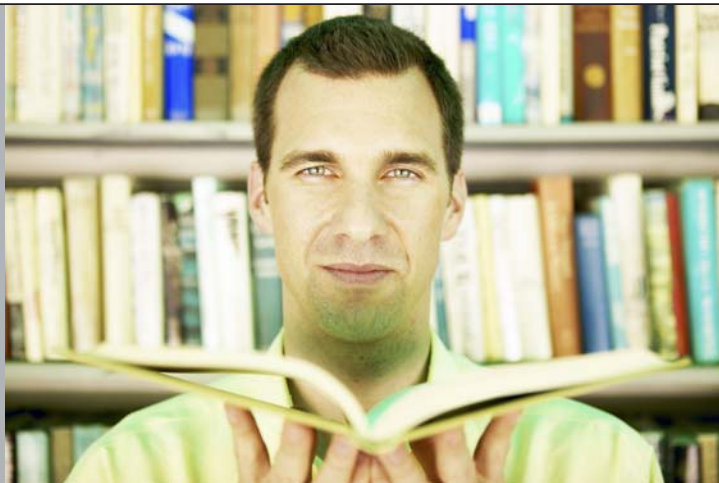


Publications



Department of Microelectronics and Applied Physics

Material Physics MP

Peer reviewed international journal articles

J. Chang, S. Pailh s, M. Shi, M. M nsson, T. Claesson, O. Tjernberg, J. Voigt, V. Perez-Dieste, L. Patthey, N. Momono, M. Oda, M. Ido, A. Schnyder, C. Mudry and J. Mesot **When low- and high-energy electronic responses meet in cuprate superconductors** Phys. Rev. B *75*, 224508

P. Palmgren, T. Claesson, A.  nsten, B. Agnarsson, M. M nsson, O. Tjernberg and M. G thelid, **Band bending and structure dependent HOMO energy at the ZnO(0001)-titanyl phthalocyanine interface**, Surf. Sci. *601*, *4222

Anneli  nsten, Martin M nsson, Thomas Claesson, Takayuki Muro, Tomohiro Matsushita, Tetsuya Nakamura, Toyohiko Kinoshita, Ulf O. Karlsson, and Oscar Tjernberg **Probing the valence band structure of Cu₂O using high-energy angle-resolved photoelectron spectroscopy**, Phys. Rev. B *76*, 115127

P. Grivickas, V. Grivickas, J. Linnros and A. Galeckas, **Fundamental band edge absorption in nominally undoped and doped 4H-SiC**, J. Appl. Phys. 101, 123521-10

I. Sychugov, N. Elfstr m, A. Hall n, J. Linnros and M. Qiu, **Effect of photonic bandgap on luminescence from silicon nanocrystals**, Optics Lett. 32, 1878-1880

N. Elfstr m, R. Juhasz, I. Sychugov, T. Engfeldt, A. Eriksson Karlstr m and J. Linnros, **Surface charge sensitivity of silicon nanowires: Size dependence**, Nano Letters 7, 2608-2612

M. Simon, K.-J. Engel, B. Menser, X. Badel and J. Linnros, **X-ray imaging performance of scintillator-filled silicon pore arrays**, accepted Medical Physics

N. Elfstr m and J. Linnros, **Avalanche breakdown in surface modified silicon nanowires**, Appl. Phys. Lett. 91, 103502

V. Grivickas, V. Bikbajevs, K. Gulbinas, V. Gavryushin and J. Linnros, **Strong photoacoustic oscillations in layered TiGaSe₂ semiconductor**, in press Phys. Stat. Sol. (b)

N. Elfstr m, A. Eriksson Karlstr m and J. Linnros, **Silicon nanoribbons for electrical detection of biomolecules**, accepted for publication in Nano Letters.

P. Palmgren, T. Claesson, A.  nsten, B. Agnarsson, M. M nsson, O. Tjernberg, and M. G thelid, **Bandbending and structure dependent HOMO at the ZnO(0001)-TiOPc interface**, Surf Sci. 601 4222

D. Stoltz, A.  nsten, U.O. Karlsson, and M. G thelid, **High resolution spectroscopic and microscopic signatures of ordered growth of ferrous sulfite in SO₂ assisted corrosion of Fe₃O₄(100)**, Appl. Phys. Lett. 91 093107

Szamota-Leandersson, R. Bugoi, M. G thelid, G. Le Lay, and U.O. Karlsson, **Electronic properties of Pb/InAs(111)B**, Surf. Sci 601 3246

B. Agnarsson, M. G thelid, S. Olafsson, H.P. Gislason, and U.O. Karlsson, **Influence of surface reconstruction on nitridation of sapphire using low pressure ammonia**, J. Appl. Physics 101 013519

Yan Zhou, J. Persson, and Johan  kerman, **Impact of Magnetoresistance and Anisotropy on Synchronized Spin Torque Oscillators** Proceedings of IEEE-NANO 2007, in press

Yan Zhou, J. Persson, and Johan  kerman, **Tunable Intrinsic Phase Shift Between a Spin Torque Nano-Oscillator and an AC Current** Proceedings of IEEE-NANO 2007, in press

Yan Zhou, J. Persson, and Johan  kerman, **Impact of Magnetoresistance and Anisotropy on Synchronized Spin Torque Oscillators** IEEE Review on Advances in Micro, Nano and Molecular Systems, in press

Yan Zhou, J. Persson, and Johan  kerman, **Tunable Intrinsic Phase Shift Between a Spin Torque Nano-Oscillator and an AC Current** IEEE Review on Advances in Micro, Nano and Molecular Systems, in press

Yan Zhou, J. Persson, and Johan  kerman, **Intrinsic phase shift and novel dynamic magnetization states of a spin torque oscillator under ac current injection** Mater. Res. Soc. Symp. Proc. 994 0998-J02-02

Johan Persson, Yan Zhou, and Johan  kerman, **Impact of Device Variability and Circuit Phase Shift in Synchronized Spin Torque Oscillators** Mater. Res. Soc. Symp. Proc. 994 0998-J02-06

Johan  kerman, V. Str m, K. V. Rao, and E. Dan Dahlberg **Separation of exchange anisotropy and magnetocrystalline anisotropy in Co/CoO bilayers by means of ac susceptibility measurements** Phys. Rev. B 76, 144416

Casey W. Miller, Zhi-Pan Li, Ivan K. Schuller, R. W. Dave, J. M. Slaughter, and Johan  kerman **Dynamic Spin-Polarized Resonant Tunneling in Magnetic Tunnel Junctions** Phys. Rev. Lett 99, 047206

Yan Zhou, J. Persson, and Johan  kerman, **Intrinsic phase shift between a spin torque oscillator and an alternating current** J. Appl. Phys. 101, 09A510

J. Persson, Yan Zhou, and Johan  kerman, **Phase Locked Spin Torque Oscillators: Impact of Device Variability and Time Delay** J. Appl. Phys. 101, 09A503

Casey W. Miller, Z. Li, Johan  kerman, Ivan K. Schuller, **Impact of interfacial roughness on tunneling conductance and extracted barrier parameters** Appl. Phys. Lett. 90, 043513

Peer Reviewed Conference Proceedings

U.L. Olsen, X. Badel, J. Linnros, M. Di Michiel, T. Martin, S. Schmidt and H.F. Poulsen, **Development of a high-efficiency high-resolution imaging detector for 30–80 keV X-rays**, Nucl. Instrum. Methods A 576, 52-55 (IWORLD, 2006).

Invited Talks

- J. Linnros, **Semiconductor quantum dots - including single dot spectroscopy**, invited lecture at Palanga summer school, Lithuania
- J. Linnros, **X-ray imaging detectors**, IMAGIC seminar
- J. Linnros, **Probing the luminescence from a single silicon quantum dot**, Vilnius, invited seminar
- J. Linnros, Ilya Sychugov and Jan Valenta, **Probing the luminescence from a single silicon quantum dot**, invited presentation at Swedish-Japanese meeting Q-NANO, Lund

Book chapters

- J. Valenta and J. Linnros, **Optical spectroscopy of individual silicon nanocrystals**, manuscript submitted (2007) for book on 'Silicon nanophotonics' (World Scientific).

Popular Articles

- Johan Åkerman, **Spintronik** Forskning och Framsteg

Conference contribution

- K. Szamota-Leandersson, M. Göthelid, J. Kanski, L. Ilver, G. LeLay and U.O. Karlsson, **Structure dependent interaction between Sn and InAs(111) surfaces**, IVC17, Stockholm
- K. Szamota-Leandersson, J. Sadowski, J. Kanski, L. Ilver, M. Göthelid and U.O. Karlsson, **Electronic structure of the InAs/GaAs(100) wetting layer and the effect of adsorbed Cs**, IVC17, Stockholm
- S. Yu, P. Palmgren, K. Nilsson, F. Hennies and M. Göthelid, **Comparison of titanyl phthalocyanine and iron phthalocyanine adsorption on rutile TiO₂(110)**, IVC17, Stockholm
- C. Castleton, A. Höglund, M. Göthelid, M. Qian, and S. Mirbt, **Charge accumulation, hydrogen level line-ups and STM vacancies on the surfaces of InAs and other III-V semiconductors**, IVC17, Stockholm
- T. Angot, P. Palmgren, C.I. Nlebedim, J.-M. Layet, G. Le Lay and M. Göthelid, **Atomic hydrogen dissolution of Si nanowires on Ag(110)**, IVC17, Stockholm
- P. Palmgren, T. Angot, C.I. Nlebedim, J.-M. Layet, G. LeLay and M. Göthelid **Iron phthalocyanine self-assembled films on Ag(110)**, IVC17, Stockholm
- B. Bruhn, M. Göthelid, A. Thatchenko and M. Gálvan **Atomic structure and adsorption energy of iodine on Pd(111)-I ("3x"3) and Pd(110)-I c(2x2) from thermal desorption spectroscopy, density functional calculations and high resolution core level spectroscopy** IVC 17, Stockholm
- A. Önsten, D. Stoltz, P. Palmgren, M. Göthelid, and U.O. Karlsson, **The chemistry of sulfur dioxide and water on zinc and zinc oxide surfaces**, IVC17 Stockholm

Functional materials FNM

Books

- Do Kyung Kim, Yun Suk Jo, Jon Dobson, Alicia El Haj and Mamoun Muhammed **Nanomaterials for Controlled Release of Anticancer Agents**, Nanotechnologies for the life sciences, Volume 6, Nanomaterials for cancer therapy. (ed. Challa S. S. R. Kumar, WILEY-VCH)

Peer reviewed journal publications

- Shanghai Li, Muhammet Toprak, Hesham M. A. Soliman, Jian Zhou, Mamoun Muhammed, Dieter Platzek and Eckhard Mueller **Fabrication of nanostructured thermoelectric bismuth telluride thick films by electrochemical deposition** Chem. Mater., 18, 3627-3633
- Shanghai Li, Yibin Liang, Jian Qin, Muhammet Toprak and Mamoun Muhammed **Template electrodeposition of ordered bismuth telluride nanowire arrays** J. Nanosci. Nanotech., Accepted
- Shanghai Li, Jian Zhou, Muhammet Toprak, Mamoun Muhammed, Dieter Platzek, Pawel Ziolkowski and Eckhard Mueller **Annealing and doping effects on nanostructured bismuth telluride thick films** Chem. Mater., Submitted

Shanghai Li, Shuo Zhang, Zeming He, Muhammet Toprak, Cristian Stiewe, Mamoun Muhammed and Eckhard Mueller **Novel solution route synthesis of low thermal conduction nanocrystalline bismuth telluride** J. Nanosci. Nanotech., Submitted

Shanghai Li, Richard Furberg, Muhammet Toprak, Yu Zhang, Björn Palm and Mamoun Muhammed **Nature-inspired fabrication of nanostructured micro-porous surfaces for enhanced boiling** Advanced Functional Materials, Accepted

Z. He, C. Stiewe, D. Platzek, G. Karpinski, E. Mueller & S. Li, M. Toprak, and M. Muhammed **Effect of ceramic dispersion on thermoelectric properties of nano ZrO₂/CoSb₃ composites** J. Appl. Phys., 101, 043707

Z. He, C. Stiewe, D. Platzek, G. Karpinski, E. Mueller & S. Li, M. Toprak, and M. Muhammed **Thermoelectric properties of hot-pressed skutterudite CoSb₃** J. Appl. Phys., 101, 053713

Z. He, C. Stiewe, D. Platzek, G. Karpinski, E. Mueller & S. Li, M. Toprak, and M. Muhammed **Nano ZrO₂/CoSb₃ composites with improved thermoelectric figure of merit** Nanotechnology, 18, 235602

V. Y. Kodash, J. R. Groza, G. Aldica, M. S. Toprak, S. Li and M. Muhammed **Field-activated sintering of skutterudites** Scripta Mater., 57, 509

C. Stiewe, Z. He, D. Platzek, G. Karpinski, E. Mueller & S. Li, M. Toprak, and M. Muhammed **Control of thermoelectric properties in ZrO₂/CoSb₃ nano-dispersed composites** Mat.-wiss. u. Werkstofftech., 38, 773

Shanghai Li, Zeming He, Muhammet Toprak, Christian Stiewe, Eckhard Mueller and Mamoun Muhammed **Thermoelectric properties of CoSb₃ with maize-like structure** Phys. Status Solidi. Rapid Res. Lett., 1, No. 6, 259-261

Shanghai Li, Muhammet S. Toprak, Yun-Suk Jo, Jon Dobson, Do-Kyung Kim, Mamoun Muhammed **Novel bulk synthesis of transparent and homogeneous polymeric hybrid materials with ZnO quantum dots and PMMA** Adv. Mater., 19, 4347-4352

Shanghai Li, Jian Qin, Do-Kyung Kim, Andrea Fornara and Mamoun Muhammed **Synthesis and magnetic properties of bulk transparent PMMA/Fe-oxide nanocomposites** Manuscript

Jian Qin, Sophie Laurent, Yun Suk Jo, Alain Roch, Maria Mikhaylova, Zaver M. Bhujwala, Robert N. Muller, Mamoun Muhammed **A high-performance magnetic resonance imaging T2 contrast agent**, Adv. Mater., 19, 1874

Vallhov Helen, Qin Jian, Johansson Sara M., Ahlberg Niklas; Muhammed Mamoun A., Scheynius Annika, Gabriellsson Susanne **The Importance of an Endotoxin-Free Environment during the Production of Nanoparticles Used in Medical Applications** Nano Lett. (2006), 6(8), 1682-1686.

Fei Ye, Helen Vallhov, Jian Qin, Muhammet Toprak, Annika Scheynius, Mamoun Muhammed **Novel Seedless Synthesis of High Aspect Ratio Gold Nanorods and Effect on Human Antigen Presenting Cells as Potential Drug Carriers** Chem. Mater., Manuscript

Fei Ye, Jian Qin, Muhammet Toprak, Mamoun Muhammed **Seedless Synthesis of High Aspect Ratio Gold Nanorods in Acidic Surrounding**, Chem. Mater., Manuscript

Andrea Fornara, Petter Johansson, Karolina Petersson, Stefan Gustafsson, Anatol Krozer, Eva Olsson, Christer Johansson and Mamoun Muhammed **Tailored Magnetic Nanoparticles for Detection of Antibodies in Serum**, Nano Lett., Manuscript

Conference proceedings

Jian Zhou, Shanghai Li, Hesham M. A. Soliman, Muhammet S. Toprak, Mamoun Muhammed, Dieter Platzek, Eckhard Mueller **The effect of P on the Seebeck coefficient of Bi₂Te₃ thick film** Mater. Res. Soc. Symp. Proc., Submitted

Patents

Flexible Peltier Module, German patent application nr: 10 2007 017 712.9

Porous Layers - Shanghai Li, Muhammet Toprak, Richard Furberg, Björn Palm, Mamoun Muhammed, Swedish patent application nr. 0600475-8, PCT pending

International conference

S. Li, S. Zhang, Y. Liang, M. S. Toprak, M. Muhammed, Z. He, E. Mueller **Synthesis and Characterization of Thermoelectric Bismuth Telluride Nanostructures** (Poster) International Conference on Nanoscience and Technology, China, June 4-6, Beijing/China

Semiconductor Materials HMA

Journal papers

Ikai Lo, Tsai, J.K.; Gau, M.H.; Chen, Y.L.; Chang, Z.J.; Wang, W.T.; Chiang, J.C.; Wang, K.R.; Chun-Nan Chen; Aggerstam, T.; Lourduoss, S., **Study of two-subband population in Fe-doped $\text{Al}_x\text{Ga}_{1-x}\text{N}/\text{GaN}$ heterostructures by persistent photoconductivity effect**, Physical Review B (Condensed Matter and Materials Physics), v 74, n 24, 15 Dec. 2006, p 245325-1-5.

Fredrik K. Olsson, Amandine Aubert, Manuel Avella, Juan Jiménez, Carlos A. Barrios, Jesper Berggren, and Sebastian Lourduoss, **Heteroepitaxy of InP on Silicon-on-Insulator for optoelectronic integration**, ECS Trans. 3, (39) 23

X.Y. Liu, P. Jänes, P. Holmström, T. Aggerstam, S. Lourduoss, L. Thylén and T.G. Andersson, **Growth of GaN and GaN/AlN multiple quantum wells on sapphire, Si and GaN template by molecular beam epitaxy**, Journal of Crystal Growth, v 300, n 1, Mar 1, 2007, p 79-82

X.Y. Liu, P. Jänes, P. Holmström, T. Aggerstam, S. Lourduoss, L. Thylén and T.G. Andersson, **Investigate the intersubband absorption of GaN/AlN multiple quantum wells grown on different substrates by molecular beam epitaxy**, Journal of Crystal Growth, v 301-302, pp. 457-460

Ikai Lo, M. H. Gau, J. K. Tsai, Y. L. Chen, Z. J. Chang, W. T. Wang, J. C. Chiang, T. Aggerstam and S. Lourduoss, **Anomalous k-dependent spin splitting in wurtzite $\text{Al}_x\text{Ga}_{1-x}\text{N}/\text{GaN}$ heterostructures**, Physical Review, vol. B75, pp. 245307-1-6

R. G. Broeke, J. Cao, C. Ji, Sang-Woo Seo, Y. Du, N. K. Fontaine, Jong-Hwa Baek, John Yan, F. M. Soares, F. Olsson, S. Lourduoss, A. V. Pham, M. Shearn, A. Scherer, S. J. B. Yoo, **Optical-CDMA in InP**, IEEE Journal of Selected Topics in Quantum Mechanics, vol. 13, no. 5, pp. 1497-1507

T. Aggerstam, S. Marcinkevičius, A. Pinos, M. Linnarsson, and S. Lourduoss, **Electron and hole capture cross-sections to Fe acceptors in GaN:Fe epitaxially grown on sapphire**, J. Electronic Materials, DOI: 10.1007/s11664-007-0202-9

E. Söderberg, J. S. Gustavsson, P. Modh, A. Larsson, Z. Z. Zhang, J. Berggren and M. Hammar, **Suppression of higher order transverse and oxide modes in 1.3 μm InGaAs VCSELs by an inverted surface relief**, Photon. Technol. Lett., 19 (5), 1041

E. Söderberg, J. S. Gustavsson, P. Modh, A. Larsson, Z. Z. Zhang, J. Berggren and M. Hammar, **High temperature Dynamics, high speed modulation, and transmission experiments using 1.3 μm InGaAs single mode VCSELs**, J. Lightwave Technol. 25 (9), 2791

Z.Zhang, R.M. Würettemberg, J. Berggren and M. Hammar **Optical loss and interface morphology in AlGaAs/GaAs distributed Bragg reflectors**, Appl. Phys. Lett., 91, 101101

Conferences

T. Aggerstam, T.G. Andersson, P. Holmström, P. Jänes, X.Y. Liu, S. Lourduoss and L. Thylén, **GaN/AlN multiple quantum well structures grown by MBE on GaN templates for 1.55 μm intersubband absorption**, Presented at the SPIE conference Photonics West, in San Jose, USA

A. Ougazzaden, S. Gautier, T. Aggerstam, J. Martin, M. Bouchaour, T.Baghdadli, S.Ould Saad, S. Lourduoss, N. Maloufi, Z. Djebbour, and F. Jomard, **Progress on new wide bandgap materials BGaN, B GaAlN and their potential applications**, Presented at the SPIE conference Photonics West, in San Jose, USA

T. Aggerstam, T.G. Andersson, P. Holmström, P.Jänes, X.Y. Liu, S. Lourduoss and L. Thylén, **Intersubband absorption in GaN/AlN multiple quantum well structures grown by MBE on GaN sapphire and templates**, E-MRS 2007, May 28 - June 1, Strasbourg, France.

F. Olsson, M. Xie, F.Gerard, A. R. Alija, I. Prieto, P. A. Postigo and S. Lourduoss, **Epitaxial lateral overgrowth of InP in micro line and submicro mesh openings**, 19th Int. Conf. on InP and Related Materials, IPRM, Matsue, Japan, p. 311-314.

F.Olsson, A.Berrier, T.Hakkarainen, S.Anand, S.Lourduoss, **Selective Area Growth of InP Nanostructures by Hydride Vapour Phase Epitaxy**, IVC-17/ICSS-13 and ICN+T2007, NCSS-6/NSM-22/SVM-4, Stockholm, Sweden

S. Marcinkevičius, T. Aggerstam, A. Pinos, M. Linnarsson, and S. Lourduoss, **Carrier capture to deep Fe acceptors in semi-insulating GaN:Fe**, 14th Semiconducting and Insulating Materials Conference, SIMC-XIV, May 15-20, 2007, Fayetteville, Arkansas, USA.

A. Pinos, T. Aggerstam, S. Marcinkevičius, and S. Lourduoss, **Time-resolved photoluminescence studies of iron doped GaN**, IVC-17/ICSS-13 and ICN+T2007, NCSS-6/NSM-22/SVM-4, Stockholm, Sweden.

Sinead Kennedy, Diederick Wiersma, Ekmel Ozbay, Sebastian Lourduoss and Clivia M. Sotomayor Torres, **The European Network of Excellence on Nanophotonics**, 3rd International Nanotechnology Conference on Communication and Cooperation (ICN3) event, 16th-19 April, Brussels.

P. Holmström, T. Aggerstam, X.Y. Liu, G. Kobayashi, A. Kikuchi, K. Kishino, S. Lourduoss, T. G. Andersson, and L. Thylén, **Intersubband photonic devices by group-III nitrides**, SPIE Asia-Pacific Optical Communications, 1 - 5 November, Wuhan, China.

S. Gautier, A. Ougazzaden, T. Aggerstam, Ali Soltani, J. Martin, M. Bouchaour, T.Baghdadli, S.Ould Saad Hammady, S. Lourduoss, N. Maloufi, **Study of structural and electrical properties of BGa(Al)N alloys grown by MOVPE**, EW-MOVPE 2

P. Gilet, E., Pougeoise, L. Grenouillet, P. Grosse, S. Poncet, A. Chelnokov, G., Bourgeois, R. Stevens, R. Hamelin, M. Hammar, J. Berggren and P. Sundgren, **1.3 μm VCSELs: InGaAs/GaAs, GaInNAs/GaAs multiple quantum wells or InAs/GaAs quantum dots- three candidates as active material**, Proceedings of the SPIE, 6484, 64840F. (Photonics West)

E. Söderberg, J.S. Gustavsson, P. Modh, A. Larsson, Z.Z. Zhang, J. Berggren, and M. Hammar, **Transmission Experiments using 1.3 μm Single Mode InGaAs VCSELs**, CLEO/Europe, Munich, June 17-22

H. Haratizadeh1, M. Gholami1, P.O. Holtz, M. Hammar and Carl Asplund, **Optical properties of InGaNAs/GaAs single quantum well**, EuroNanoForum 2007, Nanotechnology in Industrial Applications, June 19-21, CCD Düsseldorf, Germany

Device Technology, EKT

Peer reviewed international journal articles

M. M. A. Berrier, G. Malm, M. Östling, and S. Anand **Carrier transport through a dry-etched InP-based two-dimensional photonic crystal** J. Appl. Phys., vol. 101, pp. 123101

R. Ghandi, M. Kolahdouz, J. Hallstedt, L. Jun, H. Wejtmans, M. Ostling, H. H. Radamson, and R. Wise, **High boron incorporation in selective epitaxial growth of SiGe layers**, Journal of Materials Science: Materials in Electronics, vol. 18, pp. 747-51,

J. Hallstedt, R. Ghandi, M. Kolahdouz, M. Ostling, and H. H. Radamson, **Integration of HCl chemical vapour etching and SiGe:B selective epitaxy for source/drain application in MOSFETs**, Semiconductor Science and Technology, vol. 22, pp. 123-6

H.-S. Lee, M. Domeij, C-M. Zetterling, M. Östling, F. Allerstam and E.Ö. Sveinbjörnsson, **1200 V, 5.2 mW/cm² 4H-SiC BJTs with a high current gain**, IEEE Electron Device Letters, vol. 28, no 11, pp. 1007-1009,

H.-S. Lee, M. Domeij, C-M. Zetterling, M. Östling, and E.Ö. Sveinbjörnsson, **A comparative study of surface passivation on SiC BJTs with high current gain**, Materials Science Forum vol. 556-557, pp. 631-634,

H.-S. Lee, M. Domeij, C-M. Zetterling, and M. Östling, **4H-SiC power BJTs with high current gain and low on-resistance**, Materials Science Forum vol. 556-557, pp. 767-770

J. Li, Z.-B. Zhang, and S.-L. Zhang, "Percolation in random networks of heterogeneous nanotubes", *Appl. Phys. Lett.* 91, 253127

M. von Haartman, B. G. Malm, P. E. Hellström, M. Östling, T. J. Grasby, T. E. Whall, E. H. C. Parker, K. Lyutovich, M. Oehme, and E. Kasper, "Impact of strain and channel orientation on the low-frequency noise performance of Si n- and pMOSFETs," *Solid-State Electronics*, vol. 51, pp. 771-777

Z. Zhang, Z. Qiu, R. Liu, M. Östling, and S.-L. Zhang, "Schottky barrier height tuning by means of ion implantation into pre-formed silicide films followed by drive-in anneal", *IEEE Electron Device Letters* 28, 565

Z.-B. Zhang and S.-L. Zhang, "Photon-Induced Selective Interaction between Small-Diameter Metallic Carbon Nanotubes and Triton X-100", *J. Am. Chem. Soc.* 129, 666

Books and book chapters

C. Lavoie, F.M. d'Heurle, and S.-L. Zhang, "Silicides", in *Handbook of Semiconductor Manufacturing Technology*, 2nd Edition, edited by R. Doering and Y. Nishi (CRC Press, Taylor & Francis Group, Boca Raton, 2007), Chapter 10.

M. von Haartman and M. Östling, *Low-Frequency Noise in Advanced MOS devices*: Springer, 2007. Text book

Peer reviewed conference reports

M. Domeij, H.-S. Lee, C.-M. Zetterling, M. Östling, A. Schöner, "Analysis of the base current and the saturation voltage in 4H-SiC power BJTs," Presented at the 12th European conference on Power electronics and applications (EPE), Aalborg, Denmark 2nd-5th September.

F. Driussi, D. Esseni, L. Selmi, P.-E. Hellström, G. Malm, J. Hällstedt, M. Östling, T. J. Grasby, D. R. Leadley, and X. Mescot, "Experimental and Simulation Study of the Biaxial Strain and Temperature dependence of the Electron Mobility Enhancement in Si MOSFETs," presented at ULIS.

P. Eriksson, M. Domeij, H.-S. Lee, C.-M. Zetterling, and M. Östling, "A Simple and reliable electrical method for measuring the junction temperature and thermal resistance of 4H-SiC power bipolar junction transistors," Presented at International Conference on Silicon Carbide and Related Materials (ICSCRM), 14th-19th Oct. Otsu, Japan.

R. Ghandi, H.-S. Lee, M. Domeij, C.-M. Zetterling, and M. Östling, "Backside Nickel Based Ohmic Contacts to N-type Silicon Carbide," Presented at International Conference on Silicon Carbide and Related Materials (ICSCRM), 14th-19th Oct. Otsu, Japan.

J. Hällstedt, B. G. Malm, P.-E. Hellström, M. Östling, M. Oehme, J. Werner, K. Lyutovich, and E. Kasper, "Leakage current reduction in 80 nm biaxially strained Si nMOSFETs on in-situ doped SiGe virtual substrates," 37th European Solid State Device Research Conference, 2007. *ESSDERC*, pp. 319 - 322.

H.-S. Lee, M. Domeij, C.-M. Zetterling, and M. Östling, "Influence of the base contact on the electrical characteristics of SiC BJTs," in *Proc. IEEE International Symposium on Power Semiconductor Devices and ICs (ISPSD) 2007*, pp. 153-156.

H.-S. Lee, M. Domeij, C.-M. Zetterling, M. Östling, F. Allerstam and E. Ö. Sveinbjörnsson, "1200 V 4H-SiC BJTs with a common emitter current gain of 60 and low on-resistance," Presented at International Conference on Silicon Carbide and Related Materials (ICSCRM), 14th-19th Oct. Otsu, Japan.

B. G. Malm, M. von Haartman, and M. Östling, "Influence of Dislocations on Low Frequency Noise in nMOSFETs Fabricated on Tensile Strained Virtual Substrates," presented at 19th International Conference on Noise and Fluctuations, Tokyo.

Invited papers/talks

M. Östling, B. G. Malm, M. Von Haartman, J. Hällstedt, Z. Zhang, P.-E. Hellstrom, and S. Zhang, "Challenges for 10 nm MOSFET process integration," *Journal of Telecommunications and Information Technology*, pp. 25-32.

M. Östling, "Critical technology issues for deca-nanometer MOSFETs" IEEE Postgraduate meeting on electronic engineering, July 2007, Universitat Rovira I Virgili, Tarragona, Spain

H. H. Radamson, KTH (Sweden) "Selective epitaxial growth of B-doped SiGe and HCl etch of Si for the formation of SiGe:B recessed sources and drains (pMOS transistors)" Invited talk at ICSI 2007, Marseilles, France

Condensed Matters Physics, KMF

Journal papers (peer reviewed articles)

B. Espinosa-Arronte, M. Andersson, C.J. van der Beek, M. Nikolaou, J. Lidmar, and M. Wallin, "Fully anisotropic superconducting transition in ion-irradiated $\text{YBa}_2\text{Cu}_3\text{O}_{7-d}$ with a tilted magnetic field," *Phys. Rev. B* 75 (2007), 100504(R).

J. Nylén, S. Lidin, M. Andersson, H. Liu, N. Newman, and U. Häussermann, "Effect of metal doping on the low-temperature structural behavior of thermoelectric b-Zn₄Sb₃," *J. Solid State Chem.* 180, 2603.

S. J. Poon and Ö. Rapp, "Comment on "Extrinsic origin of the insulating behavior of polygrain icosahedral Al-Pd-Re quasicrystals," *Phys. Rev. B* 76, 216201

S.I. Khartsev, A.M. Grishin, "High performance [Bi₃Fe₅O₁₂/Sm₃Ga₅O₁₂]m magneto-optical photonic crystals," *J. Appl. Phys.* 101, 053906 (2007); *Virtual Journal of Nanoscale Science & Technology* 15; #11

I. Sandalov, R.G. Nazmitdinov, "Shell effects in nonlinear magnetotransport through small quantum dots," *Phys. Rev. B* 75, 075315

A.M. Grishin, S.I. Khartsev, H. Kawasaki, "980 nm Bi₃Fe₅O₁₂/Sm₃Ga₅O₁₂ magneto-optical photonic crystal," *Appl. Phys. Lett.* 90, 191113

V.V. Putrolaynen, A.A. Velichko, A.L. Pergament, A.B. Cheremisin, A.M. Grishin, "UV patterning of vanadium pentoxide films for device applications," *J. Phys. D: Appl. Phys.* 40, 5283-5286

J.-H. Kim, A.M. Grishin, V. Angelova-Ignatova, "Wet etching study of La_{0.67}(Sr_{0.5}Ca_{0.5})_{0.33}MnO₃ films on silicon substrates," *Journal of Electronic Materials* 37, 361-367

Conference papers (peer reviewed articles)

Ö. Rapp, "Quasicrystals; Properties and Prospects," in *Proceedings of International Conference on Advanced Materials, Design and Development*, Goa, India, (Editors: M. Cakraborty, D. L. McDowell, S. Gosh, F. Mistree, and D. Bhattacharaya, Elsevier, 2007) p 132.

H. Kawasaki, T. Ohshima, Y. Yagyu, Y. Suda, S.I. Khartsev, A.M. Grishin, "TiO₂/TiN/TiO₂ heat mirrors by laser ablation of single TiN target," IVC-17/ICSS13 International Conference, Stockholm, Sweden, July 02-02.

D. Dzubrou, A.M. Grishin, H. Kawasaki, Y. Suda, V. Pankov, "Tailoring optical properties of pulsed laser deposited TiO₂ films," IVC-17/ICSS13 International Conference, Stockholm, Sweden, July 02-02, 2007.

A. Cheremisin, S. Loginova, A. Velichko, V. Putrolaynen, A. Pergament, S.I. Khartsev, A.M. Grishin, "Modification of atomic structure of thin amorphous V₂O₅ films under UV laser irradiation," IVC-17/ICSS13 International Conference, Stockholm, Sweden, July 02-02.

V. Putrolainen, A. Velichko, A. Pergament, A.M. Grishin, A. Cheremisin, S.I. Khartsev, S. Bonetti, "UV patterning of vanadium pentoxide film for device application," IVC-17/ICSS13 International Conference, Stockholm, Sweden, July 02-02.

A. Velichko, M. Savoini, A.M. Grishin, "Nonvolatile resistance switching in Au/V₂O₅/SiO₂/Si junctions," IVC-17/ICSS13 International Conference, Stockholm, Sweden, July 02-02.

Invited talks

Östen Rapp; "Electronic and Atomic Disorder in Icosahedral AlPdRe," *Liquid and Amorphous Metals* 13, Moscow, July 2007.

A.M. Grishin, S.I. Khartsev, "All-garnet magneto-optical photonic crystals," MORIS2007: Workshop on thermal and optical magnetic materials and devices, Pittsburgh, PA, USA, September 24-26.

Referee work for international journals

Magnus Andersson: Phys. Rev. Lett. (4 times), Phys. Rev. B (1), Physica C (1), and J. Phys. Conf. (1).

Östen Rapp; Physical Review and Physical Review Letters, (8 occasions during 2007), J Physics Condensed Matter (2) Physics C (1), Superconducting Science and Technology (1), J Low Temperature Physics (1)

Patent

Microwave readable dielectric barcode, A.M. Grishin, R.M. Mays, US2007/0221729

Microwave readable dielectric barcode, A.M. Grishin, R.M. Mays, CA2589946

Commissions

Magnus Andersson:

Committee member of doctoral thesis: Thomas Liljenfors, "The role of interfaces in oxide thin films" Chalmers (2007)

Coordinator in the SSF OXIDE program

Main project leader in the SSF OXIDE program

Quantum Electronics and Quantum Optics, QEO**Peer reviewed**

L. L. Sánchez-Soto, E. C. Yustas, G. Björk, A. B. Klimov, **Maximally polarized states for quantum light fields**, Phys. Rev. A 76 043820/1-8, quant-ph/0610032.

I. Sainz, C. Kothe, and G. Björk, **Estimating entanglement through local correlations**, Proc. of SPIE Vol. 6726, 67263E-1-8.

Isabel Sainz and Gunnar Björk, **Entanglement invariant for the double Jaynes-Cummings model**, Phys. Rev. A 76, 042313, arXiv:0706.3813.

Q. Wang and A. Karlsson, **Performance enhancement of a decoy-state quantum key distribution using a conditionally prepared down-conversion source in the Poisson distribution**, Phys. Rev. A 76, 014309.

S. Sauge, M. Swillo, S. Albert-Seifried, G. B. Xavier, J. Waldeback, M. Tengner, D. Ljunggren, A. Karlsson, **Narrowband polarization-entangled photon pairs distributed over a WDM link for qubit networks**, Optics Express, 15, 6926-6933, quant-ph/0703253.

I. Sainz Abascal and G. Björk, **Bipartite entanglement measure based on covariances**, Phys. Rev. A.75, 062317/1-6, quant-ph/0703249.

Q. Wang, X.-B. Wang, G. Björk, and A. Karlsson, **Improved practical decoy state method in quantum key distribution with parametric down conversion source**, Europhys. Lett. 79, 40001/1-5, quant-ph/0703252.

C. Kothe and G. Björk, **Entanglement quantification through local observable correlations**, Phys. Rev. A 75, 012336, quant-ph/0608041.

G. Björk, J.-L. Romero, A. B. Klimov, and L. L. Sánchez-Soto, **Mutually unbiased bases and discrete Wigner functions**, J. Opt. Soc. Am. B 24, 371-378, quant-ph/0608173.

A. B. Klimov, J.-L. Romero, G. Björk and L. L. Sánchez-Soto **Geometrical approach to mutually unbiased bases**, J. Phys. A 40, 3987-3998.

Conference contributions, peer reviewed

C. Kothe and G. Björk, **Quantum lithography**, contributed poster at Optik i Sverige, Skellefteå, Sweden, Nov. 8 - 9

Q. Wang, X.-B. Wang, G. Björk, and A. Karlsson, **Improved decoy-state method in quantum key distribution with parametric down-conversion source**, contributed poster at the Single-photon-workshop 2007, Turin, Italy, Sep. 25 - 28.

I. Sainz and G. Björk, **Entanglement sudden death and entanglement conservation**, contributed poster 19 at Asian Conference on Quantum Information Science, Kyoto, Japan, September 3-6.

Q. Wang and A. Karlsson, **Practical decoy-state method in quantum key distribution with heralded single photon source**, contributed poster at the European Young Scientist Conference on Quantum Information, Vienna, Austria, August 27 - 31.

A. B. Klimov, J. L. Romero, G. Björk, and L. L. Sánchez-Soto, **Discrete phase-space structure and mutually unbiased bases**, contributed talk at the International Workshop on the Arithmetic of Finite Fields, Madrid, Spain, June 21-22.

Y. Chen and G. Björk, **Generation and detection of photonic qutrits**, poster presentation at the International Quantum Electronics Conference, München, Germany, June 17-22.

S. Sauge, M. Swillo, S. Albert-Seifried, G.B. Xavier, J. Waldeback, M. Tengner, D. Ljunggren, Q. Wang, A. Karlsson, **Quantum communication in optical networks: an overview and selected recent results**, contributed talk at the 9th International Conference on Transparent Optical Networks (ICTON), Rome, Italy, July 1-5.

S. Sauge, M. Swillo, S. Albert-Seifried, J. Waldeback, M. Tengner, D. Ljunggren, A. Karlsson, G. B. Xavier, **Narrowband polarization-entangled photon pairs distributed over a WDM link for qubit networks**, contributed talk at the joint Conference on Lasers and Electro-Optics (CLEO Europe) and International Quantum Electronics Conference (IQEC), München, Germany, June 17-22.

I. Ghiu and G. Björk, **Probabilistic implementation of a two-output quantum processor for quDits**, contributed talk at the Central European Workshop on Quantum Optics, Palermo, Italy, June 1-5.

Invited talks

I. Sainz and G. Björk, **Correlation measure for entanglement**, invited talk at the 10th International Conference on Squeezed States and Uncertainty Relations, Bradford, UK, 31 March - 4 April.

G. Björk, I. Sainz Abascal, and C. Kothe, **Estimating entanglement through local correlations**, invited talk at the International Conference of Coherent and Non-linear Optics, Minsk, Belarus, May 28 - June 1.

C. Kothe, S. Inoue, and G. Björk, **Quantum imaging and lithography**, invited talk at 16th International Laser Physics Workshop, León, Mexico, August 20-24.

Photonics and Microwave Engineering, FMI**Publications, peer reviewed**

Z. Ruan, M. Yan, C. W. Neff, and M. Qiu **I deal cylindrical cloak: Perfect but sensitive to tiny perturbations**, Phys. Rev. Lett., Vol.99, No.11, 113903.

M. Yan and M. Qiu **Guided plasmon polariton at 2D metal corners**, J. Opt. Soc. Am. B, Vol.24, No.9, 2333-2342.

C. W. Neff, L. M. Andersson, and M. Qiu **Coupled resonator optical waveguide structures with highly dispersive media** Opt. Express, Vol.15, No.16, 10362-10369.

Sychugov, N. Elfström, A. Hallén, J. Linnros, and M. Qiu **Effect of photonic bandgap on luminescence from silicon nanocrystals** Opt. Lett., Vol.32, Iss.13, pp.1878-1880.

C. W. Neff, L. M. Andersson, and M. Qiu **Modelling electromagnetically induced transparency media using the finite-difference time-domain method** New J. Phys., 9, 48.

S. Xiao and M. Qiu **Theoretical study of the transmission properties of a metallic film with surface corrugations**, J. Opt. A: Pure Appl. Opt., Vol.9, 349-351.

S. Xiao and M. Qiu **Optical microcavities based on surface modes in two-dimensional photonic crystals and silicon-on-insulator photonic crystals** J. Opt. Soc. Am. B, Vol.24, No.5, 1225-1229.

S. Xiao, N. A. Mortensen, and M. Qiu **Enhanced transmission through arrays of subwavelength holes in gold films coated by a finite dielectric layer** J. Eur. Op. Soc., Vol.2, 07009.

- M. Yan, Z. Ruan, and M. Qiu **Scattering characteristics of simplified cylindrical invisibility cloaks** *Opt. Express*, Vol. 15, Issue 26, pp. 17772-17782.
- M. Yan, Z. Ruan, and M. Qiu **Cylindrical invisibility cloak with simplified material parameters is inherently visible** *Phys. Rev. Lett.*, Vol. 99, No. 23, 233901
- Z. Zhang, M. Qiu, U. Andersson, and L. Tong **Subwavelength-diameter silica wire for light in-coupling to silicon-based waveguide** *Chinese Optics Letters*, Vol. 5, Issue 10, pp. 577-579
- Y. Lu, F. Liu, M. Qiu, Y. Su **All-optical format conversions from NRZ to BPSK and QPSK based on nonlinear responses in silicon microring resonators** *Opt. Express*, Vol. 15, Issue 21, pp. 14275-14282
- A. Kulbickas, J. Tamuliene, L. Rasteniene, M. Franckevicius, R. Vaisnoras, M. Marcos, J. L. Serrano, B. Jaskorzynska, I. Wosinski **Optical study and structure modeling of PPI crystal-line dendrimer derivatives** *Photonics and Nanostructures - Fundamentals and Applications*, 5, 178 – 183
- L. Wosinska and T.K. Svensson **Analysis of Connection Availability in an All-Optical Mesh Network** *Fiber and Integrated Optics*, Volume 26.2, second publication of 2007
- W. D. Grover, L. Wosinska and A. Fumagalli **High Availability in Optical Networks: introduction to the feature issue** *OSA Journal of Optical Networking*, Vol. 6, No 3, pp. 319 - 321 (March 2007)
- Jiajia Chen and L. Wosinska **Analysis of protection schemes in PON compatible with smooth migration from TDM-PON to hybrid WDM/ TDM-PON** *OSA Journal of Optical Networking*, Vol. 6, No 5 (May 2007)
- L. Wosinska and M. Glick **Photonics in Switching: introduction to the feature issue** *OSA Journal of Optical Networking*, Vol. 6, No 11, pp. 1244 - 1246 (November 2007)
- M. Yan and M. Qiu **Analysis of Surface Plasmon Polariton Using Anisotropic Finite Elements** *IEEE Photonics Technology Letters*, Vol. 19, No. 22, 1804-1806
- Z. Zhang M. Dainese, L. Wosinski, S. Xiao, Min Qiu, M. Swillo, and U. Andersson **Optical filter based on two-dimensional photonic crystal surface-mode cavity in amorphous silicon-on-silica structure** *Appl. Phys. Lett.*, 90, 041108.
- Z. Ruan and M. Qiu **Slow electromagnetic wave guided in subwavelength region along one-dimensional periodically structured metal surface** *Appl. Phys. Lett.*, 90, 201906.
- X.Y. Liu, T. Aggerstam, P. Jänes, P. Holmström, S. Lourdudoss, L. Thylén, and T.G. Andersson **Investigation of intersubband absorption in GaN/AlN multiple quantum wells grown on different substrates by molecular beam epitaxy** *J. Crystal Growth* 301-302, pp.457-460.
- X.Y. Liu, P. Jänes, P. Holmström, T. Aggerstam, S. Lourdudoss, L. Thylén, and T.G. Andersson **Growth of GaN and GaN/AlN multiple quantum wells on sapphire, Si and GaN template by molecular beam epitaxy** *J. Crystal Growth* 300, pp.79-82.
- D.M.Gvozdiac and U. Ekenberg **Strong dependence of spin direction and wave function localization on in-plane wave vector in wide modulation-doped quantum wells** *Journal of Physics: Conference Series* 61, 273.
- D.M.Gvozdiac and U. Ekenberg **Efficient switching of Rashba spin splitting in wide modulation-doped quantum wells** *Appl. Phys. Lett.* 90, 053105.
- A. Kulbickas, J. Tamuliene, L. Rasteniene, M. Franckevicius, R. Vaisnoras, M. Marcos, J. L. Serrano, B. Jaskorzynska, I. Wosinski, **Optical study and structure modeling of PPI crystal-line dendrimer derivatives**, *Photonics and Nanostructures - Fundamentals and Applications*, 5, 178 – 183

Publications, invited

- X.Y. Liu, P. Holmström, P. Jänes, L. Thylén, and T.G. Andersson **Intersubband absorption at 1.5 – 3.5 μm in GaN/AlN multiple quantum wells grown by molecular beam epitaxy on sapphire** *Phys. Stat. Sol. B*244, pp. 2892-2905

Book Chapters

- P. Holmström **Intersubband Electroabsorption Modulator** book chapter in "Nitride Semiconductor Devices: Principles and Simulation", J. Piprek ed., Wiley VCH, Berlin, pp.253-277.

Conference Contributions

- C. W. Neff, L. M. Andersson, and M. Qiu: **Enhanced Transmission in Dynamically Tuned Optical Microresonator Possessing Highly Dispersive Media**, 13th Eur. conf. Integrated Optics (ECIO 2007), Paper WH4, Copenhagen, Denmark, Apr.
- Z. Y. Zhang, M. Yan, and M. Qiu: **Numerical Studies on Silica Wire Directional Couplers**, 13th Eur. conf. Integrated Optics (ECIO 2007), Paper ThG26, Copenhagen, Denmark, Apr.
- M. Yan and M. Qiu: **Finite-element analysis of L-wedge plasmon polariton guide**, 13th Eur. conf. Integrated Optics (ECIO 2007), Paper ThG35, Copenhagen, Denmark, Apr.
- Z. C. Ruan and M. Qiu: **Some applications of designed surface plasmons in periodically structured metal surface**, int. symp. Photonic and Electromagnetic Crystal Structures (PECS-VII), Apr.2007, Monterey, California, USA.
- Z. Y. Zhang, M. Dainese, L. Wosinski, M. Swillo, and M. Qiu: **Two-dimensional photonic crystal surface-mode cavity in amorphous silicon-on-silica structure**, int. symp. Photonic and Electromagnetic Crystal Structures (PECS-VII), Apr.2007, Monterey, California, USA.
- C. W. Neff, L. M. Andersson, and M. Qiu: **Slow light in coupled resonator optical waveguides possessing highly dispersive background media**, int. symp. Photonic and Electromagnetic Crystal Structures (PECS-VII), Apr.2007, Monterey, California, USA.
- Z. Y. Zhang, M. Dainese, L. Wosinski, M. Swillo, S. S. Xiao, and M. Qiu: **Experimental Demonstration of 2-D Photonic Crystal Surface Cavity in Amorphous Silicon on Silica Structure**, proc. 2007 Optical Fiber Communication conf., paper OMI3, March 2007, Anaheim, California, USA.
- T. Aggerstam, T.G. Andersson, P. Holmström, P. Jänes, X.Y. Liu, S. Lourdudoss, and L. Thylén: **Intersubband absorption in GaN/AlN multiple quantum well structures grown by MBE on sapphire and GaN templates**, Paper B7-3, E-MRS 2007 Spring Meeting, Strasbourg, France, May 28 - June 1.
- X.Y. Liu, T. Aggerstam, P. Holmström, S. Lourdudoss, and T.G. Andersson: **Cracks in GaN/AlN multiple quantum well structures grown by MBE**, Paper EMPP2-118, 17th int. Vacuum Congress and 13th int. conf. Surface Science, proc. J. Physics: Conf. Ser., Stockholm, Sweden, June.
- M. Yan and M. Qiu: **Finite element study of metal-corner Plasmon polariton waveguides**, Asia-Pacific Optical Communications (APOC), #6781-86, Wuhan, China, Nov.
- JiaJia Chen and L. Wosinska: **Performance Analysis of Protection Schemes Compatible with Smooth Migration from TDM-PON to Hybrid WDM/TDM-PON**, proc. Optical Fiber Communication/National Fiber Optic Engineers conf. OFC/NFOEC'07, Anaheim, CA, March.
- A. Muchanga, A. B. Bagula, and L. Wosinska: **On Using Fast Signalling to Improve Restoration in Multilayer Networks**, proc. Optical Fiber Communication/National Fiber Optic Engineers conf. OFC/NFOEC'07, Anaheim, CA, March.
- Jiajia Chen, L. Wosinska, and S. He: **A Novel Protection Scheme for Hybrid WDM/TDM PONs**, proc. Asia-Pacific Optical Communications conf. APOC'07, Wuhan, China, Nov.
- M. Kantor, J. Chen, L. Wosinska, and K. Wajda: **Techno-economic analysis of PON protection schemes**, proc. BroadBand Eur. conf. BBE'07, Antwerp, Belgium, Dec.
- L. Wosinski, L. Liu, M. Dainese, and D. Dai: **Amorphous Silicon in Nanophotonic Technology**, proc. 13th Eur. conf. Integrated Optics, ECIO 2007, Copenhagen, Denmark, April 25-27.
- D. Parekh, L. Thylén, C.J. Chang-Hasnain: **Metal Nanoparticle Metamaterials for Engineering Dielectric Constants and Their Applications to Near Resonant Surface Plasmon Waveguides**, *Frontiers in Optics*, OSA Technical Digest Series (Optical Society of America), paper FThF6

D. M. Gvozdiac and U. Ekenberg: **Rapid spin flip in a spin subband at an anticrossing region in a slightly asymmetric modulation-doped quantum well**, contribution to the 13th int. conf. Modulated Semiconductor Structures, Genova, available online as *Physica E*, doi: 10.1016/j.physe.2007.09.112.

P. Holmström, P. Jänes, U. Ekenberg, and L. Thylén: **Efficient electroabsorption for mid-infrared wavelengths using intersubband transitions**, Paper EMP10-Or3, int. conf. Nanoscience and Technology (ICN+T 2007), proc. J. Physics: Conf. Ser., Stockholm, Sweden, June.

P. Holmström, P. Jänes, U. Ekenberg, and L. Thylén: **Infrared modulator at 6 μm using intersubband transitions in step quantum wells grown by MOVPE**, Paper WE-PM32, int. conf. Modulated Semiconductor Structures (MSS-13), Genova, Italy, July.

JiaJia Chen, L. Wosinska, L. Thylén, and S. He: **Novel Architectures of Asynchronous Optical Packet Switch**, proc. Eur. conf. Optical Communication ECOC'07, Berlin, Germany, Sept.

Invited Talks

T. Aggerstam, T. G. Andersson, P. Holmström, P. Jänes, X. Y. Liu, S. Lourdudoss, and L. Thylén: **GaN/AlN multiple quantum well structures grown by MBE on GaN templates for 1.55 μm intersubband absorption**, *invited*, Photonics West conf.; proc. SPIE 6479, pp. 6479E1-12, San Jose, USA, Jan.

L. Thylén, E. Berglind, and M. Qiu: **Prospects for nanophotonics circuits: What comes after silicon nanowires?** OSA Topical conf. Nanophotonics (NANO 2007). June 18-21, Hangzhou, China. (invited)

M. Qiu, Z. Y. Zhang, U. Andersson, and L. M. Tong: **Direct Butt-Coupling between Subwavelength-diameter Silica Wire and Silicon Wire Waveguide**, OSA Topical conf. Nanophotonics (NANO 2007). June 18-21, Hangzhou, China. (invited)

M. Qiu: **Modeling nanophotonic devices with dispersive media**, Photonics North 2007, June 3-7, Ottawa, ON, Canada. (invited)

P. Holmström, X. Y. Liu, H. Uchida, T. Aggerstam, A. Kikuchi, K. Kishino, S. Lourdudoss, T. G. Andersson, and L. Thylén: **Intersubband photonic devices by group-III nitrides**, *invited*, Optoelectronic Materials and Devices II, APOC 2007 conf., proc. SPIE 6782, pp.6782N11-14, Wuhan, China, Nov.

Bozena Jaskorzynska, Lech Wosinski, Min Qiu, Srinivasan Anand, and Lars Thylén: **Mesophotonic structures**, IX int. Workshop Nonlinear Optics Appl. (NOA), Swinoujscie, Poland, May 17-20. (invited)

L. Wosinski, L. Liu, M. Dainese, and E. Berglind: **Technology challenges for silicon nanophotonics and beyond**, 9th int. conf. Transparent Optical Networks, ICTON 2007, Rome, Italy, July 1-5, proc. IEEE, vol.1, pp.183-188 (invited).

L. Wosinski: **Silicon-based photonics**, conf. "Optics in Sweden 2007", Skellefteå, Sweden, Nov. 8-9 (invited).

L. Wosinska, J. Chen, M. Kantor, and K. Wajda: **Reliability and cost analysis of Passive Optical Networks**, *invited*, proc. IEEE int. conf. Transparent Optical Networks – Mediterranean Winter, ICTON-MW'07, Sousse, Tunisia, Dec.

L. Thylén: **Nanophotonics: Plasmonics and photonic lightwave circuits**, Nanotech Northern Europe, Helsinki, March (invited).

L. Thylén: **Prospects for nanophotonics circuit**, proc. IEEE and OSA AOE Optical Fiber Communications and Optoelectronic conf., Shanghai PR China, invited.

L. Wosinska and JiaJia Chen: **Reliability Performance of Passive Optical Networks**, *invited*, proc. IEEE int. conf. Transparent Optical Networks/Reliability Issues in Optical Networks, ICTON/RONEXT'07, Rome, Italy, July.

F. Callegati, L. Wosinska, M. Tornatore, and F. Cugini: **Research in Optical Transport Networks: the e-Photon/ONE+ experience**, (*Plenary talk*), proc. IEEE int. conf. Transparent Optical Networks, ICTON'07, Rome, Italy, July.

Carla Raffaelli, Lena Wosinska, Franco Callegati, Nicola Andriolli, Piero Castoldi, Luca Valcarengi, Wojciech Kabacinski, Guido Mayer, and Achille Pattavina: **Photonics in Switching in NoE e-Photon/One+**, *invited*, proc. IEEE int. conf. Transparent Optical Networks, ICTON'07, Rome, Italy, July.

L. Valcarengi, R. Inkret, B. Mikac, A. Patavina, M. Tornatore, M. Pickavet, K. Wajda, and L. Wosinska: **Which Resilience for the Optical Internet? An e-Photon/ONE+ Outlook**, *invited*, proc. IEEE int. conf. Transparent Optical Networks/Reliability Issues in Optical Networks, ICTON/RONEXT'07, Rome, Italy, July.

M. Qiu: **Photonic Crystal and Plasmonic Devices for Photonic Integration**, Asia Optical Fiber Communication & Optoelectronic Exposition & conf. (AOE 2007), Oct, Paper SC2.S3.1, Shanghai, China.

M. Qiu: **Control of Slow Light in Coupled Resonator Optical Waveguide Structures with Highly Dispersive Media**, Asia Optical Fiber Communication & Optoelectronic Exposition & conf. (AOE 2007), Oct, Paper SLW1.1, Shanghai, China.

Optics OPT

Peer reviewed international journal papers:

K. Blomstedt, T. Setälä, and A.T. Friberg, **Arbitrarily short coherence length in fields within finite source regions**, *Phys. Rev. E* 75, 026610

K. Blomstedt, T. Setälä, and A.T. Friberg, **Effective degree of coherence: general theory and application to electromagnetic fields**, *J. Opt. A: Pure Appl. Opt.* 9, 907-919

K. Lindfors, A. Priimagi, T. Setälä, A. Shevchenko, A.T. Friberg, and M. Kaivola, **Local polarization of tightly focused unpolarized light**, *Nature Phot.* 1, 228-231

A. Burvall, P. Martinsson, and A.T. Friberg, **Communication modes in large-aperture approximation**, *Opt. Lett.* 32, 611-613

P. Martinsson, H. Lajunen, and A.T. Friberg, **Communication modes with partially coherent fields**, *J. Opt. Soc. Am.* 24, 3336-3342

V. Torres-Company, H. Lajunen, and A.T. Friberg, **Effects of partial coherence on frequency combs**, *J. Eur. Opt. Soc. Rapid Publ.* 2, 07007

V. Torres-Company, H. Lajunen, and A.T. Friberg, **Coherence theory of noise in ultrafast-pulse trains**, *J. Opt. Soc. Am. B* 24, 1441-1450; also in *Virtual Journal of Ultrafast Science*, July 2007 issue.

V. Torres-Company, G. Minguez-Vega, J. Lancis, and A.T. Friberg, **Controllable generation of partially coherent light pulses with direct space-to-time pulse shaper**, *Opt. Lett.* 32, 1608-1610; also in *Virtual Journal of Ultrafast Science*, August 2007 issue.

A.T. Friberg, H. Lajunen, and V. Torres-Company, **Spectral elementary-coherence-function representation for partially coherent light pulses**, *Opt. Express* 15, 5160-5165.

S. Popov, S. Ricciardi, A.T. Friberg, and S. Sergeyev, **Mode suppression in a microcavity solid-state dye laser**, *J. Eur. Opt. Soc. Rapid Publ.* 2, 07022.

S. Ricciardi, S. Popov, A.T. Friberg, and S. Sergeyev, **Thermally induced wavelength tunability of microcavity solid-state dye lasers**, *Opt. Express* 15, 12971-12978.

S. Popov, S. Ricciardi, A.T. Friberg, and S. Sergeyev, **Impact of cavity symmetry on mode suppression and increase of free spectral range in solid-state dye microlaser**, *Chinese Opt. Lett.* 5, 651-653.

S. Sergeyev, S. Popov, and A.T. Friberg, **Polarization dependent gain and gain fluctuations in a fiber Raman amplifier**, *J. Opt. A: Pure Appl. Opt.* 9, 1119-1122.

S. Sergeyev and S. Popov, **Excitation back transfer in a statistical model for upconversion in Er-doped fibers**, *J. Eur. Opt. Soc. Rapid Publ.* 2, 07027.

T. Aggerstam, A. Pinos, S. Marcinkevicius, M. Linnarsson, and S. Lourdudoss, **Electron and hole capture cross-sections to Fe acceptors in GaN: Fe epitaxially grown on sapphire**, *J. Electron. Mat.* 36, 1621-1624.

S. Marcinkevicius, A. Pinos, K. Liu, D. Veksler, M.S. Shur, J. Zhang and R. Gaska, **Intrinsic electric fields in AlGaIn quantum wells**, *Appl. Phys. Lett.* 90, 081914

Books and book chapters

A.T. Friberg, M.L. Calvo, and P. Chavel, **Arthur H. Guenther and the International Commission for Optics: promoting a global view of Optics**, in *Tribute to Arthur H. Guenther*, ed. A. Glass (SPIE Press, Bellingham, WA, USA, 2007), Chapter 10.

S. Marcinkevicius, **Dynamics of carrier transfer into In(Ga)As self-assembled quantum dots**, in *Self-Assembled Quantum Dots*, ed. Z.M. Wang (Springer, Berlin, Germany, 2007) p. 129-164.

Peer reviewed conference reports

K. Kolacz, A. Burvall, A. Goncharov, Z. Jaroszewicz, C. Dainty, and A.T. Friberg, **Present design of lens axicons and their history**, in *Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2007*, ed. R.S. Romaniuk (Wilga. Poland, May 2007), Proc SPIE 6937, 69373Z

S.V. Sergejev; S.Yu. Popov, and A.T. Friberg, **A new PMD measurement technique**, in *Int'l Conference on Coherent and Nonlinear Optics (ICONO/LAT 2007, Minsk, Belarus, May – June 2007): Advanced Lasers and Systems*, eds. V.A. Orlovich, V. Panchenko, and I.A. Scherbakov, Proc. SPIE 6731, 67310S-1-8

S. Popov, S. Ricciardi, A.T. Friberg, and S. Sergejev, **Even-mode generation in microcavity dye laser**, in *Int'l Conference on Coherent and Nonlinear Optics (ICONO/LAT 2007, Minsk, Belarus, May – June 2007): Coherent and Nonlinear Optical Phenomena*, eds. V.N. Belyi, K.N. Drabovich, and C. Flytzanis, Proc. SPIE 6729, 67292M-1-9

S. Ricciardi, S. Popov, A.T. Friberg, and S. Sergejev, **Tunable microcavity solid-state dye laser for biometrics applications**, in *Int'l Conference on Coherent and Nonlinear Optics (ICONO/LAT 2007, Minsk, Belarus, May – June 2007): Coherent and Nonlinear Optical Phenomena*, eds. V.N. Belyi, K.N. Drabovich, and C. Flytzanis, Proc. SPIE 6729, 67292N-1-9

S. Sergejev, S. Popov, and A.T. Friberg, **A new PMD measurement technique with a fiber Raman amplifier**, *Conference on Lasers and Electro-Optics/Europe (CLEO/Europe 2007)*, Munich, Germany, June.

S. Ricciardi, S. Popov, A.T. Friberg, and S. Sergejev, **Thermo-elastic tunability of microcavity solid-state dye laser**, *OSA Topical Conference on Nanophotonics (NANO)*, Hangzhou, China, June, p. 61.

S. Popov, S. Ricciardi, A.T. Friberg, and S. Sergejev, **Mode depletion in micro-sized solid-state dye laser**, *OSA Topical Conference on Nanophotonics (NANO)*, Hangzhou, China, June, p. 116.

A.T. Friberg, J. Tervo, and T. Setälä, **Electromagnetic coherence and Pancharatnam-Berry phase in Young's interference experiment**, in *9th Rochester Conference on Coherence and Quantum Optics (CQO9)*, Rochester, NY, USA, June, poster CSuA28.

S. Popov, S. Ricciardi, A.T. Friberg, and S. Sergejev, **Odd-mode depletion in microcavity solid-state dye laser**, *International Conference on Nanoscience and Technology (ICN+T 2007)*, Stockholm, Sweden, July, *Journal of Physics: Conference series* (in press).

J. Tervo, T. Setälä, and A.T. Friberg, **Stokes parameters and Pancharatnam-Berry phase in Young's interference experiment**, in *EOS Topical Meeting on Advanced Imaging Techniques*, Lille, France, September, pp. 82-83.

K. Lindfors, A. Priimagi, T. Setälä, A. Shevchenko, M. Kaivola, and A.T. Friberg, **Local polarization of tightly focused unpolarized light**, in *EOS Topical Meeting on Advanced Imaging Techniques*, Lille, France, September, pp. 149-150 (poster).

S. Ricciardi, S. Popov, and A.T. Friberg, **Wavefront shaping: plane waves out of a point source**, in *COMSOL Conference, Grenoble, France, October, Proc. COMSOL Users' Conference 2*, pp. 761-764.

S. Ricciardi, S. Popov, and A.T. Friberg, **Diffraction optical beamsplitter: application of the resonance properties of wavelength-scaled microcavity**, in *EOS Topical Meeting on Diffractive Optics, Barcelona, Spain, November, Proc. EOS Topical Meeting on Diffractive Optics*, pp. 23-24.

M.D. Guina, S. Suomalainen, T. Hakulinen, O.G. Okhotnikov, and S. Marcinkevicius, **Semiconductor saturable absorbers with recovery time controlled by lattice mismatch**, in *Photonics West, San Jose, CA, USA, January 2007: Optical Components and Materials IV*, eds. S. Jiang and M. J. F. Digonnet, Proc. SPIE 6469, 64690P-1-7

M.D. Guina, P. Tuomisto, O.G. Okhotnikov, S. Marcinkevicius, K. Mizohata, and J. Keinonen, **Semiconductor saturable absorbers with recovery time controlled through growth conditions**, in *Photonics West, San Jose, CA, USA, January 2007: Solid State Lasers XVI: Technology and Devices*, eds. H.J. Hoffman, R.K. Shori, and N. Hodgson, Proc. SPIE 6451, 645113-1-7

S. Marcinkevicius, T. Aggerstam, A. Pinos, M. Linnarsson, and S. Lourduoss, **Carrier capture due to Fe in semi-insulating GaN:Fe**, *14th Semiconducting and Insulating Materials Conference*, Fayetteville, AR, USA, May.

Y. Shi, A. Berrier, J. Siegert, S. Marcinkevicius, S. He, and S. Anand, **Accumulated side-wall damage and its impact on carrier lifetimes in dry-etched InP-based photonic crystals**, *13th International Conference on Surface Science, Stockholm, Sweden, July*, paper EMP 03-Or1.

A. Pinos, T. Aggerstam, S. Marcinkevicius, and S. Lourduoss, **Time-resolved photoluminescence studies of iron doped GaN**, *22nd Nordic Semiconductor Meeting, Stockholm, Sweden, July*, paper EMP 05-Or3.

S. Marcinkevicius, A. Pinos, T. Aggerstam, and S. Lourduoss, **Dynamics of carrier capture to deep Fe centres in GaN:Fe**, *13th International Symposium on Ultrafast phenomena in Semiconductors, Vilnius, Lithuania, August*, paper O1-1.

S. Marcinkevicius, A. Pinos, K. Liu, D. Veksler, M.S. Shur, J. Zhang, and R. Gaska, **Intrinsic electric fields in wide band gap AlGaIn quantum wells**, *7th International Conference of Nitride Semiconductors, Las Vegas, NV, USA, September*, paper WP79.

S. Marcinkevicius, A. Pinos, K. Liu, M.S. Shur, J. Zhang, and R. Gaska, **Screening dynamics of intrinsic electric fields in deep AlGaIn quantum wells**, *34th International Symposium on Compound Semiconductors, Kyoto, Japan, October*, paper ThC P24.

Invited talks

A.T. Friberg, **Electromagnetic coherence in nanophotonics**, *Nanotech Northern Europe 2007 (Helsinki, Finland, March 2007 (Havana, Cuba, April, Proceedings CD (12 pp).*

A.T. Friberg, **Electromagnetic coherence in optics**, in *Tecnolaser 2007 (Havana, Cuba, April, Proceedings CD (12 pp).*

A.T. Friberg, J. Tervo, and T. Setälä, **Young's interference experiment reloaded**, *6th Int'l Workshop on Information Optics – WIO'07 (Reykjavik, Iceland, June)*, eds. J.A. Benediktsson, B. Javidi, and K. Gudmundsson, *AIP Conf. Proc.* 949, pp. 131-137

A.T. Friberg, **Partial polarization and coherence in arbitrary electromagnetic fields**, in *6. Ibero-American Conference on Optics & 9. Latin-American Meeting on Optics, Lasers and Applications – RIAO/OPTILAS 2007 (Campinas, Brazil, October)*, Proc. AIP (electronic), 6 pp.

A.T. Friberg, **Coherence and information in random electromagnetic fields**, in *Meeting on Applied Optics (Buenos Aires, Argentina, October)*.

A.T. Friberg, **Young's interference experiment revisited: effects of polarization**, in *Meeting on Applied Optics (La Plata, Argentina, October)*.

V. Torres-Company, H. Lajunen, J. Lancis, and A.T. Friberg, **Ghost interference with classical light pulses**, in *Optics and Laser Applications in Medicine and Environmental Monitoring for Sustainable Development – OptoLaserMed 2007 (Cape Coast, Ghana, November)*, p. 71.

Department of Communication Systems, CoS

Journal Papers

Sem Borst, Nidhi Hegde, and Alexandre Proutiere, **Interacting queues with server selection and coordinated scheduling - Application to cellular data networks**, Annals of Operations Research, June

Omar Al-Askary and Slimane Ben Slimane, **Effect of error in CSI on the capacity of Rayleigh fading channels with QAM signalling and the design**, IET Communications Journal, June

Klas Johansson, Anders Furuskär, and Jens Zander, **Modelling the cost of heterogeneous wireless access networks**, Int. J. Mobile Network Design and Innovation, May

Charles Bordenave, David McDonald, and Alexandre Proutiere, **A particle system in interaction with a rapidly varying environment: Mean Field limits and Applications**, Journal on Stochastic Processes and their Applications, May

David Gomez-Barquero, Aurelian Bria, Jens Zander, Narcis Cardona **Affordable Mobile TV Services in Hybrid Cellular and DVB-H Systems** IEEE Network, April

Slimane Ben Slimane, **Reducing the Peak-to-Average Power Ratio of OFDM Signals Through Precoding**, IEEE Transactions on Vehicular Technology, March

Book Chapters

Johan Hultell, Jens Zander, and Jan Markendahl, **Competition and Cooperation in Wireless Multi-Access Networks**, in Cognitive Wireless Networks, September

Conference Papers

Afif Osseiran, Andrew Logothetis, Slimane Ben Slimane, and Peter Larsson, **Relay Cyclic Delay Diversity: Modeling & System Performance**, Proceedings IEEE International Conference on Signal Processing and Communication, November

Marvin Sanchez, Bo Hagerman, and Jens Zander, **Radio Resource Allocation in Spatial TDMA Multihop Networks with Advanced Antennas**, Wireless Rural and Emergency Communications WRECOM 2007, October

Klas Johansson, Christian Bergljung, Catarina Cedervall, and Peter Karlsson, **Capacity Expansion for Non-Uniform Spatial Traffic Distributions**, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, September

Klas Johansson, Anders Furuskär, Christian Bergljung, **A Methodology for Estimating Cost and Performance of Heterogeneous Wireless Access Networks**, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, September

Aurelian Bria, Patrik Kärrberg, Per Andersson, **TV in the mobile or tv for the mobile: Challenges and changing value chains**, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, September

Bogdan Timus and Slimane Ben Slimane, **Performance analysis of an amplify and forward relaying scheme with pre-coding**, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), September

Pietro Lungaro, **Distributed and Centralized Mobility-Aware Caching Schemes for Collaborative Service Provision in User-Deployed Networks**, Proceedings IEEE Vehicular Technology Conference, Fall, September

Young-Keum Song, Hyun Guk, Dongwoo Kim, Seung Hoi Kim, **Setting up/down step-size in open loop power control for WIBRO reverse link**, Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC07), September

Eun-Hee Shin and Dongwoo Kim, **On the asymptotic sum-rate in 2xNx2 dual-hop relaying with quality based channel reporting and relay selection**, Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC07), September

Aurelian Bria, Jan Markendahl, Rene Rembarz, Petteri Pöyhönen, Csaba Simon, and Marco Miozzo, **Validation of the Ambient Networks System**, Chinacom Conference, August

Oscar Somarriba and Jens Zander, **Evaluation of Heuristic Strategies for Scheduling, and Power Allocation in STDMA Wireless Networks**, International Symposium on Signals, Systems, and Electronics, August.

Jiaping Liu, Alexandre Proutiere, Yung Yi, Mung Chiang, and Vincent Poor, **Flow level Stability of Data Networks with Nonconvex and Time-varying rate regions**, ACM Sigmetrics, June.

Charles Bordenave, David McDonald, and Alexandre Proutiere **Random multi-access algorithms in networks with partial interaction: A mean field analysis**, ITC'07, June

Luca Stabellini and Alexandre Proutiere, **Evaluating delay and energy in sensor networks with sporadic and correlated traffic**, AdHoc'07, May.

U. H. Rizvi, G. J. M. Janssen, and Slimane Ben Slimane, **Combined multiple transmit antennas and multilevel modulation techniques**, Proceeding of the 28th Symposium on Information Theory in the Benelux, May.

Klas Johansson, Anders Furuskär, and Jens Zander, **Cost Efficient Deployment of Heterogeneous Wireless Access Networks**, Proceedings IEEE Vehicular Technology Conference, Spring, April.

David Gomez-Barquero and Aurelian Bria, **Forward Error Correction for File Delivery in DVB-H**, Proceedings IEEE Vehicular Technology Conference, Spring, April.

Pietro Lungaro, **Collaborative Information Revelation and Collusion in "Word-of-Mouth" Access Selection Schemes**, Proceedings IEEE Vehicular Technology Conference, Spring, April.

Mats Blomgren and Johan Hultell, **Demand-Responsive Pricing in Open Wireless Access Markets**, Proceedings IEEE Vehicular Technology Conference, Spring, April.

Mats Blomgren and Johan Hultell, **Decentralized Market-Based Radio Resource Management in Multi-Network Environments**, Proceedings IEEE Vehicular Technology Conference, Spring, April.

Bozidar Radunovic and Alexandre Proutiere, **On Downlink Capacity of Cellular Data Networks with WLAN/WPAN Relays**, RAWNET, April.

Applied Signal Processing

Journals

Jinliang Huang and Svante Signell, **On Spectral Efficiency of Low-Complexity Adaptive MIMO Systems in Rayleigh Fading Channel**. IEEE Trans. Wireless Commun, to be scheduled 2008.

Refereed conference papers

Jinliang Huang and Svante Signell, **The Spectral Efficiency of 2x2 Adaptive MIMO Systems in Spatially Correlated Rayleigh Fading Channel**. In Future Generation Communication and Networking (FGCN), volume 2, pages 244 - 247, Jeju Island, Korea, December.

Jinfeng Du and Svante Signell, **Comparison of CP-OFDM and OFDM/OQAM in Doubly Dispersive Channels**. In Future Generation Communication and Networking (FGCN), volume 2, pages 207 - 211, Jeju Island, Korea, December.

S. Signell and J. Huang, **A Simulation Environment for Multi-Antenna Software Defined Radio**. In International Conference on Information, Communications and Signal Processing (ICICS), Singapore, December.

Jinfeng Du and Svante Signell, **Time Frequency Localization of Pulse Shaping Filters in OFDM/OQAM Systems**. In International Conference on Information, Communications and Signal Processing (ICICS), Singapore, December.

Svante Signell, **ADDA - A Versatile Development Platform for AD- and DA-Converters**. In Proceedings of 25th Norchip Conference, Aalborg, Denmark, November.

Yiran Sun and Svante Signell, **Implementation Aspects of Generalized Bandpass Sampling**. In European Signal Processing Conference (EUSIPCO), Poznan, September.

Yiran Sun and Svante Signell. **Implementation of Generalized Uniform Bandpass Sampling with Complex FIR and IIR Filtering**. In Proceedings of European Conference on Circuit Theory and Design (ECCTD), Sevilla, August.

Ruida Yun and Svante Signell. **A Least Mean Square Based Calibration Technique for 1.5 bit/stage Pipelined ADCs**. In Proceedings of European Conference on Circuit Theory and Design (ECCTD), Sevilla, August.

Jinliang Huang and Svante Signell. **On Spectral Efficiency of Adaptive MIMO Systems in 2x2 spatially correlated Rayleigh Fading Channel**. In Sarnoff Symposium, Princeton, April-May.

Jinliang Huang and Svante Signell. **Adaptive MIMO Systems based on Partial Channel State Information in 2x2 Uncorrelated Rayleigh Fading Channel**. In Proceedings of IEEE Wireless Communications and Networking Conference (WCNC), Hong Kong, March.

Non-refereed conference papers

S. Signell. **ADDA - A versatile development platform for AD- and DA- converters**. In Swedish System on Chip Conference (SSoCC), Gullmarstrand, May. Non-reviewed.

Y. Qin and S. Signell. **Calibration of Capacitor-Mismatch Errors in multibit/stage Pipelined ADCs**. In Swedish System on Chip Conference (SSoCC), Gullmarstrand, May. Non-reviewed.

X. Yuan and S. Signell. **Hybrid CT/DT Sigma Delta Modulator With 1.5b Quantizer**. In Swedish System on Chip Conference (SSoCC), Gullmarstrand, May. Non-reviewed.

J. Du and S. Signell. **Time Frequency Localization of Pulse Shaping filters in OFDM/OQAM Systems**. In Swedish System on Chip Conference (SSoCC), Gullmarstrand, May. Non-reviewed.

J. Huang and S. Signell. **On Diversity Order of Singular Value Decomposition**. In Swedish System on Chip Conference (SSoCC), Gullmarstrand, May. Non-reviewed.

Department of Electronic, Computer, and Software Systems (ECS)

System Architecture and Methodology, SAM

Conference contributions

Zhonghai Lu and Axel Jantsch. **Slot allocation for TDM virtual-circuit configuration for network-on-chip**. In Proceedings of the 2007 International Conference on Computer-Aided Design (ICCAD'07), San Jose, CA, USA, November.

Ingo Sander and Axel Jantsch. **Modelling adaptive systems in ForSyDe**, Proceedings of the First Workshop on Verification of Adaptive Systems (VerAS), pp. 39-54, Kaiserslauten, 2007.

Zhonghai Lu and Axel Jantsch. **Admitting and Ejecting Flits in Wormhole-switched Networks on Chip**, IET Computers & Digital Techniques, vol. 5, no. 1, pp. 546-556, September.

Ming Liu, Wolfgang Kuehn, Zhonghai Lu, Axel Jantsch, Shuo Yang, Tiago Perez, and Zhenan Liu. **Hardware/Software Co-design of a General-Purpose Computation Platform in Particle Physics**, Proceedings of the ICFPT.

Huimin She, Zhonghai Lu, Axel Jantsch, Li-Rong Zheng, and Dian Zhou. **Traffic Splitting with Network Calculus for Mesh Sensor Networks**, International Workshop on Wireless Ad Hoc, Mesh and Sensor Networks, December.

Huimin She, Zhonghai Lu, Axel Jantsch, and Dian Zhou. **A Network-based System Architecture for Remote Medical Applications**, Proceedings of the Asia-Pacific Advanced Network Meeting.

Tomas Henriksson, Pieter van der Wolf, Axel Jantsch, and Alistair Bruce. **Network Calculus Applied to Verification of Memory Access Performance in SoCs**, Proceedings of the 5th IEEE Workshop on Embedded Systems for Real-Time Multimedia, October.

Andreas Herrholz, Frank Oppenheimer, P. A. Hartmann, Andreas Schallenberg, Wolfgang Nebel, Christoph Grimm, Markus Damm, J. Haase, Fernando Herrera, Eugenio Villar, Ingo Sander, Axel Jantsch, Anne-Marie Fouilliant, and Marcos Martinez. **The ANDRES Project: ANalysis and Design of run-time REconfigurable, heterogeneous Systems**, Proceedings of the The International Conference on Field-Programmable Logic, Reconfigurable Computing, and Applications (FPL), August.

Andreas Herrholz, Frank Oppenheimer, Andreas Schallenberg, Wolfgang Nebel, Christoph Grimm, Markus Damm, Fernando Herrera, Eugenio Villar, Ingo Sander, Axel Jantsch, Anne-Marie Fouilliant, and Marcos Martinez. **ANDRES - ANalysis and Design of run-time REconfigurable, heterogeneous Systems**, Workshop on Reconfigurable Systems at DATE, April.

Tarvo Raudvere, Ingo Sander, and Axel Jantsch. **A Synchronization Algorithm for Local Temporal Refinements in Perfectly Synchronous Models with Nested Feedback Loops**, Proceedings of the Great Lake Symposium on VLSI (GLSVLSI).

Tarvo Raudvere, Ingo Sander, and Axel Jantsch. **Synchronization after design refinements with sensitive delay elements**, Proceedings of the International Conference on HW/SW Codesign and System Synthesis, Salzburg, Austria, September.

Zhonghai Lu and Axel Jantsch. **Slot Allocation Using Logical Networks for TDM Virtual-Circuit Configuration for Network-on-Chip**, International Conference on Computer Aided Design (ICCAD), November.

Zhonghai Lu, Ming Liu, and Axel Jantsch. **Layered Switching for Networks on Chip**, Proceedings of the Design Automation Conference, June.

Zhonghai Lu, Jonas Sicking, Ingo Sander, and Axel Jantsch. **Using Synchronizers for Refining Synchronous Communication onto Hardware/Software Architectures**, Proceedings of the 18th IEEE/IFIP International Workshop on Rapid System Prototyping, Porto Alegre, Brasil, May.

Mickael Millberg and Axel Jantsch. **Increasing NoC Performance and Utilisation using a DualPacket Exit Strategy**, 10th EuroMicro Conference on Digital System Design, Lubeck, Germany, August.

Mickael Millberg and Axel Jantsch. **Improvements of Performance and Use of Buffers in NoCs using Dual Packet Exit**, Proceedings of the 1st Symposium on Networks on Chip, poster, May.

Per Badlund and Axel Jantsch. **An analytical approach for dimensioning mixed traffic networks**, Proceedings of the 1st Symposium on Networks on Chip, poster, May.

Deepak Mathaikutty, Hiren Patel, Sandeep Shukla, and Axel Jantsch. **EWD: A Metamodeling Driven Customizable Multi-MoC System Modeling Framework**, ACM Transactions on Design Automation of Embedded Systems, vol. 12, no. 3, August.

Iyad Al Khatib, Davide Bertozzi, Francesco Poletti, Luca Benini, Axel Jantsch, Mohamed Bechara, Hasan Khalifeh, Mazen Hajjar, Rustam Nabiev, and Sven Jonsson. **Hardware/Software Architecture for Real-Time ECG Monitoring and Analysis Leveraging MPSoC Technology**, Transactions on High-Performance Embedded Architectures and Compilers (HiPEAC), vol. 1, no. 1, pp. 239-258, LNCS 4050.

Iyad Al-Khatib, and Davide Bertozzi, Axel Jantsch, and Luca Benini. **Performance Analysis and Design Space Exploration for High-End Biomedical Applications: Challenges and Solutions**, Proceedings of the International Conference on Hardware - Software Codesign and System Synthesis, September.

Axel Jantsch, **The Nostrum Home Page**, <http://www.imit.kth.se/info/FOFU/Nostrum>.

Axel Jantsch, **Models of Computation for Networks on Chip**, Invited Seminar at IMEC, February.

Axel Jantsch, NoC: State of the art, trends and challenges, Section I of Full Day Tutorial **NoC at the Age of Six: Advanced Topics, Current Challenges and Trends** at DATE 2007, April.

Axel Jantsch, Performance analysis and dimensioning of bandwidth and buffer capacity, Section I of Full Day Tutorial **Tutorial on Networks on Chip** at the NoC Symposium 2007, May.

Axel Jantsch, **The Nostrum Network on Chip**, Invited Seminar at Turku Center for Computer Science, November.

Zhonghai Lu and Axel Jantsch, **Slot allocation using logical networks for TDM virtual circuit configuration for network-on-chip**, Invited Seminar at Eindhoven University of Technology, November.

Electronic Systems Design, ESD

Journal papers

Saul Rodriguez, Jad G. Atallah, Ana Rusu, Li-Rong Zheng, Mohammed Ismail, "ARCHER: An Automated RF-IC Rx Front-End Circuit Design Tool," in Journal of Analog Integrated Circuits and Signal Processing, Kluwer Academic Publishers Rodriguez, S.; Rusu, A.; Zheng, L.-R.; Ismail, M., "CMOS RF mixer with digitally enhanced IIP2," IEE Electronics Letters

Weerasekera, R.; Pamunuwa, D.; Zheng, L.-R.; Tenhunen, H., "Minimal-Power, Delay-Balanced Smart Repeaters for Global Interconnects in the Nanometer Regime," IEEE Transactions on Very Large Scale Integration (VLSI) Systems

Li-Rong Zheng, **Intelligent paper and packaging - I integration of microelectronics technologies into paper and packaging products**, ipw – The Magazine for European Paper and Pulp Industry.

Z. Zou, M. Baghaei-Nejad, H. Tenhunen, L.-R. Zheng. **An Efficient Passive RFID System for Ubiquitous Identification and Sensing Using Impulse UWB Radio**. Accepted by e+i Journal of OVE, special issue on RFID. Springer, Dec.

Majid Baghaei Nejad, Meigen Shen, Tero Koivisto, Teemu Peltonen, Esa Tjukanoff, Hannu Tenhunen, and Li-Rong Zheng. **Uwb radio module design for wireless sensor networks**. Analog Integrated Circuits & Signal Processing, Vol. 50, No. 1, Jan.

Conference contributions

E. Dubrova, M. Teslenko, H. Tenhunen, **A Computational Model Based on Random Boolean Networks**, BIONETICS'2007, December 10-13, Budapest, Hungary.

M. Teslenko, E. Dubrova, H. Tenhunen, **FIREwork: Redundancy Identification and Removal for Large Combinational Circuits**, Notes of International Workshop on Logic and Synthesis (IWLS'2007), May 30 - June 1, San Diego, CA, USA, pp. 388-396.

V. Lirigis, E. Dubrova, **Evaluation and Comparison of Threshold Logic Gates**, Proceedings of 37th IEEE International Symposium on Multiple-Valued Logic (ISMVL'2007), May 14-16, Oslo, Norway, pp.52-56.

E. Dubrova, H. Tenhunen, **A Dynamic Network Model for Nanoscale Systems**, European NanoSystems'2007, December 3-4, Paris, France.

Z. Zou, M. Baghaei-Nejad, H. Tenhunen, L.-R. Zheng. **Baseband Design for Passive Semi-UWB Wireless Sensor and Identification Systems**. IEEE International SoC Conference SoCC'07. Sept.

Z. Zou, M. Baghaei-Nejad, H. Tenhunen, L.-R. Zheng. **An Efficient Passive RFID System for Ubiquitous Identification and Sensing Using Impulse UWB Radio**. First International EURASIP Workshop on RFID Technology, Vienna, Austria, Sept. 24-25

M. Baghaei-Nejad, Z. Zou, D. S. Mendoza, H. Tenhunen, L.-R. Zheng. **Enabling Ubiquitous Wireless Sensing by a Novel RFID-Based UWB Module**. First International EURASIP Workshop on RFID Technology, Vienna, Austria, Sept. 24-25

Majid Baghaei-Nejad and Zhuo Zou and Hannu Tenhunen and Li-Rong Zheng, **A Novel Passive Tag with Asymmetric Wireless Link for RFID and WSN Applications**, The IEEE International Symposium on Circuits and Systems (ISCAS), New Orleans, Us, May

Yuechao Niu and Majid Baghaei Nejad and Hannu Tenhunen and Li-Rong Zheng, **Design of a Digital Baseband Processor for UWB Transceiver on RFID Tag**, The IEEE 21st International Conference on Advanced Information Networking and Applications (AINA-07), Niagra Falls, Canada, May.

Jian Chen, Fredrik Jonsson, Li-Rong Zheng, Hannu Tenhunen and Dian Zhou. "Sizing of MOS device in LC-tank Oscillators". In: Proc. the 25th IEEE Norchip Conference, Aalborg, Denmark, Nov. 19-20.

Huimin She, Zhonghai Lu, Axel Jantsch, Li-Rong Zheng and Dian Zhou. "Traffic Splitting with Network Calculus for Mesh Sensor Networks." In Proceedings of the 2007 International Workshop on Wireless Ad Hoc, Mesh and Sensor Networks (WAMSN-07), Korea, Dec. 6-8.

Huimin She, Zhonghai Lu, Axel Jantsch, Li-Rong Zheng and Dian Zhou. "A Network-based System Architecture for Remote Medical Applications." In Proceedings of 24th Asia-Pacific Advanced Network meeting (APAN'07), Xi'an, China, Aug.

Rodriguez, S.; Atallah, J. G.; Zheng, L.-R.; Ismail, M., "ARCHER: An Automated RF-IC Rx Front-End Circuit Design Tool," Signals, Circuits and Systems, 2007. IEEE ISSCS 2007. International Symposium on , vol.1, no., pp.1-4, Iasi, Romania, 13-14 July

Atallah, J. G.; Rodriguez, S.; Zheng, L.-R.; Ismail, M., "A Direct Conversion WiMAX RF Receiver Front-End in CMOS Technology," Signals, Circuits and Systems, 2007. IEEE ISSCS 2007. International Symposium on, vol.1, no., pp.1-4, Iasi, Romania, 13-14 July

Roshan Weerasekera, Dinesh Pamunuwa, Li-Rong Zheng, and Hannu Tenhunen. **Delay-balanced smart-repeaters for on-chip global signaling**. In Accepted for VLSI Design, 2007. 20th International Conference on, Bangalore, India.

Roshan Weerasekera, Li-Rong Zheng, Dinesh Pamunuwa and Hannu Tenhunen, "Extending Systems-on-Chip to the Third Dimension: Performance, Cost and Technological Tradeoffs" Accepted as a regular paper for the International Conference on Computer Aided Design (ICCAD)

Roshan Weerasekera, Li-Rong Zheng, Dinesh Pamunuwa and Hannu Tenhunen, "Early Selection of System Implementation Choice among SoC, SoP and 3-D I integration" Accepted as a regular paper for the International Conference on System-on-Chip (IEEE-SOCC)

Roshan Weerasekera, Dinesh Pamunuwa, Li-Rong Zheng and Hannu Tenhunen, "Delay-Balanced Smart-Repeaters for on-chip Global Signaling", vlsid, pp. 308-313, 20th International Conference on VLSI Design held jointly with 6th International Conference on Embedded Systems (VLSID'07).

Botao Shao, Roshan Weerasekera, Abraham Tareke Woldegiorgis, Li-Rong Zheng, Ran Liu, Werner Zapka, Peter Lindberg. "Electrical Characterization of Inkjet Printed Interconnections on Flexible Substrates". IEEE CPMT SYMPOSIUM ON GREEN ELECTRONICS 2007, Göteborg, Sweden

Invited talks

Li-Rong Zheng, **Ubiquitous intelligence for paper and packaging products** 2007 IEEE European Systems Packaging Workshop, Grand Hotel di Como - Como, Italy, January 29-January 31 (invited presentation)

Li-Rong Zheng, **Electronics paper for the future smart intelligent world**, Fiber in Focus 2007, 11-12 September, Brussels (invited speech)

Software engineering and Distributed Systems, DCS

Journal papers

Xuetao, Niu; Boxun, Zhang; Matskin, Mihail **An Architecture and System for Support of Cooperation in Multi-Agent Software Development**. I: Proceedings of the 2007 International Conference on Software Engineering Research and Practice (SERP 2007). USA: CSREA press 2007. ISBN 1-60132-033-7. s. 296-302

Küngas, Peep; Matskin, Mihail **Interaction and Potential Synergy between Commercial and Governmental Web Services - a Case Study**. I: SERVICES 2007, Proceedings of 2007 IEEE Congress on Services: IEEE Computer Society 2007. ISBN 0-7695-2926-7. pp. 1-8

M. Matskin, R. Maignre, E. Tyugu **Compositional Logical Semantics for a Business Process Language**. In Proceedings of Second International Conference on Internet and Web Applications and Services, 2007. ICIW '07. 13-19 May 2007 Mauritius, ISBN 0-7695-2844-9/07, IEEE Computer Society, Page(s):38-38

Petersen, Sobah Abbas; Rao, Jinghai; Matskin, Mihhail **Virtual Enterprise Formation Supported by Agents and Web Services. I: Agent and Web Service Technologies in Virtual Enterprises.** Hershey, New York: IGI Global 2008. ISBN 978-1-59904-648-8. pp. 46-65

Nima Dokoohaki, Mihhail Matskin **"Structural Determination of Ontology-Driven Trust Networks in Semantic Social Institutions and Ecosystems"**, Proceedings of the International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM'07) and the International Conference on Advances in Semantic Processing SEMAPRO 2007, November 4-9, 2007 - Papeete, French Polynesia. 2007, ISBN 0-7695-2993-3, IEEE Computer Society, Los Alamitos, CA, USA, pp. 263-268. (*This publication received a best paper award at SEMAPRO 2007.*)

Tallat M. Shafaat, Ali Ghodsi, Seif Haridi: **Handling Network Partitions and Mergers in Structured Overlay Networks.** Peer-to-Peer Computing 2007: 132-139

Ali Ghodsi, Seif Haridi: **Exploiting the Synergy between Gossiping and Structured Overlays.** ACM Operating Systems Review.

Jim Dowling, Jan Sacha, Seif Haridi: **Improving ICE Service Selection in a P2P System using the Gradient Topology.** SASO 2007: 285-288

Supriya Krishnamurthy, Sameh El-Ansary, Erik Aurell, Seif Haridi: **An Analytical Study of a Structured Overlay in the presence of Dynamic Membership** to appear in IEEE/ACM Transactions on Networking

Paolo Trunfio, Domenico Talia, H. Papadakis, P. Fragopoulou, Matteo Mordacchini, M. Pennanen, Konstantin Popov, Vladimir Vlassov, Seif Haridi: **Peer-to-Peer resource discovery in Grids: Models and systems.** Future Generation Comp. Syst. 23(7): 864-878

Vladimir Vlassov, Oscar Sierra Merino, Csaba Andras Moritz, and Konstantin Popov, **Support for Fine-Grained Synchronization in Shared-Memory Multiprocessors,** In: Parallel Computing Technologies (PaCT'07), LNCS, vol. 4671, Springer-Verlag Heidelberg, pp. 453-467

Conference contribution

Farzad Kamrani and Rassul Ayani. **Simulation-aided path planning of UAV.** In Proceedings of the Winter Simulation Conference, Washington, DC, USA, December.

Farzad Kamrani and Rassul Ayani. **Using on-line simulation for adaptive path planning of UAVs.** In the 11-th IEEE International Symposium on Distributed Simulation and Real Time Applications, Chania, Crete Island, Greece, October.

Marianela Garcia Lozano, Farshad Moradi, and Rassul Ayani. **Sdr: A semantic based distributed repository for simulation models and resources.** In Proceedings of the first Asia Modelling Symposium, AMS 2007, Phuket, Thailand, March.

Farshad Moradi, **Component-based Simulation Model Development using BOMs and Web Services,** in Proceedings of the first Asia Modelling Symposium, AMS 2007, March.

M Moser, S Haridi: **ATOMIC COMMITMENT IN TRANSACTIONAL DHTS,** First Core-GRID European Network of Excellence Symposium, 2007 – Springer

P. Brand, J. Hoglund, K. Popov, N. de Palma, F. Boyer, N. Parlvanzas, V.Vlassov, A. Al-Shishtawy. **The Role of Overlay Services in a Self-Managing Framework for Dynamic Virtual Organizations.** CoreGRID Workshop on Grid Programming Model, Grid and P2P Systems Architecture, Grid Systems, Tools and Environments, Heraklion - Crete, Greece

Mikael Z. Lagerkvist, Christian Schulte, **Advisors for Incremental Propagation,** Thirteenth International Conference on Principles and Practice of Constraint Programming.

Laurent Michel, Christian Schulte, Pascal Van Hentenryck. **Constraint Programming Tools,** Trends in Constraint Programming.

Bradley G. **Collaboration between people for Sustainability in the ICT Society.** In Proceedings at the HCI International 2007, Beijing China, July 22-27. Springer ISBN 978-3-540-73738-4 (CD and hard cover books).

Invited talk

Bradley G. **Is there a theory in Community Informatics?** Invited talk at CIRN (Community Informatics Research Network) conference on "Community Informatics – Prospects for Communities and Action", Prato, Italy, November 5-7

TsLab

M. Hidell, P. Sjödin, T. Klockar, L. Carr-Motycykova, **"A Modularized Control Plane for BGP"**, in Proceedings of the 19th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2007), Cambridge, Massachusetts, USA, November.

A. Császár, G. Enyedi, M. Hidell, G. Rétvári, P. Sjödin, **"Converging the Evolution of Router Architectures and IP Networks"**, IEEE Network Magazine, Vol. 21, No. 4, July/August.

Amos Nungu, Björn Pehrson, **"Interconnection of Broadband Islands in Developing Regions"**, IEEE 3rd International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities, Orlando, May (IEEE TridentCom 2007)

Américo Muchanga, Antoine B. Bagula, Lena Wosinska, **On Using Fast Signaling to Improve Restoration in Multi-layer Networks,** Accepted for Presentation and Publication at OFC/NFOEC, Anaheim, March.

RaMSiS

Journal papers

Mohammed Ismail and Delia Rodriguez (Editors), **"Radio Design in Nanometer Technologies"**, Springer, January 2007.

Ana Rusu & Mohammed Ismail, **"Emerging Analog-to-Digital Conversion Techniques for Software Defined Radios"** book chapter in "Radio Design in Nanometer Technologies" Editors: M. Ismail & D. Rodriguez, Springer, January 2007.

Delia Rodriguez de Llera Gonzalez, Ana Rusu & Mohammed Ismail, **"TACT- A CAD toolkit for 4G wireless radio systems"** book chapter in "Radio Design in Nanometer Technologies" Editors: M. Ismail & D. Rodriguez, Springer, January.

James Wilson and Mohammed Ismail, **"RFIC Design for first-pas silicon success"**, book chapter in "Radio Design in Nanometer Technologies" Editors: M. Ismail & D. Rodriguez, Springer, January.

Jalali-Farahani, B.; Ismail, M., **"Adaptive Noise Cancellation Techniques in Sigma-Delta Analog-to-Digital Converters"**, in IEEE Transactions on Circuits and Systems I: Regular Papers, Volume 54, Issue 9, Sept. Page(s):1891 – 1899.

Alzاهر, H.; Al-Ghamdi, M.; Ismail, M., **"CMOS low-power bandpass IF filter for Bluetooth"**, in IET Circuits, Devices & Systems, Volume 1, Issue 1, February Page(s):7 – 12

Conference contributions

Martin Gustafsson, Ana Rusu and Mohammed Ismail, **"Behavioral Modeling of a Programmable UWB/Bluetooth ADC"**, in Proc. of IEEE ICECS 2007, Maroko, pp. 1159-1162, December.

Z. Zhao, J. G. Atallah, Ana Rusu, and M. Ismail, **"Vertical Handover for 4G Multi-Standard Wireless Transceivers"**, in Proc. of IEEE ICECS 2007, Maroko, pp.1456-1359, December.

Chithrupa Ramesh, Ana Rusu, M. Ismail, M. Skoglund, **"TrACS: Transceiver Architecture and Wireless Channel Simulator"**, in Proc. of IEEE SBCII 2007, Rio de Janeiro, Brazil, pp.128-132, September.

Ana Rusu, M. Gustafsson, Delia Rodriguez and M. Ismail, **"Flexible ADCs for Wireless Mobile Radios"** in Proc. of IEEE ECCTD 2007, Seville, Spain, pp.172-175, August.

Delia Rodriguez, Ana Rusu, M. Ismail, **"EDA for RF and Analog Front-ends in the 4G Era: Challenges and Solutions"** in Proc. of IEEE ECCTD 2007, Seville, Spain, pp. 24-27, August.

Sandeep Kowligi Srinivasan, Ana Rusu, M. Ismail, "Ultra-low power 2.4 GHz CMOS receiver front-end for sensor nodes" in Proc. Of IEEE ECCTD 2007, Seville, Spain, pp. 595-598, August.

Ana Rusu and Mohammed Ismail, "Design Challenges of Wireless Mobile Radios", in Proc. Of IEEE ISSCS 2007, Iasi, Romania, vol. 1, pp.1-4, July.

J. G. Atallah, S. Rodriguez, L.-R. Zheng, and M. Ismail, "A Direct Conversion WiMAX RF Receiver Front-End in CMOS Technology," Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, 2007 ISSCS 2007, pp. 37-40, July

S. Rodriguez, J. G. Atallah, L.-R. Zheng, and M. Ismail, "ARCHER: An Automated RF-IC Rx Front-End Circuit Design Tool," Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, 2007 ISSCS 2007, pp. 129-132, July

Delia Rodriguez de Llera Gonzalez, Ana Rusu, Wangren Xu, Mohammed Ismail, "TACT as a Learning Tool for Radio Design" in Proc. Of IEEE MSE 2007, San Diego, US, pp. 71-72, June.

Liang Rong, Martin Gustafsson, Ana Rusu and Mohammed Ismail, "Systematic Design of a Flash ADC for UWB Applications", at IEEE ISQED, San Jose, U.S., pp. 108-112, March.

Fayed, A.; Ismail, M., "A 3.7mW, 1.6V CMOS Analog Adaptive Equalizer for a 125Mbps Wire-Line Transceiver", in Proc. Of ISCAS 2007. IEEE International Symposium on Circuits and Systems, 27-30 May, pp. 2136 - 2139

Tien-Yu Lo.; Chung-Chih Hung, Mohammed Ismail, "A wide tuning range Gm-C filter for multi-mode direct-conversion wireless receivers, in Proc. Of 33rd European Solid State Circuits Conference, 2007. ESSCIRC 11-13 Sept, pp.210 - 213

Department of Computer and Systems Sciences

Information Systems

KTH ICT related publications

Journal Papers

Henkel Martin, Perjons Erik, Zdravkovic Jelena, "Towards Guidelines for the Evolution of E-service Environments", International Journal of Public Information Systems, 2007:3, p183-200, IS

Nfuka Ngemera Edephonce, Rusu Lazar, "Management of IT-enabled Change in a Public Organization in Tanzania", Granskad tidskriftsartikel, 2, 334-349, Inderscience Publishers, International Journal of Information Systems and Change Management, 4, 1479-3121

Perjons Erik, Bider Ilia, Andersson Birger, "Building and Exploiting a Business Process Model for Lobbying: Experience Report", Communications of the IIMA (CIIMA), Vol. 7. No 3, 2007, pp. 1-14., 2007, ISSN: 1543-5970, IS

Peer reviewed conference contributions

Andersson Birger, Edirisuriya Ananda, Ilayperuma Tharaka, Bergholtz Maria, Johannesson Paul, Zdravkovic Jelena, "On the Alignment of Goal Models and Business Models", REA-25. A Celebration of the REA Enterprise Model, Geerts, G., University of Delaware. Department of Accounting & MIS, June

Andersson Birger, Bergholtz Maria, Edirisuriya Ananda, Ilayperuma Tharaka, Johannesson Paul, Zdravkovic Jelena, "Using Strategic Goal Analysis for Enhancing Value-based Business Models", Caise07/Busital07 Workshop, June

Bider Ilia, Perjons Erik, "Effects from introduction of business process support systems and how they can be measured", In: Pernici B. and Gulla J.A (Eds.) CAISE'07 workshop proceedings, Tapir Academic Press, Trondheim, Norway, pp 369-377

Haritakis Konstantinos, "Using parallel corpora to create a Greek-English dictionary with Uplug", Nodalida 2007, The 16th Nordic Conference of Computational Linguistics, 25-26 May 2007 in Tartu, Estonia, May

Henkel Martin, Johannesson Paul, Perjons Erik, Zdravkovic Jelena, "Value and Goal Driven Design of E-Services", The IEEE International Conference on e-Business Engineering (ICEBE'07), October

Henkel Martin, Johannesson Paul, Perjons Erik, "Value and Goal Modelling in Healthcare", 12th International Symposium for Health Information Management Research (ISHIMR2007), July

Hodosi Georg, Rusu Lazar, "A Software Tool that Supports Decisions for Companies to Outsource Information Technology or Not", Proceedings of the Mediterranean Conference on Information Systems - MCIS'07, University of Trento, Italy, Vol.1, pp.69-78, <http://www.mcis2007.org>, October

Juell-Skielse Gustaf, "Extended ERP Consulting Competence", 4th International Conference on Enterprise Systems, Accounting and Logistics (4th ICESAL 2007) 9-10 July 2007, Corfu Island, Greece., 4, 53-56, July, 978-960-287-092-1

Kajko-Mattsson Mira, Ta Mi, Wilczek Lukas, "State of Modernization Practice in Four Swedish Organizations", 31st Annual International Computer Software and Applications Conference, IEEE

Rusu Lazar, El Mekawy Mohamed Sobih Aly, Ahmad Haseeb Nabeel, "ERP Systems Implementation: Characteristics and Critical Success Factors. A Case Study of Electrolux", The 8th IBIMA Conference: Information Management in the Networked Economy: Issues & Solutions, Dublin City University, Ireland, CD-Proceedings, pp. 501-508, <http://www.ibima.org/Dublin2007/index.html>, June, 0-9753393-7-0, IS pdf

Rusu Lazar, Man Yi, "RFID Technology Applications in Mobile Payment", The 8th IBIMA Conference: Information Management in the Networked Economy: Issues & Solutions, Dublin City University, Ireland, CD-Proceedings, pp. 511-516, June, ISBN 0-9753393-7-0

Weigand Hans, Johannesson Paul, Andersson Birger, Edirisuriya Ananda, Bergholtz Maria, Ilayperuma Tharaka, "Strategic Analysis using Value Modelling - the C3-Value Approach", Proceedings of the 40th Hawaii International Conference on System Sciences (HICSS-40): Internet and the Digital Economy - Value Webs in the Digital Economy Track, hicss, 00, ISSN: 1530-1605, 175c, IEEE Computer Society, Los Alamitos, CA, USA

Books and book chapters

Johannesson Paul, "The Role of Business Models in Enterprise Modelling", Conceptual Modelling in Information Systems Engineering, John Krogstie et. al., 123-140, Springer

Other publications

Juell-Skielse Gustaf, "Irrläror frälsar oss inte", 52000, 103, 28, IDG, Computer Sweden, 0280-9982, October

Security Informatics

KTH related publications

Peer reviewed conference contributions

Bakari Jabiri Kuwe, Tarimo Charles N, Magnusson Christer, Yngström Louise, "Operationalisation of ICT Security Policy and Mechanisms in an organisation", Granskad konferensbidrag, OST-Africa 2007, (8 pages), Maputo, Mozambique, 1-905824-04-1

Magnusson Christer, Bakari Jabiri Kuwe, Wahlgren Gunnar, Yngström Louise, "ICT Risk Management Drivers - a Comparative Study of Sweden, USA, India, and Tanzania", Proceedings of the CRISIS 2007 International Conference on Risk and Security of Internet and Systems, IEEE GIIS, (8 pages), Marrakech, Morocco

Näckros Kjell, Davidson Alan, "Practical assignments in it security for contemporary higher education: An experiment in exploiting student initiative", Wise5: Proceedings for the IFIP TC11 WG11.8 Fifth World Conference on Information Security Education, IFIP TC11 WG11.8, Springer-Verlag GmbH Berlin Heidelberg, West Point, NY

Muftic Sead, "Assessment of Energy Consumption in Wireless Sensor Networks", Granskad konferensbidrag, IEEE International Workshop on Wireless and Sensor Networks Security (IEEE WSNS 2007), October

Muftic Sead, "Balancing Security and Energy Consumption in Wireless Sensor Networks", 3rd International Conference on Mobile Ad-hoc and Sensor Networks (MSN 2007), December

Other publications

Yngström Louise, "Citizen Identity registration system and Unique Citizen identity number", Intern Rapport, Complimentary information concerning the pre-planning phase of the Mozambique Project Proposal for Spider

Yngström Louise, "Making ICT Security Readiness Possible - The Case of Tanzania in the Sub-Saharan Region", Konferensbidrag, Ohrid, Macedonia, september, Paper prepared for the 5th CEENet Workshop on Network management: The Challenges for Secure Research and Education Networking in the Developing Countries

Software Development

KTH ICT related publications

Journal Papers

Candia Rodolfo, Ekenberg Love, Glimbert Lars, "ICT for Academic Development in Sri Lanka", Bokkapitel, Felicitation volume in honour of Prof. V.K. Samaranayake

Ekenberg Love, Popov Oliver, "Using Event Tree Analysis in Information Security", Bokkapitel, Policies for Secure Research and Education Networking, O. Popov, NATO, 2007

Peer reviewed conference contributions

Asker Lars, Alemu Argaw Atelach, "An Amharic Stemmer : Reducing Words to their Citation Forms", Konferensbidrag, Computational Approaches to Semitic Languages: Common Issues and Resources, Violetta Cavalli-Sforza and Imed Zitouni, 104 - 110, Association for Computational Linguistics, Prague, Czech Republic, June

Danielson Mats, Ekenberg Love, Sundgren Daniel, "Structure Information in Decision Trees and Similar Formalisms", Granskat konferensbidrag, Proceedings of the 20th International FLAIRS Conference

Hansson Karin, Danielson Mats, Ekenberg Love, Mondlane E., "Essential Features of a Flood Management Framework", Proceedings of ICT-Africa

Kahiigi Kigozi Evelyn, Ekenberg Love, Danielson Mats, Hansson H., "E-learning State of the art: A Holistic Evaluation", Proceedings of ECEL

Kivunike Nameere Florence, Ekenberg Love, Danielson Mats, Tusubira F., "Measuring the Information Society: An Explorative Study of Existing Tools", Proceedings of ECIME

Sotomane Constantino, Johansson Hedberg Linda, Ekenberg Love, Hansson H., "Piloting e-learning courses - the MICTI initiative", Proceedings of eLearning Africa, PVU, DSV

Patent

M. Danielson and L. Ekenberg, "A Method for Decision and Risk Analysis in Probabilistic and Multiple Criteria Situations", U.S. Patent No. 11/145229.

Journal papers

M. Danielson and L. Ekenberg, "Computing Upper and Lower Bounds in Interval Decision Trees," European Journal of Operational Research 181, pp. 808–816.

M. Danielson, L. Ekenberg, J. Idefeldt and A. Larsson, "Using a Software Tool for Public Decision Analysis – the Case of Nacka Municipality," Decision Analysis, Vol. 4, No. 2, pp. 76–90.

M. Danielson, L. Ekenberg and A. Larsson, "Distribution of Belief in Decision Trees," International Journal of Approximate Reasoning, Vol. 46, Issue 2, pp. 387–407.

R. Candia, L. Ekenberg and L. Glimbert, "ICT for Academic Development in Sri Lanka," Felicitation volume in honour of Prof. V.K. Samaranayake.

Conference proceedings

M. Danielson, L. Ekenberg and D. Sundgren, "Structure Information in Decision Trees and Similar Formalisms," Proceedings of FLAIRS UR 2007.

K. Hansson, M. Danielson, L. Ekenberg and A. Mondlane, "Essential Features of a Flood Management Framework," Proceedings of IST-Africa.

L. Ekenberg, M. Andersson, M. Danielson and A. Larsson, "Distributions over Expected Utilities," proceedings of ISIPTA.

E. Kahiigi, L. Ekenberg, M. Danielson and H. Hansson, "E-learning State of the art: A Holistic Evaluation," proceedings of ECEL 2007.

F. Kivunike, L. Ekenberg, M. Danielson and F. Tusubira, "Measuring the Information Society: An Explorative Study of Existing Tools," proceedings of ECIME 2007.

C. Sotomane, L. Johansson, L. Ekenberg and H. Hansson, "Piloting e-learning courses – the MICTI initiative," Proceedings of eLearning Africa.

Popular articles

L. Ekenberg and M. Wiklund, "Att vara eller inte vara," Dagens Nyheter, August 29.

M. Danielson and L. Ekenberg, "Att fatta svåra beslut," Miljöforskning nr 4.

L. Ekenberg, "Vem betalar i katastrofens spår?," Miljöforskning nr 4.

Scientific theses

Licentiate theses

David Sundgren, **Distribution of Expected Utility in Second-order Decision Analysis**

Jinliang Huang, **Adaptation in Multiple Input Multiple Output Systems with Channel State Information at Transmitter.**

Farzad Kamrani, **Using On-line Simulation in UAV Path Planning.**

Johan Hultell Andersson, **Access Selection in Multi-System Architectures.**

Pietro Lungaro, **Self-organization, cooperation and control distribution in wide and local area networks**

Docotoral theses

Martin Jonsson **Sensing and Making Sense: Designing Middle-ware for Context Aware Computing.**

Vandana Kabilan **Ontology for Information Systems (O4IS) Design Methodology.**

Johan Mattsson **Pointing, Placing, Touching - Physical Manipulation and Coordination Techniques for Interactive Meeting Spaces.**

Petra Färm **Integrated Logic Synthesis Using Simulated Annealing.**

Zhonghai Lu **Design and Analysis of On-Chip Communication for Network-on-Chip Platforms.**

Tarvo Raudvere **System Level Techniques for Verification and Synchronization after Local Design Refinements.**

Ilya Sytjugov **Synthesis and properties of single luminescent silicon quantum dots.**

Felix Djebe Mbairi **Some Aspects of Advanced Technologies and Signal Integrity issues in High Frequency PCBs, with Emphasis on Planar Transmission Lines and RF/Microwave Filters.**

Julius Hällstedt **Integration of epitaxial SiGe(C) layers in advanced CMOS devices**

Stéphane Junique **Surface-normal multiple quantum well electroabsorption modulators.**

Peter Jänes **Photonic Devices and Applications based on Inter-subband Transitions and Electromagnetically Induced Transparency.**

Anders Månsson **Quantum State Analysis: Probability theory as logic in Quantum mechanics.**

Piero Mana **Studies in plausibility theory, with applications to physics**

Beatriz Espinosa Arronte **Resistivity and the vortex solid-to-liquid transition in high-temperature super conductors.**

Thomas Claesson **Investigations of Transition Metal Systems: Angle-Resolved Photoelectron Spectroscopy at Low and High Energy.**

Martin Månsson **Adatoms, Quasiparticles & Photons - The Multifaceted World of Photoelectron Spectroscopy.**

Ingemar Petermann **Fibre Bragg Gratings: Realization, Characterization and Simulation.**

Antoine B. Bagula *) **Hybrid Routing in Next Generation IP Networks: QoS Routing Mechanisms and Network Control Strategies.**

Pål Palmgren **Phthalocyanine interfaces - the monolayer region.**

Zhichao Ruan **Dispersion Engineering: Negative Refraction and Designed Surface Plasmons in Periodic Structures.**

Americo Muchanga *) **Interdomain Traffic Engineering and Faster Restoration in Optical Networks.**

Klas Johansson **Cost Effective Deployment Strategies for Heterogeneous Wireless Networks.**

*) These postgraduates presented their theses in December 2006. Since their work was regrettably omitted by mistake from the 2006 dissertation list, their theses have been published in the 2007 list.