

List of publications

Marian Codreanu

May 29, 2023

Articles in international peer-reviewed journals

- J51. M. Moltafet, M. Leinonen, **M. Codreanu**, and R.D. Yates, “Status update control and analysis under two-way delay,” *IEEE/ACM Transactions on Networking*, early access 2023. [preprint: [arXiv:2208.06177](https://arxiv.org/abs/2208.06177)]
- J50. A. Zakeri, M. Moltafet, M. Leinonen, and **M. Codreanu**, “Minimizing the AoI in resource-constrained multi-source relaying systems: Dynamic and learning-based scheduling,” *IEEE Transactions on Wireless Communications*, in press. 2023. [preprint: [arXiv:2203.05656](https://arxiv.org/abs/2203.05656)]
- J49. S. S. Vilni, M. Moltafet, M. Leinonen, and **M. Codreanu**, “AoI analysis and optimization in systems with computations-intensive updates,” *Journal of Communications and Networks*, submitted May 2023.
- J48. A. Zakeri, M. Moltafet, M. Leinonen, and **M. Codreanu**, “Query-age-optimal scheduling under sampling and transmission constraints,” *IEEE Communications Letters*, vol. 27, no. 4, Apr. 2023. [preprint: [arXiv:2209.11689](https://arxiv.org/abs/2209.11689)]
- J47. S. S. Vilni, M. Moltafet, M. Leinonen, and **M. Codreanu**, “Multi-source AoI-constrained resource minimization under HARQ: Heterogeneous sampling processes,” *IEEE Transactions on Vehicular Technology*, submitted Dec. 2022. [preprint: [arXiv:2207.08996](https://arxiv.org/abs/2207.08996)]
- J46. E. Fountoulakis, **M. Codreanu**, A. Ephremides, and N. Pappas, “Joint sampling and transmission policies for minimizing cost under AoI constraints,” *IEEE Transactions on Communications*, submitted Nov. 2022. [preprint: [arXiv:2103.15450](https://arxiv.org/abs/2103.15450)]
- J45. M. Hatami, M. Leinonen, Z. Chen, N. Pappas, and **M. Codreanu**, “On-demand AoI minimization in resource-constrained cache-enabled IoT networks with energy harvesting sensors,” *IEEE Transactions on Communications*, vol. 70, no. 11, pp. 7446 - 7463, Nov. 2022. [preprint: [arXiv:2201.12277](https://arxiv.org/abs/2201.12277)]
- J44. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Moment generating function of age of information in multi-source M/G/1/1 queueing systems,” *IEEE Transactions on Communications*, vol. 70, no. 10, pp. 6503–6516, Oct. 2022. [preprint: [arXiv:2201.10991](https://arxiv.org/abs/2201.10991)]
- J43. E. Uysal, O. Kaya, A. Ephremides, J. Gross, **M. Codreanu**, P. Popovski, M. Assaad, G. Liva, A. Munari, T. Soleymani, B. Soret, K.H. Johansson, “Semantic communications in networked systems,” *IEEE Network*, vol. 36, no. 4, Jul. 2022. [preprint: [arXiv:2103.05391](https://arxiv.org/abs/2103.05391)]
- J42. M. Moltafet, M. Leinonen, **M. Codreanu**, and N. Pappas, “Power minimization for age of information constrained dynamic control in wireless sensor networks,” *IEEE Transactions on Communications*, vol. 70, no. 1, pp. 419–432, Jan. 2022. [preprint: [arXiv:2007.05364](https://arxiv.org/abs/2007.05364)]

- J41. M. Hatami, M. Leinonen, and **M. Codreanu**, “AoI minimization in status update control with energy harvesting sensors,” *IEEE Transactions on Communications*, vol. 69, no. 12, pp. 8335–8351, Dec. 2021. [preprint: [arXiv:2009.04224](#)]
- J40. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Moment generating function of the AoI in two-source system with packet management,” *IEEE Wireless Communications Letters*, vol. 10, no. 4, pp. 882–886, Apr. 2021. [preprint: [arXiv:2009.14439](#)]
- J39. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Average AoI in multi-source systems with source-aware packet management,” *IEEE Transactions on Communications*, vol. 69, pp. 1121–1133, Feb. 2021. [preprint: [arXiv:2001.03959](#)]
- J38. M. Moltafet, M. Leinonen, and **M. Codreanu**, “On the age of information in multi-source queuing models,” *IEEE Transactions on Communications*, vol. 68, no. 8, pp. 5003–5017, Aug. 2020. [online preprint]
- J37. M. Leinonen, and **M. Codreanu**, “Low-complexity vector quantized compressed sensing via deep neural networks,” *IEEE Open Journal of the Communications Society*, vol. 1, pp. 1278–1294, Aug. 2020. [online preprint]
- J36. E. Belyaev, **M. Codreanu**, M. Juntti, and K. Egiazarian, “Compressive sensed video recovery via iterative thresholding with random transforms,” *IET Image Processing*, vol. 14, no. 6, pp. 1187–1199, May 2020. [online preprint]
- J35. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Worst case age of information in wireless sensor networks: A multi-access channel,” *IEEE Wireless Communications Letters*, vol. 9, no. 3, pp. 321–325, Mar. 2020. [online preprint]
- J34. M. Leinonen, **M. Codreanu**, M. Juntti, and G. Kramer, “Rate-distortion performance of lossy compressed sensing of sparse sources,” *IEEE Transactions on Communications*, vol. 66, no. 10, pp. 4498–4512, Oct. 2018. [online preprint]
- J33. M. Leinonen, **M. Codreanu**, and M. Juntti, “Distributed distortion-rate optimized compressed sensing in wireless sensor networks,” *IEEE Transactions on Communications*, vol. 66, no. 4, pp. 1609–1623, Apr. 2018. [online preprint]
- J32. H. Shiri, M.A. Tinati, **M. Codreanu**, and G. Azarnia “Distributed sparse diffusion estimation with reduced communication cost,” *IET Signal Processing*, Apr. 2018.
- J31. S. Manosha, S. Joshi, **M. Codreanu**, N. Rajatheva, and M. Latva-aho, “Admission control in algorithms for QoS-constrained multicell MISO Downlink Systems,” *IEEE Transactions on Wireless Communications*, vol. 17, no. 3, pp. 1982–1999, Mar. 2018. [online preprint]
- J30. H. Shiri, M.A. Tinati, **M. Codreanu**, and S. Daneshvar, “Sparse distributed diffusion based on set membership and affine projection,” *Digital Signal Processing (Elsevier) Journal*, vol. 73, pp. 47–61, Feb. 2018.
- J29. S. Joshi, S. Manosha, **M. Codreanu**, and M. Latva-aho, “Dynamic inter-operator spectrum sharing via Lyapunov optimization,” *IEEE Transactions on Wireless Communications*, vol. 16, no. 10, pp. 6365–6381, Oct. 2017. [online preprint]
- J28. E. Belyaev, S. Forchhammer, and **M. Codreanu**, “Error concealment for 3-D DWT based video codec using iterative thresholding,” *IEEE Communications Letters*, vol. 21, no. 8, pp. 1731–1734, Aug. 2017. [online preprint]
- J27. U. Wijewardhana and **M. Codreanu**, “A Bayesian approach for online recovery of streaming signals from compressive measurements,” *IEEE Transactions on Signal Processing*, vol. 65, no. 1, pp. 184–199, Jan. 2017.
- J26. U. Wijewardhana, **M. Codreanu**, and M. Latva-aho, “An interior-point method for modified total variation exploiting transform-domain sparsity,” *IEEE Signal Processing Letters*, vol. 24, no. 1, pp. 56–60, Jan. 2017.

- J25. M. Costa, **M. Codreanu**, and A. Ephremides, “On the age of information in status update systems with packet management,” *IEEE Transactions on Information Theory*, vol. 62, no. 4, pp. 1897–1910, Apr. 2016. [preprint: [arXiv:1506.08637](https://arxiv.org/abs/1506.08637)]
- J24. K. Lähtekangas, **M. Codreanu**, and B. Aazhang, “Route discovery protocol for energy efficient networks with MIMO links,” *IEEE Journal on Selected Areas in Communications*, vol. 33, no. 12, pp. 2735–2748, Dec. 2015.
- J23. S. Joshi, U. Wijewardhana, **M. Codreanu**, and M. Latva-aho, “Maximization of worst-case weighted sum-rate for MISO downlink systems with imperfect channel knowledge,” *IEEE Transactions on Communications*, vol. 63, no. 10, pp. 3671–3685, Oct. 2015.
- J22. D. Das, A. Abouzeid, and **M. Codreanu**, “Network-layer scheduling and relaying in cooperative spectrum sharing networks,” *IEEE Transactions on Wireless Communications*, vol. 14, no. 8, pp. 4597–4613, Aug. 2015.
- J21. M. Leinonen, **M. Codreanu**, and M. Juntti, “Sequential compressed sensing with progressive signal reconstruction in wireless sensor networks,” *IEEE Transactions on Wireless Communications*, vol. 14, no. 3, pp. 1622–1635, Mar. 2014.
- J20. S. Manosha, **M. Codreanu**, N. Rajatheva, and M. Latva-aho, “Power-throughput tradeoff in MIMO heterogeneous networks,” *IEEE Transactions on Wireless Communications*, vol. 13, no. 8, pp. 4309–4322, Aug. 2014.
- J19. J. Jeon, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “The stability property of cognitive radio systems with imperfect sensing,” *IEEE Journal on Selected Areas in Communications*, vol. 32, no. 3, pp. 628–640, Mar. 2014.
- J18. U. Wijewardhana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “A robust beamformer design for underlay cognitive radio networks using worst case optimization,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2014, Article ID 37, 16 pages, 2014.
- J17. S. Joshi, **M. Codreanu**, and M. Latva-aho, “Distributed resource allocation for MISO downlink systems via the alternating direction method of multipliers,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2014, Article ID 1, 19 pages, 2014.
- J16. M. Leinonen, **M. Codreanu**, and M. Juntti, “Distributed joint resource and routing optimization in wireless sensor networks via alternating direction method of multipliers,” *IEEE Transactions on Wireless Communications*, vol. 12, no. 11, pp. 5454–5467, Nov. 2013.
- J15. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Multicell downlink weighted sum-rate maximization: A distributed approach,” *IEEE Transactions on Signal Processing*, vol. 61, no. 3, pp. 556–570, Feb. 2013.
- J14. S. Joshi, P. C. Weeraddana, **M. Codreanu**, and M. Latva-aho, “Weighted sum-rate maximization for MISO downlink cellular networks via branch and bound,” *IEEE Transactions on Signal Processing*, vol. 60, no. 4, pp. 2090–2095, Apr. 2012.
- J13. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Weighted sum-rate maximization for a set of interfering links via branch and bound,” *IEEE Transactions on Signal Processing*, vol. 59, no. 8, pp. 3977–3996, Aug. 2011.
- J12. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Resource allocation for cross-layer utility maximization in wireless networks,” *IEEE Transactions on Vehicular Technology*, vol. 60, no. 6, pp. 2790–2809, Jul. 2011.
- J11. J. Karjalainen, **M. Codreanu**, A. Tölli, M. Juntti, and T. Matsumoto, “EXIT chart based power allocation for iterative frequency domain MIMO detector,” *IEEE Transactions on Signal Processing*, vol. 59, no. 4, pp. 1624–1641, Apr. 2011.

- J10. Z. Khan, J. Lehtomäki, **M. Codreanu**, M. Latva-aho, and L. A. DaSilva, “Throughput-efficient dynamic coalition formation in distributed cognitive radio networks,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2010, Article ID 653913, 13 pages, 2010.
- J9. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “On the effect of self-interference cancelation in multihop wireless networks,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2010, Article ID 513952, 10 pages, 2010.
- J8. P. C. Weeraddana, **M. Codreanu**, L. Wei, and M. Latva-aho, “Primal decomposition-based method for weighted sum-rate maximization in downlink OFDMA systems,” *EURASIP Journal on Wireless Communications and Networking*, vol. 2010, Article ID 324780, 9 pages, 2010.
- J7. A. Tölli, **M. Codreanu**, and M. Juntti, “Linear multiuser MIMO transceiver design with quality of service and per-antenna power constraints,” *IEEE Transactions on Signal Processing*, vol. 56, no. 7, pp. 3049–3055, July 2008.
- J6. A. Tölli, **M. Codreanu**, and M. Juntti, “Cooperative MIMO-OFDM cellular system with soft handover between distributed base station antennas,” *IEEE Transactions on Wireless Communications*, vol. 7, no. 4, pp. 1428–1440, Apr. 2008.
- J5. **M. Codreanu**, M. Juntti, and M. Latva-aho, “On the dual decomposition based sum capacity maximization for vector broadcast channels,” *IEEE Transactions on Vehicular Technology*, vol. 56, no. 7, pp. 3577–3581, Nov. 2007.
- J4. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, “Joint design of Tx-Rx beamformers in MIMO downlink channel,” *IEEE Transactions on Signal Processing*, vol. 55, no. 9, pp. 4639–4655, Sept. 2007.
- J3. **M. Codreanu**, M. Juntti, and M. Latva-aho, “Low complexity iterative algorithm for finding the MIMO-OFDM broadcast channel sum capacity,” *IEEE Transactions on Communications*, vol. 55, no. 1, pp. 48–53, Jan. 2007.
- J2. A. Tölli, **M. Codreanu**, and M. Juntti, “Compensation of non-reciprocal interference in adaptive MIMO-OFDM cellular systems,” *IEEE Transactions on Wireless Communications*, vol. 6, no. 2, pp. 545–555, Feb. 2007.
- J1. **M. Codreanu**, D. Tujkovic, and M. Latva-aho, “Adaptive MIMO-OFDM with low signalling overhead for unbalanced antenna systems,” *IEICE Transactions on Communications*, vol. E88-B, no. 1, pp. 28–38, Jan. 2005.

Scientific books (monographs)

- M2. M. Leinonen, **M. Codreanu**, and G. Giannakis, *Compressed sensing with applications in wireless networks*, Foundations and Trends[®] in Signal Processing, Now Publishers, pp. 1–282, 2019. [\[available online\]](#)
- M1. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, A. Ephremides, and C. Fischione, *Weighted sum-rate maximization in wireless networks: A review*, Foundations and Trends[®] in Networking, Now Publishers, pp. 1–163, 2012. [\[available online\]](#)

Book chapters

- BC1. M. Molatafet, M. Leinonen, and **M. Codreanu**, *Timely status updating via packet management in multi-source systems*, Age of Information: Foundations and Applications, Cambridge University Press, in press, 2022.

Articles in international peer-reviewed conference proceedings

- C95. S. S. Vilni, M. Moltafet, M. Leinonen, and **M. Codreanu**, “AoI-Constrained Transmission Scheduling with HARQ and Heterogeneous Sampling Processes,” in *Proc. IEEE INFOCOM, Age of Information Workshop*, New York area, USA, May 17–20 2023.
- C94. M. Moltafet, M. Leinonen, and **M. Codreanu**, “AoI in source-aware preemptive M/G/1/1 queueing systems: moment generating function,” *Proc. IEEE Int. Symp. Inform. Theory*, Espoo, Finland, Jun. 26–Jul. 1 2022.
- C93. M. Hatami, M. Leinonen, Z. Chen, N. Pappas, and **M. Codreanu**, “Asymptotically optimal on-demand AoI minimization in energy harvesting IoT networks,” *Proc. IEEE Int. Symp. Inform. Theory*, Espoo, Finland, Jun. 26–Jul. 1 2022.
- C92. A. Zakeri, M. Moltafet, M. Leinonen, and **M. Codreanu**, “Minimizing the AoI in multi-source two-hop systems under an average resource constraint,” *Proc. IEEE Works. on Sign. Proc. Adv. in Wirel. Comms. (SPAWC)*, Oulu, Finland, Jul. 4–6 2022.
- C91. M. Hatami, M. Leinonen, and **M. Codreanu**, “Status updating with an energy harvesting sensor under partial battery knowledge,” *Proc. IEEE Works. on Sign. Proc. Adv. in Wirel. Comms. (SPAWC)*, Oulu, Finland, Jul. 4–6 2022.
- C90. S. S. Vilni, M. Moltafet, M. Leinonen, and **M. Codreanu** “Status updating with an energy harvesting sensor under partial battery knowledge,” to appear in *Proc. IEEE Int. Conf. on Internet of Things and Intelligence Syst. (IoTaIS)*, Bali, Indonesia, Nov. 24–26, 2022.
- C89. A. Zakeri, M. Moltafet, M. Leinonen, and **M. Codreanu**, “Minimizing AoI in resource-constrained multi-source relaying systems with stochastic arrivals,” in *Proc. IEEE Global Commun. Conf. (GLOBECOM)*, Madrid, Spain, Dec. 7–11 2021. [[preprint: arXiv:2109.05106](#)]
- C88. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Moment generating function of the AoI in multi-source systems with computation-intensive status updates,” in *Proc. IEEE Inform. Theory Workshop (ITW)*, Kanazawa, Japan, Oct. 17–21 2021. [[preprint: arXiv:2102.01126](#)]
- C87. M. Hatami, M. Leinonen, and **M. Codreanu**, “Minimizing average on-demand AoI in an IoT network with energy harvesting sensors,” in *Proc. IEEE Works. on Sign. Proc. Adv. in Wirel. Comms. (SPAWC)*, Lucca, Italy, Sep. 27–30 2021.
- C86. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Source-aware packet management for computation-intensive status updating: MGF of the AoI”, in *Proc. Int. Symp. on Wireless Commun. Syst. (ISWCS)*, special session on Age of Information, virtual conference, Sep. 6–9 2021.
- C85. M. Hatami, M. Jahandideh, M. Leinonen, and **M. Codreanu**, “Age-aware status update control for energy harvesting IoT sensors via reinforcement learning,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, London, UK, August 31–September 3 2020. [[preprint: arXiv:2004.12684](#)]
- C84. M. Moltafet, M. Leinonen, and **M. Codreanu**, “An exact expression for the average AoI in a multi-source M/M/1 queueing model,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, London, UK, August 31–September 3 2020. [[online preprint](#)]
- C83. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Average age of information for a multi-source M/M/1 queueing model with packet management,” in *Proc. IEEE Int. Symp. Inform. Theory*, Los Angeles, California, USA, June 21–26 2020. [[online preprint](#)]

- C82. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Average age of information in a multi-source M/M/1 queueing model with LCFS prioritized packet management,” in *Proc. IEEE INFOCOM, Age of Information Workshop*, Toronto, Canada, July 6–9 2020. [[online preprint](#)]
- C81. M. Fountoulakis, N. Pappas, **M. Codreanu**, and A. Ephremides, “Optimal sampling cost in wireless networks with age of information constraints,” in *Proc. IEEE INFOCOM, Age of Information Workshop*, Toronto, Canada, July 6–9 2020. [[preprint arXiv:2003.02512](#)]
- C80. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Average age of information for a multi-source M/M/1 queueing model with packet management and self-preemption in service,” in *Proc. Int. Symp. on Modelling and Opt. in Mobile, Ad-hoc and Wireless Networks*, Volos, Greece, June 15–19 2020. [[online preprint](#)]
- C79. M. Leinonen and **M. Codreanu**, “Quantized compressed sensing via deep neural networks,” in *Proc. 6G Wireless Summit*, Levi, Finland, Mar.17–20 2020. [[online preprint](#)]
- C78. M. Moltafet, M. Leinonen, and **M. Codreanu**, “An approximate expression for the average AoI in a multi-source M/G/1 queueing model,” in *Proc. 6G Wireless Summit*, Levi, Finland, Mar.17–20 2020. [[online preprint](#)]
- C77. M. Moltafet, M. Leinonen, **M. Codreanu**, and N. Pappas, “Power minimization in wireless sensor networks with constrained AoI using stochastic optimization,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, Nov.3–6 2019. [[online preprint](#)]
- C76. M. Hatami, M. Leinonen, and **M. Codreanu**, “Online caching policy with user preferences and time-dependent requests: A reinforcement learning approach,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, Nov.3–6 2019. [[online preprint](#)]
- C75. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Worst case analysis of age of information in a shared-access channel,” in *Proc. Int. Symp. on Wireless Commun. Syst.*, Oulu, Finland, Aug.27–30 2019. [[online preprint](#)]
- C74. M. Moltafet, M. Leinonen, and **M. Codreanu**, “Closed-form expression for the average age of information in a multi-source M/G/1 queueing model,” in *Proc. IEEE Inform. Theory Workshop*, Visby, Gotland, Sweden, Aug.25–28 2019. [[online preprint](#)]
- C73. M. Leinonen, **M. Codreanu**, and M. Juntti, “Practical compression methods for quantized compressed sensing,” in *Proc. IEEE INFOCOM, SMILING Workshop*, Paris, France, Apr. 29 – May 2 2019. [[online preprint](#)]
- C72. M. Jahandideh, M. Moltafet, **M. Codreanu**, and M. Latva-aho, “Low complexity sparse channel estimation for wideband mmWave systems: Multi-stage approach,” in *Proc. IEEE Wireless Commun. and Networking Conf.*, Marrakech, Morocco, Apr. 15–19 2019. [[online preprint](#)]
- C71. M. Leinonen, **M. Codreanu**, and M. Juntti, “Signal reconstruction performance under quantized noisy compressed sensing,” in *Proc. Data Compression Conference*, Snowbird, UT, USA, Mar. 26–29 2019.
- C70. M.U. Aminu, **M. Codreanu**, and M. Juntti, “Bayesian learning based millimeter-wave sparse channel estimation with hybrid antenna arrays,” in *Proc. IEEE Works. on Sign. Proc. Adv. in Wirel. Comms.*, Kalamata, Greece, Jun. 25–28 2018.
- C69. U. L. Wijewardhana, **M. Codreanu**, “Lapped transforms based image recovery for block compressed sensing,” in *Proc. Data Compression Conference*, Snowbird, UT, USA, Mar. 27–30 2018.

- C68. K.B.S. Manosha, S. Joshi, **M. Codreanu**, N. Rajatheva, and M. Latva-aho, “A distributed admission control algorithm for multicell MISO downlink systems,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Oct. 29 – Nov. 1 2017.
- C67. U. L. Wijewardhana, E. Belyaev, **M. Codreanu**, and M. Latva-aho, “Signal recovery in compressive sensing via multiple sparsifying bases,” in *Proc. Data Compression Conference*, Snowbird, UT, USA, Apr. 4–7 2017.
- C66. S. Joshi, S. Manosha, **M. Codreanu**, and M. Latva-aho, “Inter-operator dynamic spectrum sharing: A stochastic optimization approach,” in *Proc. Wireless On-demand Network systems and Services Conference*, Jackson Hole, Wyoming, USA, Feb. 21–24 2017.
- C65. U. Wijewardhana, **M. Codreanu**, M. Latva-aho, “Bayesian method for image recovery from block compressive sensing,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 6–9 2016.
- C64. M. Leinonen, **M. Codreanu**, M. Juntti, and G. Kramer, “Rate-distortion lower bound for compressed sensing via conditional remote source coding,” in *Proc. IEEE Inform. Theory Workshop*, Cambridge, UK, Sep. 11–14 2016.
- C63. M. Leinonen, **M. Codreanu**, and M. Juntti, “Distributed variable-rate quantized compressed sensing in wireless sensor network,” in *Proc. IEEE Signal Proc. for Wireless Commun.*, Edinburgh, Scotland, Jul. 3–7 2016.
- C62. M. Leinonen, **M. Codreanu**, and M. Juntti, “Channel-robust compressed sensing via vector pre-quantization in wireless sensor networks,” in *Proc. IEEE Global Conf. on Signal and Inform. Proc.*, Orlando, Florida, USA, Dec. 14–16 2015, pp. 383–387.
- C61. S. Joshi, U. Wijewardhana, **M. Codreanu**, and M. Latva-aho, “Maximization of worst-case weighted sum-rate for MISO downlink systems with channel uncertainty,” in *Proc. IEEE Int. Conf. Commun.*, London, UK, Jun. 8–12 2015, pp. 2289–2294.
- C60. U. Wijewardhana, **M. Codreanu**, “A sparse Bayesian learning method for streaming signal recovery,” in *Proc. IEEE Inform. Theory Workshop*, Hobart, Tasmania, Australia, Nov. 2–5 2014, pp. 302–306.
- C59. U. Wijewardhana, **M. Codreanu**, “Streaming signal recovery using sparse Bayesian learning,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 2–5 2014, pp. 1225–1230.
- C58. M. Costa, **M. Codreanu**, and A. Ephremides, “Age of information with packet management,” in *Proc. IEEE Int. Symp. Inform. Theory*, Honolulu, HI, USA, Jun. 29–Jul. 4 2014, pp. 1583–1587.
- C57. D. Das, A. Abouzeid, and **M. Codreanu**, “Opportunistic scheduling and relaying in a cooperative cognitive network,” in *Proc. Int. Symp. on Modelling and Opt. in Mobile, Ad-hoc and Wireless Networks*, Hammamet, Tunisia, May 12–16 2014.
- C56. M. Leinonen, **M. Codreanu**, and M. Juntti, “Compressed acquisition and progressive reconstruction of multi-dimensional correlated data in wireless sensor networks,” in *Proc. IEEE Int. Conf. Acoust., Speech, Signal Processing*, Florence, Italy, May. 4–9 2014, pp. 6449–6453.
- C55. D. Das, A. Abouzeid, and **M. Codreanu**, “Scheduling in cooperative cognitive radio networks,” in *Proc. Annual Allerton Conf. Commun., Cont., Computing*, Allerton House, UIUC, Illinois, USA, October 2–3 2013, pp. 739–746.
- C54. M. Leinonen, **M. Codreanu**, and M. Juntti, “Distributed correlated data gathering in wireless sensor networks via compressed sensing,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 3–6 2013.

- C53. U. Wijewardhana, S. Joshi, **M. Codreanu**, and M. Latva-aho, “Worst-case weighted sum-rate maximization for MISO downlink systems with imperfect channel knowledge,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 3–6 2013, pp. 1248–1252.
- C52. S. Manosha, S. Joshi, **M. Codreanu**, N. Rajatheva, and M. Latva-aho, “Power-throughput tradeoff in MIMO heterogeneous networks,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 3–6 2013, pp. 1228–1232.
- C51. J. Jeon, A. Ephremides, **M. Codreanu**, and M. Latva-aho, “On hybrid access for cognitive radio systems with time-varying connectivity,” in *Proc. IEEE Int. Symp. Inform. Theory*, Istanbul, Turkey, July 7–12 2013.
- C50. K. Lähetkangas, **M. Codreanu**, and B. Aazhang, “Energy efficient power allocation for MIMO multihop networks,” in *Proc. IEEE Int. Symp. Inform. Theory*, Istanbul, Turkey, July 7–12 2013.
- C49. U. Wijewardhana, **M. Codreanu**, and M. Latva-aho, “Robust beamformer design for underlay cognitive radio network using worst case optimization,” in *Proc. Int. Symp. on Modelling and Opt. in Mobile, Ad-hoc and Wireless Networks*, Tsukuba Science City, Japan, May 13–17 2013, pp. 404–411.
- C48. S. Joshi, **M. Codreanu**, and M. Latva-aho, “Distributed SINR balancing for MISO downlink systems via the alternating direction method of multipliers,” in *Proc. Int. Symp. on Modelling and Opt. in Mobile, Ad-hoc and Wireless Networks*, Tsukuba, Japan, May 13–17 2013, pp. 318–325.
- C47. J. Jeon, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Sensitivity of stable rates in cognitive radio systems to the sensing errors,” in *Proc. Int. Symp. on Modelling and Opt. in Mobile, Ad-hoc and Wireless Networks*, Tsukuba Science City, Japan, May 13–17 2013.
- C46. M. Leinonen, **M. Codreanu**, and M. Juntti, “Consensus based distributed joint power and routing optimization in wireless sensor networks,” in *Proc. IEEE Global Telecommun. Conf.*, Anaheim, California, USA, Dec. 3–7 2012.
- C45. S. Joshi, **M. Codreanu**, and M. Latva-aho, “Distributed resource allocation for MISO downlink systems via the alternating direction method of multipliers,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 4–7 2012, pp. 488–493.
- C44. M. Leinonen, **M. Codreanu**, and M. Juntti, “Distributed consensus based joint resource and routing optimization in wireless sensor networks,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, California, USA, Nov. 4–7 2012.
- C43. P. C. Weeraddana, **M. Codreanu**, S. Joshi, and M. Latva-aho, “Multicell downlink weighted sum-rate maximization: A distributed approach,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 6–9 2011, pp. 1569–1573.
- C42. S. Joshi, P. C. Weeraddana, **M. Codreanu**, and M. Latva-aho, “Weighted sum-rate maximization for MISO downlink cellular networks via branch and bound,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 6–9 2011, pp. 1569–1573.
- C41. A. P. Kumara T. G., N. Rajatheva, and **M. Codreanu**, “Resource allocation for OFDMA-based relay assisted two-tier femtocell networks,” in *Proc. IEEE Int. Symp. Wireless Commun. Syst.*, Aachen, Germany, Nov. 6–9 2011, pp. 834–838.
- C40. **M. Codreanu**, P. C. Weeraddana, M. Latva-aho, and A. Ephremides, “Weighted sum-rate maximization in singlecast and multicast wireless networks - global optimum via

- branch and bound,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, Toronto, Canada, Sept. 11–14 2011, pp. 2274–2278.
- C39. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Optimal maxweight scheduling in a multihop wireless network via branch and bound,” in *Proc. IEEE Int. Symp. Inform. Theory*, Saint Petersburg, Russia, July 31–Aug. 5 2011, pp. 2787–2791.
- C38. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Weighted sum-rate maximization for a set of interfering links via branch and bound,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 7–10 2010.
- C37. J. Karjalainen, **M. Codreanu**, A. Tölli, M. Juntti, and T. Matsumoto, “On greedy methods for exit chart based transmission power allocation,” in *Proc. IEEE Global Telecommun. Conf.*, Miami, Florida, Dec.6–10 2010.
- C36. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “The benefits from simultaneous transmission and reception in wireless networks,” in *Proc. IEEE Inform. Theory Workshop*, Dublin, Ireland, Aug. 30–Sept. 3 2010, pp. 1–5.
- C35. P. C. Weeraddana, **M. Codreanu**, M. Latva-aho, and A. Ephremides, “Resource allocation for cross-layer utility maximization in multi-hop wireless networks in the presence of self interference,” in *Proc. Int. Symp. on Modelling and Opt. in Mobile, Ad-hoc and Wireless Networks*, Avignon, France, May 31–June 4 2010, pp. 70–75.
- C34. P. C. Weeraddana, **M. Codreanu**, and M. Latva-aho, “Cross-layer resource allocation for wireless networks via signomial programming,” in *Proc. IEEE Global Telecommun. Conf.*, Honolulu, Hawaii, USA, Nov. 30–Dec. 4 2009, pp. 1–6.
- C33. **M. Codreanu**, P. C. Weeraddana, and M. Latva-aho, “Cross-layer utility maximization subject to stability constraints for multi-channel wireless networks,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Nov. 2–4 2009, pp. 776–780.
- C32. P. C. Weeraddana, **M. Codreanu**, and M. Latva-aho, “On the advantages of using multiuser receivers in wireless ad-hoc networks,” in *Proc. IEEE Veh. Technol. Conf.*, Anchorage, Alaska, USA, Sept. 20–23 2009, pp. 1–6.
- C31. M. E. R. Khan, M. Latva-aho, and **M. Codreanu**, “Performance of interference avoidance scheme for cognitive femtocells in future generation wireless networks,” in *Proc. Int. Symp. Wireless Pers. Multimedia Commun.*, Sendai, Japan, Sept.7–10 2009, CD-Rom.
- C30. J. Karjalainen, A. Tölli, **M. Codreanu**, M. Juntti, and T. Matsumoto, “Power allocation for irregularly modulated MIMO signaling with iterative frequency domain detector,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, California, Nov.1–4 2009, pp. 1518–1522.
- C29. P. C. Weeraddana, L. Wei, **M. Codreanu**, and M. Latva-aho, “Weighted sum-rate maximization for downlink OFDMA systems,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, CA, USA, Oct. 27–29 2008, pp. 990–994.
- C28. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, “Uplink-downlink SINR duality via Lagrange duality,” in *Proc. IEEE Wireless Commun. and Networking Conf.*, Las Vegas, Nevada, USA, Mar.31 – Apr. 3 2008, pp. 1160–1165.
- C27. P. C. Weeraddana, L. Wei, **M. Codreanu**, and M. Latva-aho, “Adaptive subcarrier and power allocation for OFDMA systems,” in *Proc. of the IFIP Wireless Days Conf.*, Dubai, UAE, Nov. 24–27 2008, pp. 1–5.

- C26. P. C. Weeraddana, **M. Codreanu**, Li. Wei, and M. Latva-aho, “Low complexity adaptive subcarrier and power allocation scheme for downlink OFDMA systems,” in *Proc. Int. Symp. Wireless Pers. Multimedia Commun.*, Lapland, Finland, Sept. 8–11 2008, CD-Rom.
- C25. A. Tölli, **M. Codreanu**, and M. Juntti, “Linear cooperative multiuser MIMO transmission with quality of service constraints,” in *Proc. IEEE Global Telecommun. Conf.*, Washington, DC, USA, Nov. 30 – Dec. 4 2007, pp. 3285–3289.
- C24. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, “Linear transceiver design for SINR balancing in MIMO downlink channels,” in *Proc. Int. Conf. on Commun. and Networking in China*, Shanghai, China, Aug.22–24 2007.
- C23. A. Tölli, **M. Codreanu**, and M. Juntti, “Linear multiuser MIMO transceiver optimization in cooperative networks,” in *Proc. Int. Conf. on Commun. and Networking in China*, Shanghai, China, Aug.22–24 2007.
- C22. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, “Joint design of Tx-Rx beamformers in MIMO downlink channel,” in *Proc. IEEE Int. Conf. Commun.*, Glasgow, Scotland, June24–28 2007, pp. 4997–5002.
- C21. A. Tölli, **M. Codreanu**, and M. Juntti, “Linear cooperative multiuser MIMO transceiver design with per BS power constraints,” in *Proc. IEEE Int. Conf. Commun.*, Glasgow, Scotland, UK, June 24–28 2007, pp. 4991–4996.
- C20. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, “MIMO downlink weighted sum rate maximization with power constraints per antenna groups,” in *Proc. IEEE Veh. Technol. Conf.*, Dublin, Ireland, Apr.23–25 2007, pp. 2048–2052.
- C19. A. Tölli, **M. Codreanu**, and M. Juntti, “Minimum SINR maximization for multiuser MIMO downlink with per BS power constraints,” in *Proc. IEEE Wireless Commun. and Networking Conf.*, Hong Kong, Mar.11–15 2007, pp. 1144–1149.
- C18. **M. Codreanu**, M. Juntti, and M. Latva-aho, “On the dual decomposition based sum capacity maximization for vector broadcast channel,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, California, Oct. 29 – Nov. 1 2006, pp. 468–472.
- C17. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, “Weighted sum mean square error minimization in MIMO broadcast channel,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, Helsinki, Finland, Sept.11–14 2006.
- C16. A. Tölli, **M. Codreanu**, and M. Juntti, “Soft handover in adaptive MIMO-OFDM cellular system with cooperative processing,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, Helsinki, Finland, Sept.11–14 2006.
- C15. A. Tölli, **M. Codreanu**, and M. Juntti, “Adaptive MIMO-OFDM cellular system with soft handover between distributed base station antennas,” in *Proc. IEEE Global Telecommun. Conf.*, San Francisco, USA, Nov.27 – Dec. 1 2006.
- C14. **M. Codreanu**, M. Juntti, and M. Latva-aho, “Low complexity iterative algorithm for finding the MIMO-OFDM broadcast channel sum capacity,” in *Proc. Annual Asilomar Conf. Signals, Syst., Comp.*, Pacific Grove, California, Oct. 28 – Nov. 1 2005, pp. 1529–1533.
- C13. **M. Codreanu**, D. Tujkovic, and M. Latva-aho, “Adaptive MIMO-OFDM systems with estimated channel state information at TX side,” in *Proc. IEEE Int. Conf. Commun.*, Seoul, Korea, May 16–20 2005, vol. 4, pp. 2645–2649.
- C12. A. Tölli, **M. Codreanu**, and M. Juntti, “Suppression of non-reciprocal interference in adaptive MIMO-OFDM cellular systems,” in *Proc. IEEE Veh. Technol. Conf.*, Stockholm, Sweden, May30 – June 1 2005, vol. 2, pp. 1072–1076.

- C11. A. Tölli, **M. Codreanu**, and M. Juntti, “System level impact of non-reciprocal interference in adaptive MIMO-OFDM cellular systems,” in *Proc. IST Mobile & Wireless Telecommun. Summit*, Dresden, Germany, June 19–23 2005.
- C10. **M. Codreanu**, D. Tujkovic, and M. Latva-aho, “Compensation of channel state estimation errors in adaptive MIMO-OFDM systems,” in *Proc. IEEE Veh. Technol. Conf.*, Los Angeles, California, Sept. 26–29 2004, vol. 3, pp. 1580–1584.
- C9. **M. Codreanu**, D. Tujkovic, and M. Latva-aho, “Adaptive MIMO-OFDM with low signalling overhead for unbalanced antenna systems,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, Barcelona, Spain, Sept. 5–8 2004, vol. 4, pp. 2382–2386.
- C8. A. Tölli and **M. Codreanu**, “Compensation of interference non-reciprocity in adaptive TDD MIMO-OFDM systems,” in *Proc. IEEE Int. Symp. Pers., Indoor, Mobile Radio Commun.*, Barcelona, Spain, Sept. 5–8 2004, vol. 2, pp. 859–863.
- C7. A. Tölli and **M. Codreanu**, “A closed-loop method for interference non-reciprocity compensation in adaptive TDD MIMO-OFDM systems,” in *Mobile Venue 2004 Radio Network Management*, Athens, Greece, May 27–28 2004.
- C6. **M. Codreanu** and M. Latva-aho, “Comparison between space-time block coding and eigen-beamforming in TDD MIMO-OFDM downlink with partial CSI knowledge at the TX side,” in *Proc. Int. Workshop Multi-Carrier Spread-Spectrum*, Oberpfaffenhofen, Germany, Sept. 17–19 2003, pp. 363–370.
- C5. R. Tesi, **M. Codreanu**, and I. Oppermann, “Effects of the interference of UWB transmission in OFDM communication systems,” in *Proc. 2003 International Workshop on Ultra Wideband*, Oulu, Finland, June 2–5 2003, CD-Rom.
- C4. C. Negrescu, D. Stanomir, **M. Codreanu**, and I. Constantin, “Simulation results for an improved analytic expression of the bit error rate for the direct sequence spread spectrum receiver equipped with wiener interference rejection filter,” in *Proc. IEEE Mediterranean Electrotechnical Conference*, Tel-Aviv, Israel, May 18–20 1998, pp. 839–843.
- C3. V. E. Neagoe and **M. Codreanu**, “A neuro-genetic approach for detection of FSK signals,” in *Proc. of Int. Conf. "Communications'98"*, Bucharest, Romania, Nov. 19–20 1998, pp. 99–104.
- C2. C. Negrescu, D. Stanomir, and **M. Codreanu**, “Validation by simulation of an improved analytic expression for bit error rate in a direct sequence spread spectrum receiver equipped with Wiener filter for interference rejection,” in *Proc. of International Symposium on Signal Circuits and Systems*, Iasi, Romania, Oct. 2–3 1997, pp. 89–92.
- C1. A. Petrescu, C. Negrescu, and **M. Codreanu**, “Neural narrowband filter for interference canceling in direct sequence spread spectrum communications,” in *Proc. of 28th Session of Scientific Communications with International Participations, Technical Military Academy*, Iasi, Romania, Nov. 13–14 1997, pp. 275–280.

Academic theses

- AT3. **M. Codreanu**, *Multidimensional Adaptive Radio Links for Broadband Communications*, Ph.D. thesis, Centre for Wireless Communications, University of Oulu. Acta Universitatis Ouluensis, Oulu, Finland, Nov. 2007. [\[available online\]](#)
- AT2. **M. Codreanu**, *Decision feedback adaptive recurrent neural network for communication channels equalization*, Master’s thesis in Romanian, Department of Applied Electronics, “Politehnica” University of Bucharest. Bucharest, Romania, 1998.

AT1. **M. Codreanu**, *Reduction of the narrow band interference in spread spectrum communications*, Bachelor's thesis in Romanian, Department of Applied Electronics, "Politehnica" University of Bucharest. Bucharest, Romania, 1997.

Patents

- P1. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, *Communication method and system*, US Patent 8208963, Jun. 26 2012.
- P2. **M. Codreanu**, A. Tölli, M. Juntti, and M. Latva-aho, *Data Transmission Parameter Optimization in MIMO Communications System*, US Patent 7627347, Dec. 1 2009.
- P3. **M. Codreanu**, D. Tujkovic, and M. Latva-aho, *Data Loading Method, Transmitter, and Base Station*, US Patent 7356017, Apr. 8 2008.

National magazine articles

NM1. J. Iinatti, K. Kansanen, U. Celentano, **M. Codreanu**, K. Hooli, V. Tapio, A. Tölli, and J. Ylitalo, "Tulevat radioverkot testaukseen," *Prosessori, Elektroniikan suunnittelu-erikoisnumero*, vol. 11, pp. 57–58, Nov. 2006.

National conference papers

NC1. P. C. Weeraddana, **M. Codreanu**, and M. Latva-aho, "An efficient close to optimal radio resource allocation mechanism towards LTE downlink transmission," in *Proc. URSI/IEEE Convention Radio Science*, Oulu, Finland, Aug. 26 2010, pp. 71–74.