

PUBLICATIONS

Tatiana Kozlova Madsen

Theses

1. Kozlova, T. (2001). On Integrability of Dynamical Systems with Elastic Impacts, PhD-Thesis, Department of Mathematics and Mechanics, Moscow Lomonosov State University.
2. Kozlova, T. (1997). Cases of Non-integrability of Billiard Systems, Master's Thesis, Department of Mathematics and Mechanics, Moscow Lomonosov State University.

Book Chapters

1. Madsen, T. K., Zhang Q., Fitzek F. (2007). IP Header Compression for Cellular Controlled P2P Networks: or How to reduce bandwidth for delay-sensitive applications. In *Cognitive Wireless Networks*, Springer.
2. Pedersen, M. V., Perucci, G. P., Arildsen, T., Madsen, T. K., Fitzek F. (2007) Cross-Layer Example for Multimedia Services over Bluetooth. In *Mobile Phone Programming and its Application to Wireless Networking*. Springer.
3. Madsen, T. K. (2005). Cooperative Header Compression. In *Cooperation in Wireless Networks: Principles and Applications*, Springer.

Journal Papers

1. Madsen T. K., Zhang Q., Fitzek F., and Katz M. (2009) Exploiting Cooperation for Performance Enhancement and High Data Rates. *Journal of Communications*. Vol. 4, No. 3, April 2009, pp. 193-202.
2. Bondavalli A., Ceccarelli A., Groebaek J., Iovino D., Karna L., Klapka S., Madsen T., Magyar M., Majzik I., Salzo A. (2009) Design and Evaluation of a Safe Driver Machine Interface. *International Journal of Performability Engineering*, Vol. 5, No. 2, January 2009, pp. 153-166.
3. Seeling, P., Reisslein, M., Madsen, T. K., and Fitzek, F. H. P. (2006). Performance Analysis of Header Compression Schemes in Heterogeneous Wireless Multi-Hop Networks. *Springer International Journal of Wireless Personal Communications*. Vol. 38, Issue 2, July 2006, pp. 203 - 232.
4. Popovski, P., Yomo, H., Kuijpers, G., Madsen, T. K., and Prasad, R. (2006). Blue-Park: Energy-Efficient Operation of Bluetooth Networks using Park Mode. *Elsevier Computer Communications*, 29 (17), pp. 3416-3424, November 2006.
5. Probability of Wireless Ad Hoc Networks: Definition, Evaluation, Comparison. *Springer International Journal of Wireless Personal Communications*. Vol. 35, 135-151.
6. Kozlov, V. V., Madsen, T. K., and Sorokin, A. A. (2004). On weighted average values of weakly-dependent random variables. *Moscow University Mathematics Bulletin. Series Mathematics*. No. 5, pp. 34-37.
7. Kozlov, V. V., Madsen T. K. (2003). Poincare Rotation Numbers and the Riesz and Voronoi Means. *Mathematical Notes*. Vol.74. No.2, pp. 299-301.
8. Kozlova, T. (2001) Systems with elastic impacts admitting polynomial integrals. *Moscow University Mathematics Bulletin. Series Mathematics*. No.3, pp. 69-71.

9. Kozlova, T. (2001) Billiard systems with polynomial integrals of third and fourth degree. *Journal of Physics A: Math. and General.* V.34. No.11. pp. 2121-2125.
10. Kozlova, T. (1999) On polynomial integrals of systems with elastic impacts. *Regular & Chaotic Dynamics.* V.4. No.1.
11. Kozlova, T. (1998) Non-integrability of a rotating elliptical billiard. *Journal of Applied Mathematics and Mechanics.* Vol.62. No.1.

Conference Proceedings

1. Nielsen J., Madsen T., Schwefel H.-P. (2010) Impact of Mobility and Path Loss on Location-Based Mobile Relay Selection. In *Proceedings of IEEE Wireless Communication and Networking Conference (WCNC'10)*, Sydney, Australia, April 2010.
2. Nielsen J., Madsen T., Schwefel H.-P. (2010) Mobility Impact on Centralized Selection of Mobile Relays. In *Proceedings of IEEE Consumer Communications and Networking Conference (CCNC'10)*, Las Vegas, USA, January 2010.
3. Madsen T., Nielsen K. F., Fitzek F. (2009) Different Strategies for Network Coding in Local Interchange Scenarios. In *The Third International Conference on Networks for Grid Applications*, Springer in the ICST Lecture Notes (LNICST) series, Ed. ICST, 2009.
4. Perrucci G. P., Pedersen M., Madsen T. K., Fitzek F. (2009) Energy Evaluation for Bluetooth Link Layer Packet Selection Scheme. In *Proc. of European Wireless 2009*, Aalborg, Denmark, May 2009.
5. Grauballe A., Jensen M., Paramanathan A., Fitzek F., Madsen T. (2009) Implementation and Performance Analysis of Cooperative Medium Access Control Protocol for CSMA/CA based Technologies. In *Proc. of European Wireless 2009*, Aalborg, Denmark, May 2009.
6. Madsen T., Groenbaek J., Figueiras, J., Schwefel H.-P. (2009) Modelling Chain for Throughput Estimation in Wireless Networks. In *Proceedings of the 69th IEEE Vehicular Technology Conference (VTC) Spring 2009*. Barcelone, Spain.
7. Nielsen K. F., Madsen T. K., Fitzek F. (2008) Coding Opportunities for Wireless Grids Formed by Mobile Devices. In *The Second International Conference on Networks for Grid Applications*, Springer in the ICST Lecture Notes (LNICST) series, Ed. ICST, Oct. 2008.
8. Majzik I., Bondavalli A., Klapka S., Madsen T., Iovino D. (2008) Formal Methods in the Evaluation of a Safe Driver-machine Interface. In *Proceedings of Symposium on Formal Methods for Automation and Safety in Railway and Automotive Systems (FORMS 2008)*. Budapest, Hungary. October 2008.
9. Jacobsen R., Jacobsen K., Ingtoft P., Madsen T., Fitzek F. (2008) Practical Evaluation of Partial Network Coding in Wireless Sensor Networks. In *Proceedings of 4th International Mobile Multimedia Communications Conference (MobiMedia 2008)*. ICTS/ACM, Oulu, Finland. 2008
10. Heide J., Pedersen M., Fitzek F., Madsen T., and Larsen T. (2008) Know Your Neighbour: Packet Loss Correlation in IEEE 802.11b/g Multicast. 2008. In *Proceedings of 4th International Mobile Multimedia Communications Conference (MobiMedia 2008)*. ICTS/ACM, Oulu, Finland. 2008.
11. Madsen T. K., Grauballe A., Jensen M. G., Paramanathan A., Rasmussen J. D., and Fitzek F. (2008) Reliable Cooperative Information Storage in Wireless Sensor

- Networks. In Proceedings of International Conference on Telecommunication (ICT 2008), St. Petersburg, Russia. June 2008.
12. Grauballe A., Jensen M. G., Paramanathan A., Rasmussen J. D., Madsen T. K., and Fitzek F. (2008) Implementation of Cooperative Information Storage on Distributed Sensor Boards. In Proceedings of Workshop of Cognitive and Cooperative Networks. (COCONET 2008). Chine. May 2008.
 13. Groenbaek J., Madsen T. K., and Schwefel H. P. (2008) Safe Wireless Communication Solution for Driver Machine Interface for Train Control Systems. In Proceedings of the Third International Conference on Systems (ICONS 2008). Cancun, Mexico. April 2008.
 14. Madsen T. K., Zhang Q., Fitzek F., and Katz M. (2007) Design and Evaluation of IP Header Compression for Cellular-Controlled P2P Networks. In Proceedings of IEEE Conference on Communications (ICC 2007). Glasgow, UK. June 2007.
 15. Madsen, T. K., Fitzek, F. H. P., Nethi, S., Arildsen, T., and Perrucci, G. P. (2006). Novel IP Header Compression Technique for Wireless Technologies with Fixed Link Layer Packet Types. In Proceedings of the 49th Annual IEEE GLOBECOM Technical Conference.
 16. Madsen, T. K., Fitzek, F. H. P., Perrucci, G. P., and Prasad, R. (2006). Joint Approach for IP Overhead Reduction in Wireless Ad Hoc Networks. In Proceedings of Wireless Personal Multimedia Communications (WPMC 2006).
 17. Fitzek, F., Sheahan, R., Madsen, T., Lipsky, L., and Prasad, R. (2005) Fixed / Mobile Convergence from the User Perspective for New Generation of Broadband Communication Systems. 2005. In 2nd International Conference of the Center for Information and Communication Technologies (CICT) - Next Generation Broadband - Content and user perspectives. Copenhagen, Denmark.
 18. Madsen, T. K., Schwefel, H. P., Hansen, M. B., B $\frac{3}{4}$ gh, J., and Prasad, R. (2005). On Traffic Modelling in GPRS Networks. In Proceedings of Wireless Personal Multimedia Communications (WPMC 2005). Aalborg, Denmark, September 2005.
 19. Madsen, T. K., Fitzek, F. H. P., Takatori, Y., and Prasad, R. (2005). Performance of IP Header Compression over Correlated Multiple Channels. In Proceedings of Wireless Personal Multimedia Communications (WPMC 2005). Aalborg, Denmark, September 2005.
 20. Madsen, T. K., Fitzek, F. H. P., Prasad, R. and Katz, M. (2005). IP Header Compression for Media Streaming in Wireless Networks. In Proceedings of IEEE Vehicular Technology Conference (VTC) Fall 2005. Vol. 2. Pp. 1259 - 1263. Dallas, USA. 2005.
 21. Madsen, T. K., Takatori, Y., Fitzek, F. H. P., Prasad, R., and Katz, M. (2005). Zero- AIC Header Compression with Multiple Description Coding for 4G Wireless Networks. In International Workshop on Convergent Technology (IWCT), Oulu, Finland. June 2005.
 22. Madsen, T. K., Fitzek, F. H. P., Takatori, Y., Prasad, R., and Katz, M. (2005). Cooperative IP Header Compression using Multiple Access Points in 4G Wireless Networks. In 14th IST Mobile and Wireless Communications Summit. Dresden, Germany.
 23. Madsen, T. K., Fitzek, F. H. P., Prasad, R., and Katz, M. (2005). Cooperative Header Compression for 4G Wireless Networks. In WWRF 13.
 24. Fitzek, F. H. P., Madsen, T. K., Popovski, P., Prasad, R., and Katz, M. (2005). Cooperative IP Header Compression for Parallel Channels in Wireless Meshed

- Networks. In IEEE International Conference on Communication (ICC). Pp. 1331 - 1335 Vol. 2. Seoul, Korea.
25. Madsen, T. K., Gudmundsson, F., Sverrisson, S., Schwefel, H. P., and Prasad, R. (2005). Bluetooth Scatternet with Infrastructure Support: Formation Algorithms. In Proceedings of Consumer Communications and Networking Conference (CCNC 2005), Pp. 13-18. January, 2005.
 26. Madsen, T. K., Fitzek, F. H. P., and Prasad, R. (2004). Simulating Mobile Ad Hoc Networks: Estimation of Connectivity Probability. In Wireless Personal Multimedia Communications WPMC 2004, Padova, Italy. September 2004.
 27. Kuijpers, G., Popovski, P., Yomo, H., Madsen, T. K., and Prasad, R. (2004). Flexible and Energy-Efficient Networking Structure using Bluetooth Park Mode. In Wireless Personal Multimedia Communications WPMC 2004, Padova, Italy. September 2004.
 28. Fitzek, F. H. P., Madsen, T. K., Prasad, R., and Katz, M. (2004) Impact of Node Mobility on the Protocol Design of Self-Organizing Networks. In WWRF 11. Oslo, Norway. 2004.
 29. Popovski, P., Fitzek, F. H. P., Yomo, H., Madsen, T. K., and Prasad, R. (2004) MAC-layer Approach for Cluster-Based Aggregation in Sensor Networks. In International Workshop on Wireless Ad-Hoc Networking (IWWAN) 2004. Pp. 89 - 93. Oulu, Finland.
 30. Madsen, T. K., Fitzek, F. H. P., and Prasad, R. (2004) On Connectivity of a Mobile Ad Hoc Network under Different Mobility Models. In International Workshop on Wireless Ad-Hoc Networking (IWWAN) 2004. Pp. 120 - 124. Oulu, Finland.
 31. Popovski, P., Kozlova, T., Gavrilovska, L., and Prasad, R. (2002). Device Discovery in Short-Range Wireless Ad Hoc Networks. Proc. 5th Conf. Wireless Personal Multimedia Communications (WPMC). Pp. 1361 - 1365, vol.3. October 2002.
 32. Madsen, T. K. and Prasad, R. (2002). Hybrid ISMA/FDMA protocol for wireless packet transmission. The 13th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2002. Pp. 389 - 393, vol.1. September 2002.

Technical Reports and Deliverables

1. (2008) Safe Driver Machine Interface (DMI) for ERTMS automatic train control (SAFEDMI). Deliverable 3.1. "Wireless Communication Architecture and Protocols".
1. (2007) Safe Driver Machine Interface (DMI) for ERTMS automatic train control (SAFEDMI). Deliverable 1.2. "System Requirements".
2. (2007) Safe Driver Machine Interface (DMI) for ERTMS automatic train control (SAFEDMI). Deliverable 1.1. "Risk Assessment".
4. Fitzek, F. H. P., Madsen T. K., and Popovski, P. (2004). Header Compression for Multiple Cooperative Channels Concept and Analysis. R-04-1006, ISBN 87-90834-48-8, ISSN 0908-1224, Aalborg University, Denmark.
5. Wijting, C., Popovski, P., Yomo, H., Kozlova T., Gavrilovska L. (2002). PACWOMAN Deliverable 5.1. "State-of-the-art of the WPAN networking paradigm". IST-2001-34157. June 2002. 140 pages.

6. Wijting, C., Popovski, P., Yomo, H., Kozlova T., Gavrilovska L. (2002) FACE Deliverable 1.1. "Status Report on state-of-the-art in short-range networking", CPK, Aalborg University, September 2002. 83 pages.

Patents

1. Madsen, T. K. and Fitzek, F. H. P. (2005) IP header compression. Pending patent PA 81129.
2. Fitzek, F. H. P., Madsen, T. K., Popovski, P., Prasad, R., and Katz, M. (2004). Header Compression for Multiple Cooperative Channels. Korean Intellectual Property Office.

Tutorials

1. Fitzek, F. H. P., Madsen, T. K., and Seeling, P. (2005). IP Header Compression Enabling High Quality Consumer{Oriented Communications. In IEEE Consumer Communication & Networking Conference (CCNC). Available online at: www.comsoc.org/tutorialsnow