

## Dr TAKHIR MAMIROV

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<b>Date of birth</b>	16 of May, 1980

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### EDUCATION

Sep 2003 – Nov 2006	Dr.sc.ing. in Transport and Logistics (Sep 2011) Transport and Telecommunication Institute (TTI)
Sep 2001 – June 2003	Ms.sc.ing. in Digital Telecommunication Technologies (TTI, June 2003)
Sep 1997 – June 2001	B.sc.ing. in Engineering (TTI, June 2001)

### DISSERTATION

#### “The Development of Problems Resolution Methods of Precise Vibrodiagnostics of Transport Aggregates”

The work presents the results of the research dedicated to solving the current problems of precise vibrodiagnostics of transport aggregates. To improve the quality and validity of transport aggregates vibrodiagnostics it is suggested to use the proposed methods of high-quality narrow-band filtration. These methods are based on the synthesis of special structures of digital filters as well as on algorithms development for its best program realization.

The work demonstrates the principled possibility of realization of robust digital filters on the first-order substructures, so-called “bilines”. The minimally possible realizable passbands of such filters are investigated. The advantages and disadvantages of the new digital structures are analyzed. The comparative analysis of frequency characteristics of biline and traditional structures is executed.

#### Official reviewers:

Dr.sc.ing., professor *Alexander Grakovski*, TTI, Latvia

Dr.sc.ing., professor *Dalius Navakauskas*, Vilnius Gediminas Technical University, Lietuva

Dr.sc.ing., engineer *Igor Radchenko*, Latvenergo, Latvia

**Committee chair:** *Igor V.Kabashkin*, Dr.hab.sc.ing, president of TTI

**Members:** Arkady Borisov (Dr.hab.sc.comp), Alexander Grakovski (Dr.sc.ing.), Irina Yatskiv (Dr.sc.ing.), Eugene Kopytov (Dr.hab.sc.ing.), Alexey Latkov (Dr.hab.sc.ing.), Yuri Merkuriev (Dr.hab.sc.ing.), Leonid Novitsky (Dr.hab.sc.ing.), Nikolas A.Nechval (Dr.hab.sc.ing).

**Links:** [Summary](#) | [Dissertation](#)

### GRANTS AND FELLOWSHIPS (HONORS AND AWARDS)

2003	<b>Latvia Scientific Academy, Latvijas Gaisa Satiksme and Latvia Education Fond</b> award for scientific work “Synthesis of High-Selective Phase Filters” (Riga, Latvia)
2000-2003	<b>Aero Navigācijas Serviss</b> grants for education (Riga, Latvia)

**RESEARCH EXPERIENCE**

- 2006                      **Guidance Center** (development of the complex website for academic courses, lectures; involves binding with trainee and trainer groups, reporting, emailing)  
The Princeton Review, New-York, USA
- 2004                      **Leonardo da Vinci Programme** of the European Commission  
Project # 2004-1818 / 001-001 LE2 74SUB, Riga, Latvia

**TEACHING EXPERIENCE**

- 2003                      “Digital Signals Processing”, lab works, TTI

**RELEVANT WORK EXPERIENCE**

- 2012                      Software developer  
Mindflash, Palo Alto, CA, USA
- 2005 – onwards        Team leader, projects manager, business analyst, senior developer, quality assurance specialist  
SIA “Diatom Enterprises”, Riga, Latvia
- June 2006 – Sep 2006    Projects quality assurance control  
The Princeton Review, New-York, USA
- June 2003 – Sep 2005    Programmer-developer; economics predictions and stocks situations modeling  
Riga, Latvia
- June 2002 – Sep 2003    Programmer-developer  
SIA “RD Standard”, Riga, Latvia

**PUBLICATIONS**

1. Еремеев В., Гуменюк А., Маширов Т. Новые структуры малочувствительных цифровых фильтров. In: *Computer Modeling and New Technologies*, Volume 5, No. 1, ISSN 1407-5806, ISSN 1407-5814 (2001), p. 132-137.
2. Маширов Т. Оптимальные реализации цифровых фазовых звеньев с комплексными умножителями. In: *Programme and Abstracts of the International Conference „Reliability and Statistics in Transportation and Communication”* (RelStat'02), Transport and Telecommunication Institute, 17-18 October 2002, Riga, Latvia, ISBN 9984-668-42-8, p.81.
3. Маширов Т. Исследование возможностей высокоизбирательных цифровых фазовых фильтров. In: *Programme and Abstracts of the Research and Academic Conference „Research and Technology – Step into the Future”*, Transport and Telecommunication Institute, 7-11 April 2003, Riga, Latvia, ISBN 9984-668-51-7, p.85.
4. Маширов Т. Цифровые фазовые звенья с комплексными умножителями. In: *Transport and Telecommunication*, Volume 4, No.1, ISSN 1407-6160 (2003), с. 34-38.
5. Маширов Т. Phase Filters with High Linearity of PFC. In: *Programme and Abstracts of the International Conference „Reliability and Statistics in Transportation and Communication”* (RelStat'03), Transport and Telecommunication Institute, 16-17 October 2003, Riga, Latvia, ISBN 9984-668-59-2, p. 98.

6. Mamirov T. High-Selective Digital Filters with Optimized Linearity of Phase Characteristic. In: Proceedings of the *International Conference "Reliability and Statistics in Transportation and Communication"* (RelStat'03), ISBN 9984-668-65-7 (2004), p. 215-217.
7. Mamirov T. Estimation of Frequency Characteristics of Supernarrow-Band Filters. In: *Programme and Abstracts of the International Conference „Reliability and Statistics in Transportation and Communication"* (RelStat'04), Transport and Telecommunication Institute, 14-15 October 2004, Riga, Latvia, ISBN 9984-668-76-2, p. 95.
8. Yeremeyev V., Mamirov T. Characteristics' Identification of Narrow-Band Discrete Systems. In: *Programme and Abstracts of the International Conference „Reliability and Statistics in Transportation and Communication"* (RelStat'04), Transport and Telecommunication Institute, 14-15 October 2004, Riga, Latvia, ISBN 9984-668-76-2, p. 90.
9. Yeremeyev V., Mamirov T. Synthesis of Computational-Effective Structures of Digital Filters. In: *Abstracts of the 5th International Conference "Reliability and Statistics in Transportation and Communication"* (RelStat'05), 2005, Riga, Latvia, p.18.
10. Mamirov T. Identification and Search of Way of Problem Decision Using Standard Methods for Training of Specialists in Transport Area. In: Proceedings of the *International Conference "Innovative Vocational Education and Training in the Transport Area"* (IVETTA), ISBN 9984-9820-0-9 (2005), p. 309-317.
11. Yeremeyev V., Mamirov T. Identification of Narrow-Band Discrete Systems. In: *Transport and Telecommunication*, Volume 6, No. 2, ISSN 1407-6160 (2005), p. 255-259.
12. Yeremeyev V., Mamirov T. Synthesis of Computational-Effective Structures of Digital Filters. In: *Transport and Telecommunication*, Volume 7, No. 4, ISSN 1407-6179 (2006), p. 4-14.
13. Mamirov T. The Analysis, Synthesis and Modelling Of Robust Narrow-Band Filtration Systems. In: *RelStat'06 Proceedings*, ISBN 9984-9865-9-4 (2006), pp. 305-309.
14. Yeremeyev V., Mamirov T. Research of Characteristics of Robust Tunable Supernarrow-Band Filtration Systems. In: *RelStat'06 Proceedings*, ISBN 9984-9865-9-4 (2006), pp. 302-304.
15. Mamirov T. Estimation of Frequency Characteristics of Super-Narrow Band Digital Filters. In: *Electronics and Electrical Engineering*. ISSN 1392–1215, No. 5 (77), Kaunas, 2007, p. 69-72.
16. Mamirov T. Synthesis of Even-Order Phase Filters. In: *Abstracts of the 10th International Conference "Reliability and Statistics in Transportation and Communication"* (RelStat'10), 20–23 October 2010, Riga, Latvia, ISBN 978-9984-818-35-1, p. 72.
17. Mamirov T. Synthesis of Duo-Channel Even-Order Phase Filters. In: *Proceedings of the 10th International Conference "Reliability and Statistics in Transportation and Communication"* (RelStat'10), 20–23 October 2010, Riga, Latvia, ISBN 978-9984-818-34-4, p. 368-373.
18. Mamirov T. Synthesis of Two-Channel Even-Order Filtering Systems on Phase Units. In: *Transport and Telecommunication*, 2010, Volume 11, No. 3, ISSN 1407-6160, ISSN 1407-6179, p. 37-44.

**PRESENTATIONS AND POSTER SESSIONS**

- 2010      *Synthesis of Even-Order Phase Filters*  
Workshop on Intelligent Transport Systems (Electronics), TTI
- 2007      *Estimation of Frequency Characteristics of Super-Narrow Band Digital Filters*  
Workshop on Electronics and Electrical Engineering, Kaunas University of Technology
- 2006      *Research of Characteristics of Robust Tunable Super Narrow-Band Filtration Systems*  
Workshop on Intelligent Transport Systems (Electronics), TTI
- 2006      *The Analysis, Synthesis and Modelling of Robust Narrow-Band Filtration Systems*  
Workshop on Intelligent Transport Systems (Electronics), TTI
- 2005      *Identification and Search of Way of Problem Decision Using Standard Methods for Training of Specialists in Transport Area*  
Workshop on Life-long Learning in Vocational Education and Training, Riga, Latvia
- 2005      *Synthesis of Computational-Effective Structures of Digital Filters*  
Workshop on Efficiency of Electronics Systems and Devices, TTI
- 2004      *Characteristics' Identification of Narrow-Band Discrete Systems*  
Workshop on Efficiency of Electronics Systems and Devices, TTI
- 2004      *Estimation of Frequency Characteristics of Supernarrow-Band Filters*  
Workshop on Efficiency of Electronics Systems and Devices, TTI
- 2003      *Phase Filters with High Linearity of PFC*  
Workshop on Efficiency of Electronic Systems and Devices, TTI
- 2003      *Research of Potential of High-Selective Digital Phase Filters*  
Workshop on Modern World of Electronics, TTI
- 2002      *Optimal Realizations of Digital Phase Units with Real Multipliers*  
Workshop on Efficiency of Electronic Systems and Devices, TTI

<b>RESEARCH INTERESTS</b>	Digital data processing, suboptimal digital structures synthesis
<b>PROFESSIONAL ASSOCIATIONS</b>	Institute of Electrical and Electronics Engineering (IEEE, 2007)

**REFERENCES**

**Denis Gorshkov**, CEO of Diatom Enterprises  
[Denis.gorshkov@diatometerprises.com](mailto:Denis.gorshkov@diatometerprises.com)  
Straupes 5/1, Riga, Latvia

**Igor V.Kabashkin**, President of TTI, chair of the Promotional Council of TTI)  
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