

Mairbek Chshiev
CURRICULUM VITAE

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Education:

Habilitation à diriger des recherches (2008), Université Joseph Fourier, Grenoble, France
«Quantum Description of Spintronic Phenomena in Magnetic Tunnel Junctions»
(*Jury : A. Fert, J. Miltat, J. Moodera, O. Mryasov, C. Lacroix, D. Mayou*)

Ph.D. en Physique (1997), Moscow Lomonosov State University, Russia
«Theory of Giant Magnetoresistance in Magnetic Multilayers and Granular Alloys»
(*Ph.D. advisor: A. Vedyayev*)

Master Degree en Physique (1993), North Ossetian State University, Russia

ACADEMIC ACTIVITIES

2008 -	Nanosciences Foundation Excellence Research Chair at SPINTEC, CEA/CNRS/UJF, Grenoble, France;
2008 -	Adj. Associate Professor of Physics, University of Alabama, USA
2004 - 2008	Asst. Research Scientist, Center for Materials for Information Technology (MINT), University of Alabama, Alabama, USA
2002 - 2004	Postdoctoral Associate, Physics Department, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA
2001 - 2002	Full time teaching and research position (attaché temporaire d'enseignement et de recherche à plein temps), Louis Pasteur University (l'Université Louis Pasteur), Strasbourg, France
2000 - 2001	Postdoctoral Associate, Institute of Physics and Chemistry of Materials (Institut de Physique et Chimie des Matériaux de Strasbourg, Groupe d'étude des matériaux métalliques), Strasbourg, France

1998 - 1999	Postdoctoral Associate, CEA/Grenoble, Département de Recherche Fondamentale sur la Matière Condensée, Laboratoire du Nanostructures and Magnétisme, Grenoble, France
1994 - 1997	Ph.D. in Physics, Department of Physics, M. V. Lomonosov Moscow State University, Moscow, Russia Thesis title: « <i>Theory of Giant Magnetoresistance in Magnetic Multilayered Structures and Granular Alloys</i> », Advisor: Prof. A.Vedyayev
1993 - 1994	Fellow, Department of Physics, M. V. Lomonosov Moscow State University, Moscow, Russia
1988 - 1993	Master Degree in Theoretical Physics, Faculty of Physics, North Ossetian State University, Russia (with honors, «Red Diploma»)

RESEARCH INTERESTS, PROJECTS and AWARDS

- **Chaire d'excellence** RTRA “Nanosciences aux limites de la nanoélectronique” (Nanosciences Foundation Research Chair) in Grenoble, France
- **Principal Investigator**, Research Project “Spin Dependent Transport in Magnetic Multilayers” at U. S. DOE Nanoscale Science Research Center for Nanophase Material Sciences (CNMS), Oak Ridge National Laboratory (ORNL)
- **Co-PI**, Research Project “CRYSTO” supported by French National Research Agency
- **Invited Professor** position (invité) at Laboratoire de Physique des Matériaux, Université Henri Poincaré, Nancy, France (2007)
- **Invited** talks and lectures:
 - 2010 Gordon Research Conference, Bates College, Lewiston, ME, USA
 - 2009 APS March Meeting, Pittsburgh, PA, USA;
 - 2008 Intermag Conference in Madrid, Spain;
 - International School M-SNOW 2008, Nancy, France
 - 2008 Minatec Crossroads in Grenoble, France;
 - 2008 M-SNOW International School and Workshop, Nancy, France

Research Interests:

Keywords: Thin films, nanostructures, coherent transport, resonant tunneling, elastic and inelastic scattering, magnetic multilayers, granular alloys, spin electronics, metal-metal, metal-semiconductor and metal-insulator interfaces, molecular electronics

■ Spintronics

- Quantum theory of magnetic and transport properties of nanostructures (multilayers, tunnel junctions and granular alloys) with giant (GMR) and tunnel magnetoresistance (TMR) using free electron and tight-binding analytical models
- Spin injection into semiconductors
- Spin filtering
- Electronic and magnetic noise
- Spin transfer torque
- Application to MRAM, read-write heads, sensors
- Graphene spintronics

■ Computational Materials Science

- Electronic structure of materials and spin-dependent transport in nanostructures from first principles (based on Density Functional Theory)
- Electronic structure and magnetic properties of complex materials (Heusler alloys, chalcogenides, complex oxides etc.)
- Electronic structure of graphene

■ Molecular electronics

- Electron transport in atomic and molecular systems from the first principles, including carbon nanotubes
- Local heating and current-induced forces in molecular and atomic systems

EDITORIAL ACTIVITIES AND SERVICE

- Editor for 2008 INTERMAG Proceedings
- Referee for APS, ACS and Elsevier journals: *Physical Review Letters*, *Physical Review B*, *Nano Letters*, *Journal of Magnetism and Magnetic Materials*

SYNERGISTIC ACTIVITIES

- Working with summer research undergraduate students (REU)
- Collaboration with colleagues at historically black colleges and universities (HBCUs)
- Advisor for graduate students and postdocs
- Collaboration with industry (Western Digital, Seagate)

TEACHING ACTIVITIES :

University level:

- Lectures on “Spin Dependent Tunneling”, graduate level course in magnetic materials for physical science and engineering students at University of Alabama (Spring 2008);
- Lectures on “Noise in Magnetic Recording”, graduate level course in magnetic materials for physical science and engineering students at University of Alabama (Spring 2007);
- Certification by French Ministry of Education at Assistant Professor Level (2001);
- Full Time Teaching and Research Position (ATER); Teaching undergraduate courses in Electricity and Magnetism, Thermodynamics at Louis Pasteur University, Strasbourg, France (192 hours during 2001-2002);
- Teaching Assistant in General Physics (Mechanics, Molecular Physics, Electricity), Moscow Lomonosov State University, Moscow, Russia (72 hours during 1993-1994);
- Private course of Mathematical Analyses (96 hours during 1991-1992).

High School level:

- Private Course “Mathematics and Mechanics” for students of British International School in Moscow, Russia (180 hours during 1999).
- Tutoring in Physics and Mathematics, Moscow, Russia (240 hours during 1993-1997);
- Physics Classes at High School, Vladikavkaz, Russia (36 hours during 1992-1993);

COMPUTING SKILLS

- * Programming / numerical analysis: Basic, Fortran, Pascal, C
- * Multimedia (Internet), electronic edition (Windows/Unix), HTML, LaTeX
- * Operating Systems: DOS, Windows9X, Unix, Linux

LANGUAGES

- * *English*: read, write, understand, usual and scientific conversation
- * *French*: read, write, understand, usual and scientific conversation
- * *Russian*: native language
- * *Ossetian*: native language

Publications:

Book chapters:

"Introduction to spin transfer torque", C. Baraduc, M. Chshiev, U. Ebels, in *Nanomagnetism and Spintronics - Fabrication, Materials, Characterization and Applications* , Eds: F. Nasirpour, A. Nogaret, World Scientific Publishing, Singapore, 2009, pp. 173-192

"Spin Transfer Torques in Magnetic Tunnel Junctions", A. Manchon, N. Ryzhanova, M. Chshiev, A. Vedyayev, K.-J. Lee and B. Dieny, in *Giant Magnetoresistance: New Research* , Eds: A. D. Torres and D. A. Perez, Nova Science Publishers, New York, 2009, pp. 63-106

"Influence of interfaces on giant magnetoresistance in magnetic multilayers", A. Vedyayev, M. Chshiev, N. Tsidaeva and B. Dieny, in *Frontiers in Magnetism of Reduced Dimension Systems* , Eds: V. G. Bar'yakhtar, P. E. Wigen and N. A. Lesnik, Kluwer Academic Publishers (Dordrecht, Boston, London), 1998, p. 591

Patents:

Techniques for characterizing the noise properties of tunnel junction film stacks with little or no processing, T. Mewes, M. Chshiev, C. Mewes, P. Leclair, W. H. Butler, U.S. Patent 60/954,604, 2008

Papers in journals:

1. **"Bias-voltage dependence of perpendicular spin-transfer torque in asymmetric MgO-based magnetic tunnel junctions"**, S.-C. Oh, S.-Y. Park, A. Manchon, M. Chshiev, J.-H. Han, H.-W. Lee, J.-E. Lee, K.-T. Nam, Y. Jo, Y.-C. Kong, B. Dieny & K.-J. Lee, *Nature Physics* 5, 898 (2009); advance online publication, 25 October 2009 | doi:10.1038/nphys1427
2. **"Stable hydroxyl network on diamond (001) via first-principles and MD investigation"**, H. X. Yang, L. F. Xu, C. Z. Gu, Z. Fang, S. B. Zhang, M. Chshiev, *Surf. Sci.* 603, 3035 (2009)
3. **Calculated electronic and magnetic structure of rutile phase $V_{1-x}Cr_xO_2$** , M. E. Williams, W. H. Butler, C. K. Mewes, H. Sims, M. Chshiev, and S. K. Sarker, *J. Appl. Phys.* 105, 07E510 (2009)
4. **Origin of low Gilbert damping in half metals**, C. Liu, C. K. A. Mewes, M. Chshiev, T. Mewes, and W. H. Butler, *Appl. Phys. Lett.* 95, 022509 (2009)
5. **Spin-transfer torque in magnetic tunnel junctions**, A. Kalitsov, M. Chshiev, I. Theodonis, N. Kioussis, and W. H. Butler, *Phys. Rev. B* 79, 174416 (2009)
6. **Induced half-metallicity in Cr-based ferromagnetic chalcospinel with anion substitutions: $CuCr_2S(Se)_{4-x}E_x$ ($E=F, Cl, Br$), $Cu(Cd)Cr_2S(Se)_{4-x}$ and $CdCr_2S(Se)_{4-x}D_x$ ($D=N, P, As$)**, Y.-H.W. Wang, A. Gupta, M. Chshiev, W. H. Butler, *Appl. Phys. Lett.*, 94, 062515 (2009)
7. **High magnetization FeCo|Pd multilayers**, M.J. Walock, H. Ambaye; M. Chshiev, F.R. Klose, W.H. Butler, G.J. Mankey, *J. of Vacuum Sci and Tech A*, 26, 731 (2008)
8. **Voltage Dependence of Spin Transfer Torque in Magnetic Tunnel Junctions**, M. Chshiev, I. Theodonis, A. Kalitsov, N. Kioussis, , and W. H. Butler, *IEEE Trans. Magn.*, *IEEE Trans. Magn.* 44, 2543 (2008)

9. **Description of current-driven torques in magnetic tunnel junctions**, A. Manchon, N. Ryzhanova, A. Vedyayev, M. Chshiev and B. Dieny, *J. Phys.: Cond. Matter*, 20, 145208 (2008)
10. **Half-Metallic Electronic Structures of Quaternary Ferromagnetic chalcospinels: $\text{Cd}_x\text{Cu}_{1-x}\text{Cr}_2\text{S}_4$ and $\text{Cd}_x\text{Cu}_{1-x}\text{Cr}_2\text{Se}_4$** , Y.-H.W. Wang, A. Gupta, M. Chshiev, W. H. Butler, *Appl. Phys. Lett.*, 92, 062507 (2008)
11. **Half-Metallic L_{21} Structures with (001) Planar Insertions**, C. Culbert, M. Williams, M. Chshiev, W. H. Butler, *Journ. of Appl. Phys.* 103 (2008) 07D707
12. **Ab-initio Studies of Magnetic Properties of CoFePd Alloys and Multilayers**, M. Chshiev and W. H. Butler, *IEEE Trans. Magn.* 43 (2007) 2199
13. **Magnetism, and Transport of CuCr_2Se_4 Thin Films**, J. S. Bettinger, R.V. Chopdekar, M. Liberati, J.R. Neulinger, M. Chshiev, Y. Takamura, L.M.B. Alldredge, E. Arenholz, Y.U. Idzerda, A.M. Stacy, W.H. Butler, Y. Suzuki, *Journal of Magnetism and Magnetic Materials*, 318 (2007) 65
14. **Anomalous Bias Dependence of Spin Torque in Magnetic Tunnel Junctions**, I. Theodonis, A. Kalitsov, N. Kioussis, M.Chshiev, and W. H. Butler, *Phys. Rev. Lett.* 97 (2006) 237205
15. **Spin Dependent Tunneling in FM|semiconductor|FM structures**, S. Vutukuri, M. Chshiev, W. H. Butler, *Journ. of Appl. Phys.* 99 (2006) 08K302
16. **Spin-Polarized Current Induced Torque in Magnetic Tunnel Junctions**, A. Kalitsov, I. Theodonis, N. Kioussis, M. Chshiev, W. H. Butler, A. Vedyayev, *Journ. of Appl. Phys.* 99 (2006) 08G501
17. **Theory of Tunneling Magnetoresistance for Epitaxial Systems**, W. H. Butler, X.-G. Zhang, S. Vutukuri, M. Chshiev, and T. C. Schulthess, *IEEE Trans. Magn.* 41 (2005) 2645
18. **Role of heating and current-induced forces in the stability of atomic wires**, Z. Yang, M. Chshiev, M. Zwolak, Y.-C. Chen, M. Di Ventra, *Phys. Rev. B* 71 (2005) 041402
19. **Impurity-induced tuning of quantum well states in spin-dependent resonant tunneling**, A. Kalitsov, A. Coho, N. Kioussis, A. Vedyayev, M. Chshiev and A. Granovsky, *Phys. Rev. Lett.* 93 (2004) 046603
20. **Influence of quantum well states on transport properties of double barrier junctions**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, *Journal of Magnetism and Magnetic Materials*, 240 (2002) 146
21. **Quantum coherent transport versus diode-like effect in semiconductor free metal/insulator structure**, C. Tiusan, M. Chshiev, A. Iovan, V. da Costa, D. Stoeffler, T. Dimopoulos and K. Ounadjela, *Appl. Phys.Lett.*, 79 (2001) 4231
22. **Magnetic Diode Effect in Double Barrier Junctions**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, *Europhys. Lett.* 58 (2002) 257
23. **Magnetoresistance of Magnetic Tunnel Junctions in the presence of a nonmagnetic layer**, A.Vedyayev, M.Chshiev, B.Dieny, N.Ryzhanova, *Phys. Rev. B*, 61 (2000) 1366
24. **Angular dependence of CPP transport in magnetic sandwiches**, A.Vedyayev, O.Kotelnikova, N.Pugach, M.Chshiev, *Fizika Tverdogo Tela* (Russian), 41 (1999) 1814, *Physics of the Solid State*, 41 (1999) 1665
25. **Quantum effects in giant magnetoresistance due to interfaces in magnetic sandwiches**, A.Vedyayev, M.Chshiev, B.Dieny, *Journal of Magnetism and Magnetic Materials*, 184 (1998) 145
26. **A unified theory of giant magnetoresistance in magnetic sandwiches**, A.Vedyayev, M.Chshiev, N.Ryzhanova et al., *Journal of Magnetism and Magnetic Materials*, 172 (1997) 53
27. **Extraordinary Nernst-Ettingshausen effect in magnetic granular alloys**, A.Kalitsov, M.Chshiev, N.Tsidaeva, *Vestnik MGU, Fizika i Astronomia* (Russian), 33 (4) (1997)

28. **Extraordinary Hall effect in magnetic granular alloys**, A.Granovsky, F.Brouers, A.Kalitsov, M.Chshiev, *Journal of Magnetism and Magnetic Materials*, 166 (1997) 193
29. **Quantum statistical theory of giant magnetoresistance in magnetic heterogeneous alloys**, A.Vedyayev, B.Mevel, N.Ryzhanova, M.Tshiev, B.Dieny, A.Chamberaux, F.Brouers, *Journal of Magnetism and Magnetic Materials*, 164 (1996) 91
30. **Quantum statistical calculation of spontaneous anisotropy of giant magnetoresistance in spin-valve sandwiches**, A.B.Granovsky, A.V.Vedyayev, B.Dieny, A.V.Kalitsov, M.G.Chshiev, *Fizika Tverdogo Tela* (Russian) (Solid State Physics), vol.38 N 8 (1995), 2471-2477

Talks (conferences, invited and posters):

1. **Voltage dependence properties of ballistic spin currents and spin transfer torques in magnetic tunnel junctions**, M. Chshiev, 2009 APS March Meeting, Pittsburgh, PA, March 16-20, X29.0006 (invited)
2. **Rational design of half-metallic alloys**, W. H. Butler, C. Mewes, C. Liu, M. Chshiev, 2009 APS March Meeting, Pittsburgh, PA, March 16-20, H32.0006
3. **Calculation of intrinsic damping in half metals**, C. Liu, C. Mewes, M. Chshiev, T. Mewes, W. H. Butler, 2009 APS March Meeting, Pittsburgh, PA, March 16-20, T32.0005
4. **Nonequilibrium properties of spin transfer torque and tunnel magnetoresistance in magnetic tunnel junctions**, M. Chshiev; A. Kalitsov, I. Theodonis; N. Kioussis, W. H. Butler, 53rd MMM Conference, Austin, TX, Nov. 10-14, EB-01
5. **Calculated Electronic and Magnetic Structure of Rutile Phase $V_{1-x}Cr_xO_2$** , M.E. Williams, W. H. Butler, C. Mewes, H. Sims and M. Chshiev, 53rd MMM Conference, Austin, TX, Nov. 10-14, BE-08
6. **Induced half-metallic state in Cr-based: $CuCr_2S(Se)_{4-x}E_x$ ($E=F, Cl, Br$), $Cu(Cd)Cr_2S(Se)_{4-x}$ and $CdCr_2S(Se)_{4-x}D_x$ ($D=N, P, As$)**, Y.-H. W. Wang, A. Gupta, M. Chshiev, W. H. Butler, 53rd MMM Conference, Austin, TX, Nov. 10-14, FD-01
7. **Calculation of intrinsic damping in half metals**, C. Liu, C. Mewes, M. Chshiev, T. Mewes, W. H. Butler, 53rd MMM Conference, Austin, TX, Nov. 10-14, GF-04
8. **Nature of voltage dependence of spin transfer torque in magnetic tunnel junctions**, M. Chshiev; I. Theodonis; N. Kioussis; A. Kalitsov; W. H. Butler, 2008 Intermag Conference, Madrid, Spain, May 4-8, CC-02 (invited)
9. **Film growth and Surface Energy of (100) CrO_2** , H. Sims, K. Chetry, M. Chshiev, A. Gupta, W. H. Butler, 2008 APS March Meeting, New Orleans, LA, March 10-14, S23 9
10. **Nature of voltage dependence of spin torque in magnetic tunnel junctions**, M. Chshiev; I. Theodonis; N. Kioussis; A. Kalitsov; W. H. Butler, 2008 APS March Meeting, New Orleans, LA, March 10-14, S32 11
11. **Evaluation of intrinsic damping in transition metals using tight-binding schemes**, C. Liu, C. K. A. Mewes, M. Chshiev, T. Mewes, W. H. Butler, 2008 APS March Meeting, New Orleans, LA, March 10-14, A15 9
12. **Evaluation of intrinsic damping in half metals**, C. K. A. Mewes, C. Liu, M. Chshiev, T. Mewes, W. h. Butler, 2008 APS March Meeting, New Orleans, LA, March 10-14, A15 8
13. **Half-Metallic $L2_1$ Heusler Alloys with (001) Planar Insertions**, C. A. Culbert, M. E. Williams, M. Chshiev and W. H. Butler, 52nd MMM Conference, Tampa, FL, Nov. 5-9, DB-03
14. **Induced half-metallic state in quaternary chalcospinel of $Cd_xCu_{1-x}Cr_2S(Se)_4$** , Y.-H. W. Wang, A. Gupta, M. Chshiev, W. H. Butler, 52nd MMM Conference, Tampa, FL, Nov. 5-9, DB-12
15. **Spin torque in magnetic tunnel junctions and electronic structure of materials for spintronics**, seminaire CNRS/Thales, June 13, 2007

16. **Ab-initio studies of electronic properties of chalcogenide spinels**, M. Chshiev, Y.H.-A. Wang, A. Gupta, J. Bettinger, Y. Suzuki, W. H. Butler, 2007 APS March Meeting, Denver, CO, March 5-9, 2007
17. **High Magnetization FeCo/Pd multilayers**, M. Walock, F. Klose, M. Chshiev, G. Mankey, W. H. Butler, 2007 APS March Meeting, Denver, CO, March 5-9, 2007
18. **Heusler Alloys for CPP-GMR**, C. Culbert, M. Williams, M. Chshiev, P. R. LeClair, W. H. Butler, 2007 APS March Meeting, Denver, CO, March 5-9, 2007
19. **First principles calculations of interfacial magnetism in CrO₂-SnO₂ rutile junctions**, M. Chshiev, K. Chetry, A. Gupta, W. H. Butler, 2007 APS March Meeting, Denver, CO, March 5-9, 2007
20. **Effect of Bias on Spin-Transfer Torque in Magnetic Tunnel Junctions**, I. Theodonis; N. Kioussis; A. Kalitsov; M. Chshiev; W. H. Butler, 2007 APS March Meeting, Denver, CO, March 5-9, 2007
21. **Ab-initio studies of magnetic properties of CoFePd alloys and multilayers**, M. Chshiev; W. Butler, 10th Joint MMM/Intermag Conference, Baltimore, MD, Jan. 7-11, HD-01
22. **Growth and Characterization of CuCr₂Se₄ Thin Films**, J. Bettinger; R. V. Chopdekar; M. Liberati; J. R. Neulinger; Y. Takamura; L. M. Alldredge; E. Arenholz; M. Chshiev; W. H. Butler; Y. U. Idzerda; A. M. Stacy; Y. Suzuki, 10th Joint MMM/Intermag Conference, Baltimore, MD, Jan. 7-11, GD-11
23. **Effect of Bias on Spin-Transfer Torque in Magnetic Tunnel Junctions**, I. Theodonis; N. Kioussis; A. Kalitsov; M. Chshiev; W. H. Butler, 10th Joint MMM/Intermag Conference, Baltimore, MD, Jan. 7-11, FD-03
24. **Theory of Tunneling in Epitaxial Magnetic Tunnel Junctions**, W. H. Butler; X. Zhang; T. C. Schulthess, J. M. Maclaren; M. Chshiev; S. Vutukuri, 10th Joint MMM/Intermag Conference, Baltimore, MD, Jan. 7-11, EA-01
25. **Half-Metallic Behavior in Cr Spacer Layers Induced by Heusler Electrodes**. M. Williams; M. Chshiev; C. Culbert; W. Butler, 10th Joint MMM/Intermag Conference, Baltimore, MD, Jan. 7-11, DT-10
26. **Noise: a nuisance or a signal**, Western Digital, Fremont, CA, June 2006
27. **Non-Equilibrium Transport and Current Induced Spin Torque in Magnetic Tunnel Junctions**, Western Digital, Fremont, CA, June 2006
28. **Spin Torque and Spin Current in Magnetic Tunnel Junctions**, M. Chshiev, A. Kalitsov, I. Theodonis, N. Kioussis, W. H. Butler, 2006 APS March Meeting, Baltimore, MD, March 13-17, 2006
29. **Spin Dependent Tunneling in FM|semiconductor|FM structures**, S. Vutukuri, M. Chshiev, W. H. Butler, 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, CA, Oct. 30 –Nov. 3, EB-10
30. **Understanding Coherent Spin-Dependent Tunneling using Band Structure Codes**, Mairbek Chshiev, Chunsheng Liu and Bill Butler, MINT 2004 Workshop “Magnetic Tunnel Junctions and Applications to Read Sensors and MRAM”, November 3-4, 2004
31. **Spin Injection through an Fe(100)-GaAs(100) Interface**, S. Vutukuri, M. Chshiev and W. H. Butler, MINT 2004 Workshop “Magnetic Tunnel Junctions and Applications to Read Sensors and MRAM”, November 3-4, 2004
32. **Spin-Dependent Transport in Structures with Giant and Tunnel Magnetoresistance**, M. Chshiev, Virginia Tech, Blacksburg, USA, September 25, 2002
33. **Transport polarisé en spin dans une jonction tunnel à double barrière**, M. Chshiev, Seminaire, Laboratoire Louis Neel, Avril, 2002

34. **Spin-Polarized Transport in Magnetic Double Barrier Junctions**, M. Chshiev, D. Stoeffler, C. Tiusan, A. Vedyayev and K. Ounadjela, 1st Annual Meeting of the Research Training Network (RTN) Computational Magnetoelectronics, Budapest, Hungary, September 27-30, 2001
35. **Double Magnetic Tunnel Junctions Semiconductor-free diode: Potential Bipolar Switch for MRAMS**, C. Tiusan, A. Iovan, V. da Costa, T. Dimopoulos, M. Chshiev, D. Stoeffler, K. Ounadjela, J. Bangert and J. Wecker, 46th Annual Conference on Magnetism & Magnetic Materials, Seattle, Washington, USA -- November 12-16, 2001, EC-05
36. **Spin-polarized tunnel current in realistic double barrier structures**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, Joint European Magnetic Symposia EMMA-MRM (JEMS'01), Grenoble, France -- August 28th-September 1st, 2001, C011, Tu-C1-P4
37. **Influence of quantum well states on transport properties of double barrier junctions**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, Symposium on Metallic Multilayers (MML'01), Aachen, Germany -- June 24-29, 2001, SDT-IV P.4
38. **Double tunnel barrier structures as a tool for investigating fundamental aspects of spin polarized transport**, C. Tiusan, A. Iovan, V. da Costa, T. Dimopoulos, M. Chshiev, D. Stoeffler, K. Ounadjela, Symposium on Metallic Multilayers (MML'01), Aachen, Germany -- June 24-29, 2001, SDT-IV P.21
39. **Transport polarisé en spin dans une jonction tunnel à double barrière: diode magnétique**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, Congrès générale de la Société Française de Physique, Strasbourg, France -- 9-13 juillet 2001, oral 05.C26
40. **Transport polarisé en spin assisté par états résonants dans une jonction à double barrière**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, 7eme Colloque Louis Néel, Couches Minces et Nanostructures Magnétiques, Dourdan, France -- 8-9 mars 2001, oral III.4
41. **Spin-Polarized Transport in Double Barrier Junctions assisted by quantum well states**, M. Chshiev, Colloquium, Thales CSF – Université Paris-Sud, January, 2001
42. **Giant Asymmetry of Current And of Tunnel Magnetoresistance in Double Barrier Junctions**, M. Chshiev, D. Stoeffler, A. Vedyayev and K. Ounadjela, Research Training Network (RTN) on Computational Magnetoelectronics, Workshop on TMR and GMR, Dresden, December 01 – December 03, 2000
43. **Possible asymétrie du courant tunnel polarisé en spin dans une jonction magnétique à double barrière**, M. Chshiev, D. Stoeffler, A. Vedyayev, K. Ounadjela, POMMES et applications, Réunion du GdR POMMES, Abbaye des Prémontrés à Pont à Mousson, lundi 4 décembre au mardi 5 décembre 2000, orale O-20
44. **Crossover from symmetric to shifted M(H) loops in Co/NiO bilayers at increasing field sweep rate**, B.Dieny, P.BayleGuillemaud, M.Chshiev, R. O'Barr, S.Y.Yamamoto, Program of 44th Annual Conference on Magnetism & Magnetic Materials, San Jose, California, November 15-18, 1999
45. **TMR of MTJ in the presence of a nonmagnetic layer**, M.Chshiev, A.Vedyayev, N.Ryzhanova, B.Dieny, Moscow International Symposium on Magnetism, Moscow, June 1999
46. **Magnetoresistance de jonctions tunnel magnetiques de la forme Co/X/Al₂O₃/Co avec X=Cu ou Al**, A.Vedyayev, M.Chshiev, N.Ryzhanova, B.Dieny, Colloque Louis Neel, Couches Minces et Nanostructures Magnétiques, Dieppe (76) -- 3,4 et 5 juin 1999
47. **Dependence of resistance of magnetic sandwiches on external magnetic field**, A.Vedyayev, O.Kotelnikova, N.Pugach, N.Ryzhanova, M.Chshiev, Proceedings of XVI Russian school-seminar "New magnetic materials for microelectronics". Moscow, June, 1998, p.70
48. **Influence of interfaces on giant magnetoresistance in magnetic multilayers**, A.Vedyayev, M.Chshiev, N.Tsidaeva, NATO Advanced Research Workshop, 2 International Workshop "Itinerant Electron Magnetism: Fluctuation Effects and Critical Phenomena", Moscow, 15-19 September, 1997, p.34

- 49. The influence of interface scattering on Giant Magnetoresistance in magnetic multilayers,** *A. Vedyayev, N. Ryzhanova, M.Chshiev, B.Dieny*, NATO ASI "Frontiers in Magnetism of Reduced Dimension Systems", Sanatorium "Frunzenskoe", Partenit, Crimea, Ukraine, 25 May - 3 June 1997, Abstract O-2
- 50. Extraordinary Hall effect in magnetic granular alloys,** *A .Granovsky, F. Brouers, A. Kalitsov, M. Chshiev*, Book of abstracts of the fourth international conference on "Electrical transport and optical properties of inhomogeneous media" (ETOPIM4), Moscow-St.Petersburg, 23-30 July 1996, p.92
- 51. Extraordinary Hall effect of magnetic granular alloys in Zhang-Levy model,** *A.B.Granovsky, A.V.Kalitsov, M.G.Chshiev*, Proceedings of XV Russian school-seminar "New magnetic materials for microelectronics". Moscow, June,1996,p.170
- 52. Field dependence of giant magnetoresistance in magnetic multilayers,** *A.V.Vedyayev, B.Dieny, N.V.Ryzhanova, M.G.Chshiev*, Proceedings of XV Russian school-seminar "New magnetic materials for microelectronics". Moscow, June,1996, p.21