Curriculum Vitae: Hagit Messer

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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

- 2004-present: **environmental sensor networks**
- 2000-present: science-society interplay
- 1977-present: Statistical signal processing and applications

Employment History

From Year	To Year	Institution	Type of organization	Title
1986	present	Tel Aviv University	University	- Professor Emerita (October 2021-) - DPO (May 2019-) - The Kranzberg Chair in Signal Processing (2016-) - Vice President for R&D (2005-8) - Head, the Porter School of Environmental Studies (2003-5) - head of undergraduate EE program (1999-2000 & 2003-4)
2016		ClimaCell	Start-up company	Co-founder and Chief Scientist [not active in the company since January 1, 2017]
2013	2016	Council for Higher Education	Regulation	Vice Chair
2008	2013	The Open University	University	President
2000	2003	Ministry of Science	Government	Chief Scientist and head, directorate of science

International visits and formal collaboration

- 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
- ETIS-ENSEA (France) – summer 2014
- Harvard Hi-Lab (US) – summer 2016
- Institute of Atmospheric Physics, Chinese Academy of Sciences – winter 2019
- Columbia Univ. (US) – Fall 2019, 2021, 2022

Academic and Professional Awards and Recognition

- The IEEE **Clementina Saduwa Award** 2020
- Finalist in the ICASSP 2020 Best paper award (4/730) **and** Best paper Student Award (8/1170) - coauthor
- **IEEE Life Fellow**, from January 1, 2019
- **PIFI fellow**, Visiting Scientist Award, Chinese Academy of Sciences, President's International Fellowship Initiative (PIFI), 2018
- Member of "The Directors Team (2017, 2022)". the Government Companies Authority
- The Kranzberg **Chair** in Signal Processing, TAU, 2016
- **Honorary Fellow** of the Open University, Israel, 2016
- **2011 SPS Signal Processing Magazine Best Column Award** , for Messer, H: "Rainfall Monitoring Using Cellular Networks" [In the Spotlight], IEEE SIGNAL PROCESSING MAGAZINE, Vol. 24, No. 3, May 2007
- **Panelist, United Nations commission on the status of women**, fifty-fifth session, February 2011
- **WIPO (World Intellectual Property Organization) Medal,** 2009, "for the best invention to predict floods using cellular networks" (with N. David and P. Alpert).
- **IEEE Geoscience and Remote Sensing Letters (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 (2009-2012)
- **Member of the Editorial Board,** IEEE Journal on Selected Topics in Signal Processing (2006-2010)
- **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/keynotes talks in international conferences**: SPAWC2007, SAM2008, SAM2012, EUCON2013, CEST2017, COMCAS2018, AICT2019, ICASSP2020, ICAS2021 (partial list)

Recent Grants and Contracts

From	To	Title of Project	Source[1]
2021	2025	Opportunistic precipitation sensing network* (CA20136)	COST Action (EC)
2021	2023	Extract Rainfall Data from Satellite Communication	Magneton (IIA)
2019	2022	Improving Wireless Networks Robustness via Weather-Sensitive Predictive Management.	BSF-NSF
2018	2020	Opportunistic Sensing of Fog and other Environmental Phenomena	Kamin (IIA)
2014	2019	Integrating Microwave Link Data for Analysis of Precipitation… (IMAP)*	DFG (Germany)
2013	2020	Fog Monitoring*	MoD
2011	2015	Improving Rainfall Estimation using Radar & microwave link technologies*	BSF
2009	2012	PROCEAMA*	BMBF (Germany)
2008	2010	Environmental sensor networks using existing wireless communication	ISF
2007	2009	Rehabilitation of a discrete sensory-motor learning function*	ISF (converging tech.)
2007	2010	ReNaChip*	FP7 (EC)

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[1] * indicates joint research with other PIs

Patents

- Messer-Yaron, Hagit, et al. "Monitoring and Mapping of Atmospheric Phenomena." U.S. Patent Application No. 11/995,535.
- David, Noam, et al. "Methos, system and computer program product for generating a two dimensional fog map from cellular communication network information." U.S. Patent Application No. 15/925,798.
- Ostrometzky, Jonathan, and Hagit Messer-Yaron. "Relating rain intensity and dynamic range in commercial microwave links." U.S. Patent No. 11,204,443. 21 Dec. 2021
- David Noam, Aplert P, Messer-Yaron Hagit, SYSTEM AND METHOD FOR IDENTIFYING A HYDROMETEOR, US provisionall patent applicationn no. 61/602,156
- David, N., Gao, H.O., Messer, H., and Alpert, P.: Using commercial microwave links to detect atmospheric temperature inversions, air pollution and fog. Provisional patent application, filed by Cornell IP office, August 2017.
- J. Ostrometzky, G. Zussmann, H. Messer Yaron, D. Jacoby : "Predictive Communication Network Management Based on Weather", Provisional patent application, filed by Columbia University, July 2020.

Ph.D Students

Dr. Moti Frisch (awarded in 1992)
Dr. Joseph Tabrikian (awarded in 1996)
Dr. Nadav Bezer (awarded in 2001) – jointly with D. Mudoser
Dr. Eran Fishler (awarded in 2001)
Dr. Jonathan Friedmann (awarded in 2002)
Dr. Itsik Bergel (awarded in 2005)
Dr. David Primor (awarded in 2007) – jointly with G. Mikenberg
Dr. Lev Smolyar (awarded in 2009)
Dr. Artem Zinevich (awarded in 2010) – jointly with P. Alpert
Dr. Yair Noam (awarded in 2011)
Dr. Dana Lahat (awarded in 2013) – jointly with JF Cardoso
Dr. Nir Nosssenson (awarded in 2014)
Dr. Noam David (awarded in 2014) – jointly with P. Aplert
Dr. Jonatan Ostrometzky (awarded 2017)
Adam Eshel (submitted 2022)
        Also, supervised more than 80 M.Sc. research students.

Current public service:

2022-   Member, BoD, Israel Oceanographic and Limnological Research (IOLR)
2022-   Member, IEEE SPS Ethics Committee
2020-   Member, BoD, RAMOT's (and TAU Ventures)
2020-   IEEE Ethics and Member Conduct Committee Member (EMCC)
2017-   Member, the Directors Team, the Government Companies Authority
2017-   Chair, BASHAAR - Academic Community for Israeli Society
2017-   Member, Executive Committee, IEEE Global AIS Ethics
2016-   Member, COMEST – Ethics in Science and Technology, UNESCO
2007-   Member, BoG, the Center for Educational Technology (CET), Israel

LIST OF PUBLICATIONS: HAGIT MESSER-YARON

Journal papers

Switching in the Rain: Predictive Wireless x-haul Network Reconfiguration
Kadota, I., Jacoby, D., Messer, H., Zussman, G. and Ostrometzky, J.
(2022) Proc. ACM Meas. Anal. Comput. Syst. 6, 3, Article 55 (December 2021), 26 pages. https://doi.org/10.1145/3570616

Empirical Study on the Effect of Birds on Commercial Microwave Links
Moshe, D.B., Messer, H., Nathan, R. and Sapir, N.,
IEEE Access. 2022, 10, pp.103819-103826.

Rain field retrieval by ground-level sensors of various types
MESSER, H., Eshel, A., Habi, H.V., Sagiv, S. and Zheng, X.,
Frontiers in Signal Processing, p.47, June 2022

On the potential of commercial microwave link networks for high spatial resolution rainfall monitoring in urban areas
Xin Zheng, Hagit Messer, Qian Wang, Tao Xu, Youwei Qin, Tao Yang
Atmospheric Research. 2022 Jun 9:106289.

Estimating the Parameters of the Spatial Autocorrelation of Rainfall Fields by Measurements From Commercial Microwave Links
Eshel, Adam, Pinhas Alpert, and Hagit Messer
IEEE Transactions on Geoscience and Remote Sensing 60 (2022): 1-11.

Learning to Bound: A Generative Cram\'er-Rao Bound
Habi, Hai Victor, Hagit Messer, and Yoram Bresler
arXiv preprint arXiv:2203.03695 (2022).

Water Vapor Density Retrieval Studies Using Commercial Millimeter-wave Links at 38 GHz and E-band
Congzheng Han, Guiyang Su, Lei Bao , and Hagit Messer
Remote Sensing 14.4 (2022): 946.

Total Performance Evaluation of Intensity Estimation after Detection
T Weiss, T Routtenberg, H Messer
Signal Processing, Volume 183, June 2021, 108042

Quantitative Analysis of the Performance of Spatial Interpolation Methods for Rainfall Estimation Using Commercial Microwave Links
A Eshel, H Messer, H Kunstmann, P Alpert, C Chwala
Journal of Hydrometeorology, Published-online: 26 Jan 2021

Recurrent Neural Network for Rain Estimation Using Commercial Microwave Links
H. V. Habi and H. Messer
IEEE Transactions on Geoscience and Remote Sensing, 2020

On the Information in Extreme Measurements for Parameter Estimation
Ostrometzky, Jonatan, and Hagit Messer
Journal of the Franklin Institute 357 (1), 748-771, 2020

Spatial Reconstruction of Rain Fields from Wireless Telecommunication Networks - Scenario Dependent Analysis of IDW-Based Algorithms
A Eshel, J Ostrometzky, S Gat, P Alpert and H. Messer
IEEE Geoscience and Remote Sensing Letters, vol. 17, no. 5, pp. 770-774, 2020

Analyzing the ability to reconstruct the moisture field using commercial microwave network data
N David, O Sendik, Y Rubin, H Messer, HO Gao, D Rostkier-Edelstein,
Atmospheric Research 219, 213-222, 2019

Advancements in the Statistical Study, Modeling, and Simulation of Microwave-Links in Cellular Backhaul Networks
L Gazit and H Messer
Environments **2018**, 5(7), 75

Vertical Precipitation Estimation Using Microwave Links in Conjunction with Weather Radar
R Raich, P Alpert and H Messer
Environments **2018**, 5(7), 74

Capitalizing on Cellular Technology—Opportunities and Challenges for Near Ground Weather Monitoring
H Messer
Environments **2018**, 5(7), 73

Sufficient Conditions for Reconstructing 2-D Rainfall Maps
Gazit, L. and Hagit Messer
IEEE Trans. On Geoscience and Remote Sensing, 2018

On the potential for reconstructing the moisture field using commercial microwave network data
N David, O Sendik, H Messer, HO Gao, Y Rubin, D Rostkier-Edelstein, ...
arXiv preprint arXiv:1806.00833

The Wet-Antenna Effect – a Factor to be Considered in Future Communication Networks
Ostrometzky, J., Raich R., Bao, L., Hansryd, J., & Messer H.
IEEE Transactions on Antennas and Propagation, 66, no. 1 (2018): 315-322.

Dynamic Determination of the Baseline Level in Microwave Links for Rain Monitoring From Minimum Attenuation Values
J Ostrometzky, H Messer
IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 11, no. 1 (2018): 24-33

Comparison of Different Methodologies of Parameter-Estimation From Extreme Values
Ostrometzky, Jonatan, and Hagit Messer
IEEE Signal Processing Letters 24.9 (2017): 1293-1297.

Robust Spectrum Management with Incomplete Information over Fading Channels
Y Noam, A Leshem, H Messer
Journal of the Franklin Institute, *354*(2), pp.1066-1086, 2016

Meteorology: Mobile networks aid weather monitoring
P Alpert, H Messer, N David
Nature 537 (7622), 617-617, 2016

Parameter estimation from heterogeneous/multimodal data sets
Fijalkow, Inbar, Elad Heiman, and Hagit Messer
IEEE Signal Processing Letters 23 (3), 390-393, 2016

Detection of Stimuli from Multi-Neuron Activity: Empirical Study and Theoretical Implications
N Nossenson, A Magal, H Messer
Neurocomputing 174, 822-837, 2016

Optimal Cognitive Beamforming for Target Tracking in MIMO Radar/Sonar
Nathan Sharaga, J. Tabrikian and H. Messer
Selected Topics in Signal Processing, IEEE Journal of 9 (8), 1440-1450, 2015

The potential of microwave communication networks to detect dew using the GLRT- experimental study,
Harel., O, David, N., Alpert, P. and Messer, H.,
Selected Topics in Applied Earth Observations and Remote Sensing, IEEE Journal of 8.9 (2015): 4396-4404.

Improving Rainfall Measurement in gauge poor regions thanks to mobile telecommunication networks
Gosset, Marielle, Harald Kunstmann, François Zougmore , Frederic Cazenave , Hidde Leijnse , Remko Uijlenhoet , Christian Chwala , Felix Keis , Ali Doumounia , Barry Boubakar , Modeste Kacou , Pinhas Alpert , **Hagit Messer**, Jörg Rieckermann , Joost Hoedjes
Bulletin of the American Meteorological Society 2015 (2015).

A New Approach to Precipitation Monitoring
H Messer, O Sendik
IEEE SIGNAL PROCESSING MAGAZINE 32 (3), 110-122, May 2015

Accumulated Mixed Precipitation Estimation Using Measurements From Multiple Microwave Links
Ostrometzky, Jonatan, Dani Cherkassky, and Hagit Messer
Advances in Meteorology, 2015, 1

Cellular network infrastructure-the future of fog monitoring?
N. David, O. Sendik, H. Messer. P. Alpert
Bulletin of the American Meteorological Society 96 (10), 1687-1698, 2015

New algorithm for integration between wireless microwave sensor network and radar for improved rainfall measurement and mapping
Y. Liberman, R. Samuels, P. Alpert, and H. Messer
Atmospheric Measurement Techniques 7.10 (2014): 3549-3563

Blind Separation of Multidimensional Components via Subspace Decomposition: Performance Analysis
D. Lahat, JF Cardoso and H. Messer
IEEE Transactions on Signal Processing, Volume: 62 , Issue: 11 , June 2014

Precipitation Classification Using Measurements from Commercial Microwave Links

Cherkasky, D. Ostrometzky J. and Messer H:
IEEE Transactions on Geoscience and Remote Sensing, Volume: 52 , Issue: 5, May 2014

The potential of commercial microwave networks to monitor dense fog-feasibility study
N David, P Alpert, H Messer
Journal of Geophysical Research: Atmospheres 118 (20), 11,750-11,761, Oct. 2013

Extension of the MFLRT to Detect an Unknown Deterministic Signal Using Multiple Sensors, Applied for Precipitation Detection
O Harel, H Messer
Signal Processing Letters, IEEE Volume:20 , Issue: 10 , Oct. 2013

ADAPTIVE STATISTICAL LEARNING OF CELLULAR USERS BEHAVIOR
Y Broyde, M Livshitz, H Messer
Signal Processing, Volume 93, Issue 11, Pages 3151–3158, November 2013

The potential of cellular network infrastructures for sudden rainfall monitoring in dry climate regions
David, N; Alpert, P; Messer, H:
Atmospheric Research Volume 131, Pages 13–21, September 2013

Second-Order Multidimensional ICA: Performance Analysis
Dana Lahat, Jean-François Cardoso and Hagit Messer
IEEE TRANSACTIONS ON SIGNAL PROCESSING Volume: 60   Issue**:** 9   pp 4598-4610**,** SEP 2012

Environmental sensor networks using existing wireless communication systems for rainfall and wind velocity measurements
Messer, H. ; Zinevich, A. ; Alpert, P.
Instrumentation & Measurement Magazine, IEEE, Volume: 15,   Issue: 2 , pp 32 – 38, April 2012

Optimal Sequential Detection of Stimuli from Multiunit Recordings Taken in Densely Populated Brain Regions
Nir Nossenson **,** Hagit Messer
Neural Computation, April 2012, Vol. 24, No. 4, Pages 895-938

The Use of Linear Feature Projection for Precipitation Classification Using Measurements from Commercial Microwave Links
Dani Cherkassky, Jonatan Ostrometzky and Hagit Messer
in Latent Variable Analysis and Signal Separation ,Lecture Notes in Computer Science, 2012, Volume 7191/2012, pp 511-519

Joint Block Diagonalization Algorithms for Optimal Separation of Multidimensional Components
Dana Lahat, Jean-François Cardoso and Hagit Messer
in Latent Variable Analysis and Signal Separation, Lecture Notes in Computer Science, 2012, Volume 7191/2012, pp 155-162

Humidity Measurements using Commercial Microwave Links
David, N; Alpert, P; Messer, H:
In Advanced Trends in Wireless Communications, Editor: Mutamed Khatib. InTech, February 2011

Competitive Spectrum Management with Incomplete Information
Noam, Y.; Leshem, A.; Messer, H.;
 IEEE Transactions on Signal Processing, Dec. 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
Goldshtein, 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
* 2011 SPS Signal Processing Magazine Best Column Award

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.; Grosmann, 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
Also 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

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
Also 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

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
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