, Vol 101, Iss 1, pp 241-249

Source localization in a waveguide using polynomial rooting

Tabrikian, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 44, Issue 8, Aug. 1996 Page(s):1861 – 1871

Simultaneous spatial separation and direction-of-arrival estimation of wideband sources using bootstrapped algorithms

Messer, H.; Bar-Ness, Y.;
Circuits and Systems II: Analog and Digital Signal Processing, IEEE Transactions on [see also Circuits and Systems II: Express Briefs, IEEE Transactions on], Volume 43, Issue 4, April 1996 Page(s):316 – 328

On the achievable DF accuracy of two kinds of active interferometers

Messer, H.; Singal, G.; Bialy, L.;
Aerospace and Electronic Systems, IEEE Transactions on, Volume 32, Issue 3, July 1996 Page(s):1158 – 1164

Three-dimensional source localization in a waveguide

Tabrikian, J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 44, Issue 1, Jan. 1996 Page(s):1 – 13

The potential performance gain in using spectral information in passive detection/localization of wideband sources

Messer, H.;
Signal Processing, IEEE Transactions on Volume 43, Issue 12, Dec. 1995 Page(s):2964 - 2974

On the principal domain of the discrete bispectrum of a stationary signal

Hinich, M.J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 43, Issue 9, Sept. 1995 Page(s):2130 - 2134

Joint DOA estimation and phase calibration of linear equispaced (LES) arrays

Wylie, M.P.; Roy, S.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 42, Issue 12, Dec. 1994 Page(s):3449 - 3459

Detection of a known transient signal of unknown scaling and arrival time

Frisch, M.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 42, Issue 7, July 1994 Page(s):1859 – 1863

FEASIBILITY STUDY OF PARAMETER-ESTIMATION OF RANDOM SAMPLING JITTER USING THE BISPECTRUM

SHARFER I; MESSER H
CIRCUITS SYSTEMS AND SIGNAL PROCESSING 1994, Vol 13, Iss 4, pp 435-453

The bispectrum of sampled data. II. Monte-Carlo simulations of detection and estimation of the sampling jitter

Sharfer, I.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 42, Issue 10, Oct. 1994 Page(s):2706 – 2714

The use of spectral information in optimal detection of a source in the presence of a directional interference

Messer, H.;
Oceanic Engineering, IEEE Journal of, Volume 19, Issue 3, July 1994 Page(s):422 – 430

Optimal and suboptimal broad-band source location estimation

Schultheiss, P.M.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 41, Issue 9, Sept. 1993 Page(s):2752 – 2763

Transient signal detection using prior information in the likelihood ratio test

Frisch, M.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 41, Issue 6, June 1993 Page(s):2177 - 2192

The Bispectrum of Sampled Data: Part 1-Detection of the Sampling Jitter

Sharfer, I.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 41, Issue 1, January 1993 Page(s):296

Maximum-Likelihood Direction Finding of Wide-Band Sources

Doron, M.A.; Weiss, A.J.; Messer, H.;
Signal Processing, IEEE Transactions on Volume 41, Issue 1, January 1993 Page(s):411

**SOURCE LOCALIZATION PERFORMANCE AND THE ARRAY BEAMPATTERN ,
MESSER H**

SIGNAL PROCESSING 1992, Vol 28, Iss 2, pp 163-181

The use of the wavelet transform in the detection of an unknown transient signal

Frisch, M.; Messer, H.;
Information Theory, IEEE Transactions on, Volume 38, Issue 2, March 1992 Page(s):892 – 897

PERFORMANCE LIMITS OF HIGH-RESOLUTION SYSTEMS

BHUYAN A; MESSER H; SCHULTHEISS PM
,LECTURE NOTES IN CONTROL AND INFORMATION SCIENCES 1991, Vol 155, pp 177-216

On the eigenstructure of the signal-only tempo-spatial covariance matrix of broad-band sources using a circular array

Messer, H.; Rockah, Y.;
Acoustics, Speech, and Signal Processing [see also IEEE Transactions on Signal Processing], IEEE Transactions on Volume 38, Issue 3, March 1990 Page(s):557 - 559

Localization in the presence of coherent interference

Messer, H.; Rockah, Y.; Schultheiss, P.M.;
Acoustics, Speech, and Signal Processing [see also IEEE Transactions on Signal Processing], IEEE Transactions on Volume 38, Issue 12, Dec. 1990 Page(s):2025 - 2032

Suboptimal detection of non-Gaussian signals by third-order spectral analysis

Kletter, D.; Messer, H.;
Acoustics, Speech, and Signal Processing [see also IEEE Transactions on Signal Processing], IEEE Transactions on Volume 38, Issue 6, June 1990 Page(s):901 - 909

A unified approach to closed-loop time delay estimation systems

Messer, H.;
Acoustics, Speech, and Signal Processing [see also IEEE Transactions on Signal Processing], IEEE Transactions on Volume 36, Issue 6, June 1988 Page(s):854 - 861

Localization performance of arrays subject to phase errors

Rockah, Y.; Messer, H.; Schultheiss, P.M.;
Aerospace and Electronic Systems, IEEE Transactions on, Volume 24, Issue 4, July 1988 Page(s):402 - 410

Closed-loop least mean square time-delay estimator

Messer, H.; Bar-Ness, Y.;
Acoustics, Speech, and Signal Processing [see also IEEE Transactions on Signal Processing], IEEE Transactions on
Volume 35, Issue 4, Apr 1987 Page(s):413 - 424

A FEASIBILITY STUDY OF THE SYNCHRONOUS AND ASYNCHRONOUS OPERATION OF A SAW PROGRAMMABLE CORRELATOR BASED ON A SAW CONVOLVER

MESSER H, AVSHALOM A
INTERNATIONAL JOURNAL OF ELECTRONICS 60 (5): 641-654 MAY 1986

A Unified Approach to the Design of Voltage-Controlled SAW Delay Lines

Messer, H.; Bar-Ness, Y.;
Sonics and Ultrasonics, IEEE Transactions on, Volume 32, Issue 6, Nov 1985 Page(s):815 - 820

Distortion Estimation of SAW Time Inversion System Based on Delta Function Approximation

Messer, H.; Bar-Ness, Y.;
Sonics and Ultrasonics, IEEE Transactions on, Volume 28, Issue 6, Nov 1981 Page(s):454 - 459

WIDEBAND INSTANTANEOUS FREQUENCY MEASUREMENTS (IFM) USING SAW DEVICES

BARNES Y, MESSER H
IEEE TRANSACTIONS ON SONICS AND ULTRASONICS 28 (5): 379-379 1981

SAW Time Scaling Techniques

Messer, H.; Gilboa, H.; Bar-Ness, Y.;
Sonics and Ultrasonics, IEEE Transactions on, Volume 28, Issue 4, Jul 1981 Page(s):271 - 276

New s.a.w. time-inversion system

Messer, H.; Bar-Ness, Y.; Gilboa, H.;
Electronics Letters, Volume 15, Issue 7, March 29 1979 Page(s):214 - 215

Reprints in books

Chapter 3.2 in: Bayesian Bounds for Parameter Estimation and Nonlinear Filtering/Tracking,

Harry L. Van Trees (Editor), Kristine L. Bell (Editor), ISBN: 978-0-470-12095-8, Wiley-IEEE Press:
I. Reuven and H. Messer, "A Barankin-type lower bound on the estimation error of a hybrid parameter vector," *IEEE. Trans. Info. Theory*, vol. 43, no. 3, pp. 1084–1093, May 1997.

Chapter 5.2 in: Bayesian Bounds for Parameter Estimation and Nonlinear Filtering/Tracking,

Harry L. Van Trees (Editor), Kristine L. Bell (Editor), ISBN: 978-0-470-12095-8, Wiley-IEEE Press:
A. Bartow and H. Messer, "Lower bound on the achievable DSP performance for localizing step-like continuous signals in noise," *IEEE. Trans. Signal Process.*, vol. 46, no. 8, pp. 2195–2201, August 1998.

P. 134-137 in: Coherence and Time Delay Estimation, G. Clifford Carter (Editor): D. Kletter and H. Messer, "The role of third order spectrum in maximum likelihood time delay estimation of a random multi-tone signal in noise," *Proc. ICASSP'89*, vol. 4, pp. 2310-2313, May 1989.

Conference papers (partial list)

Modeling Neuron Firing Pattern Using a Two State Markov Chain

Nossenson N; Messer H.
Sensor Array and Multichannel Signal Processing Workshop, 2010. SAM 2010. 6th IEEE 4-7 Oct. 2010

A Rayleigh Fading Interference Game with incomplete Information

Noam Y; Leshem A.; Messer H.
Sensor Array and Multichannel Signal Processing Workshop, 2010. SAM 2010. 6th IEEE 4-7 Oct. 2010
2nd prize – Best Paper Student Award

Competitive spectrum sharing in symmetric fading channel with incomplete information

Noam Y; Leshem A; Messer H.
Acoustics Speech and Signal Processing (ICASSP), 2010 IEEE International Conference on

Flash floods warning technique based on wireless communication networks data

David N.; Alpert P.; Messer H.

Pontine Nucleus audio stimuli detection & modeling for brain machine interface rehabilitation of conditional learning

Shteingart, H.; Taub, A.; Messer, H.;

Statistical Signal Processing, 2009. SSP '09. IEEE/SP 15th Workshop on Aug. 31 2009-Sept. 3 2009 Page(s):21 - 24

ICA of correlated sources mismodeled as uncorrelated: performance analysis

Lahat, D.; Messer, H.; Cardoso, J.-F.;

Statistical Signal Processing, 2009. SSP '09. IEEE/SP 15th Workshop on Aug. 31 2009-Sept. 3 2009 Page(s):489 - 492

A cellular sector-to-users path loss distribution model

Broyde, Yehonatan; Messer, Hagit;

Statistical Signal Processing, 2009. SSP '09. IEEE/SP 15th Workshop on Aug. 31 2009-Sept. 3 2009 Page(s):321 - 324

High-order Hidden Markov Models - estimation and implementation

Hadar, Uri; messer, Hagit;

Statistical Signal Processing, 2009. SSP '09. IEEE/SP 15th Workshop on Aug. 31 2009-Sept. 3 2009 Page(s):249 - 252

Optimal Performance of Second-Order Multidimensional ICA

Lahat, D; Cardoso, JF; Messer, H

8th International Conference on Independent Component Analysis and Signal Separation, MAR 15-18, 2009 Paraty BRAZIL, INDEPENDENT COMPONENT ANALYSIS AND SIGNAL SEPARATION, PROCEEDINGS Volume: **5441** Pages: **50-57 2009**

The use of the EM algorithm for the CSC muon detection

Primor, D.; Mikenberg, G.; Messer, H.;

Sensor Array and Multichannel Signal Processing Workshop, 2008. SAM 2008. 5th IEEE 21-23 July 2008 Page(s):385 – 389

The hybrid Cramér-Rao bound and the generalized Gaussian linear estimation problem

Noam, Y.; Messer, H.;

Sensor Array and Multichannel Signal Processing Workshop, 2008. SAM 2008. 5th IEEE 21-23 July 2008 Page(s):395 – 399

An approximation of the glrt for real time muon detection

Primor, D.; Mikenberg, G.; Messer, H.;

Acoustics, Speech and Signal Processing, 2008. ICASSP 2008. IEEE International Conference on March 31 2008-April 4 2008 Page(s):3633 – 3636

Recent results of rainfall mapping from cellular network measurements

Messer, H.; Goldshtein, O.; Rayitsfeld, A.; Alpert, P.;

Acoustics, Speech and Signal Processing, 2008. ICASSP 2008. IEEE International Conference on March 31 2008-April 4 2008 Page(s):5157 – 5160

Joint downlink power allocation, beamforming weights and base assignment

Smolyar, L.; Bergel, I.; Messer, H.;

Signal Processing Advances in Wireless Communications, 2007. SPAWC 2007. IEEE 8th Workshop on 17-20 June 2007 Page(s):1 – 5

The use of cluster quality for track fitting in the CSC detector

Etzion, E.; Primor, D.; Mikenberg, G.; Amram, N.; Messer, H.;

Nuclear Science Symposium Conference Record, 2006. IEEE Volume 1, Oct. 29 2006-Nov. 1 2006 Page(s):1 - 4

The Hybrid Cramer-Rao Lower Bound - From Practice to Theory

Messer, H.;

Sensor Array and Multichannel Processing, 2006. Fourth IEEE Workshop on July 12-14, 2006 Page(s):304 – 307

Capacity Analysis of Ocean Channels

Ophir, N.; Tabrikian, J.; Messer, H.;

Sensor Array and Multichannel Processing, 2006. Fourth IEEE Workshop on July 12-14, 2006 Page(s):646 – 650

Track identification in high energy physics

Primor, D.; Mikenberg, G.; Messer, H.;

Statistical Signal Processing, 2005 IEEE/SP 13th Workshop on July 17-20 2005 Page(s):29 - 34

Optimization criteria for DNA repair

Bustin, R.; Messer, H.;

Statistical Signal Processing, 2005 IEEE/SP 13th Workshop on
July 17-20 2005 Page(s):1402 - 1407

The use of Probability Control in CDMA systems

Bergel, I.; Messer, H.;
Statistical Signal Processing, 2005 IEEE/SP 13th Workshop on
July 17-20 2005 Page(s):1060 – 1065

Statistical signal processing approach to DNA repair

Sever, R.; Messer, H.;
Acoustics, Speech, and Signal Processing, 2005. Proceedings. (ICASSP '05). IEEE International Conference on
Volume 5, 18-23 March 2005 Page(s):v/781 - v/784 Vol. 5

Semi-blind impulse radio - all win, limited complexity UWB system

Bergel, I.; Messer, H.;
Acoustics, Speech, and Signal Processing, 2004. Proceedings. (ICASSP '04). IEEE International Conference on
Volume 4, 17-21 May 2004 Page(s):iv-505 - iv-508 vol.4

Data-aided signal-to-noise-ratio estimation in time selective fading channels

Wiesel, A.; Goldberg, J.; Messer, H.;
Acoustics, Speech, and Signal Processing, 2002. Proceedings. (ICASSP '02). IEEE International Conference on
Volume 3, 13-17 May 2002 Page(s):III-2197 - III-2200 vol.3

Non-data-aided signal-to-noise-ratio estimation

Wiesel, A.; Goldberg, J.; Messer, H.;
Communications, 2002. ICC 2002. IEEE International Conference on
Volume 1, 28 April-2 May 2002 Page(s):197 - 201

Non-data-aided signal-to-noise-ratio estimation

Wiesel, A.; Goldberg, J.; Messer, H.;
Communications, 2002. ICC 2002. IEEE International Conference on
Volume 1, 28 April-2 May 2002 Page(s):197 - 201

On the effect of a-priori information on performance of the MDL estimator

Fishler, E.; Messer, H.;
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