

# Curriculum Vitae

Prof. Dr. Sefer Bora Lisesivdin,  
BSc (Engineering), MSc, PhD, SMIEEE

## CONTACT INFORMATION

(1) Department of Physics

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<http://sblisesivdin.lrgresearch.org>

## EDUCATION

- 2008 Ph.D. Physics, Gazi University, Ankara, Turkey  
Dissertation: Electron and Magneto Transport Properties of AlGa<sub>N</sub>/Ga<sub>N</sub> Based High Electron Mobility Transistors (HEMTs)  
Advisor: Prof. Dr. Mehmet Kasap
- 2005 M.Sc. Advanced Technologies, Gazi University, Ankara, Turkey  
Thesis: Transport Properties of InGaAs/GaAs and AlGaAs/GaAs Semiconductors Grown by MBE  
Advisor: Assoc. Prof. Dr. Mehmet Kasap
- 2002 B.Sc (Eng). Physics Engineering, Hacettepe University, Ankara Turkey  
Senior Project: Development of X-Ray Data Analysis Software for Windows Systems

## RESEARCH INTERESTS

Experimental and numerical investigation of electron and magnetotransport properties, strain, persistent photoconductivity, hot-electron transport properties, Shubnikov de Hass parameters and quantum parameters of 2 dimensional gas (2DEG) of III-V group semiconductor materials including, GaAs, GaN, InGa<sub>N</sub>, TiO<sub>2</sub> bulks and AlGa<sub>N</sub>/Ga<sub>N</sub>, AlGa<sub>N</sub>/(Al<sub>N</sub>)/Ga<sub>N</sub>, AlGa<sub>N</sub>/(Al<sub>N</sub>)/Ga<sub>N</sub>/Al<sub>N</sub>, AlIn<sub>N</sub>/Al<sub>N</sub>/Ga<sub>N</sub>/Al<sub>N</sub> and AlIn<sub>N</sub>/Al<sub>N</sub>/InGa<sub>N</sub>/Al<sub>N</sub> heterostructures, MgZnO/ZnO, BeZnO/ZnO heterostructures and graphene.

Numerical investigation of transport properties of low-dimensional systems as Quantum dots (0D), Quantum wires (1D), Quantum wells (2D),

## SCHOLARSHIPS / FELLOWSHIPS / AWARDS

- 2017 Duty Award, Gazi University Faculty of Science, Ankara, Turkey.
- 2016 **Turkish Academy of Sciences, Distinguished Young Scientist Award**
- 2015 **IEEE Senior Membership**
- 2015 SCI-indexed Publication Award, Gazi University, Ankara, Turkey.
- 2015 Duty Award, Gazi University Faculty of Science, Ankara, Turkey.
- 2014 **Turkish Physical Union Prof. Dr. Sevket Erk Outstanding Young Scientist Award.**
- 2014 SCI-indexed Publication Award, Gazi University, Ankara, Turkey.
- 2014 SCI-indexed Citation Award, Gazi University, Ankara, Turkey.
- 2013 TUBITAK 2219 scholarship for postdoc research (6 months).

2007-present	20 publications are promoted through TUBITAK Incentive Program for International Scientific Publications.
2010, 2012	SCI-indexed Publication Award, Gazi University, Ankara, Turkey.
2008-2009	Postdoc fellowship for postdoc studies.
2007-2008	TUBITAK 2214 scholarship for PhD research (6 months).
2007	Progetto Lagrange PhD Scholarship, Politecnico di Torino, Italy (not used due to family issues).
2005-2008	Several project scholarship for M.Sc. and Ph.D. studies.

## GRANTS & PROJECT MEMBERSHIPS

*Earned grants as a project investigator (PI) or project co-investigator (co-PI)*

2018-2019	TUBITAK 1512, 2180227, Production of Compact USB Fiber-coupled UV-VIS-NIR Optical Spectrometer for Industrial and Scientific Purposes, CEO and PI, Budget, 149 846 TL no-return grant (approximately 24 500 Euros)
2017-2020	TUBITAK 1001,116F197, Investigation of Growth Behaviors and 2DEG Properties of of MgZnO/ZnO Heterostructures grown by USPECVD Method, PI, Budget, 359 810 TL (approximately 88 600 Euros)
2014-2016	Joint grant of Scientific and Technological Research Council of Turkey and RFBR of Russia, 113F364, Manipulation properties of two-dimensional electronic gas using insitu surface passivation of AlGaIn/GaN heterostructures by molecular beam epitaxy, PI, Budget: 282 910 TL (approximately 97 500 Euros)
2012-2013	University Research Grant, 05-2012/13, Numerical optimization of $Mg_xZn_{1-x}O/ZnO$ and $Be_xZn_{1-x}O/ZnO$ based heterostructure transistors, PI, Budget: 14 889 TL (approximately 6 500 Euros)
2012-2013	University Research Grant, 05-2012/14, Investigation of the effects of transition metal palladium on electronic, structural and optical properties of graphene nanoribbons, PI, Budget: 14 955 TL (approximately 6 500 Euros)

*Project memberships*

2010-2012	TUBITAK 1002 Support Project, 209T051, MOVPE growth and characterization of epitaxial germanium for infrared photovoltaic and sensor applications, Researcher, Budget: 25k TL (approximately 11k Euros)
2009-2012	TUBITAK 1007 Research Project, 107A012, Researcher, Budget: 4.7 M TL (approximately 2M Euros)
2008-2012	Military Related Research Project, SAVS020, Scholar, Budget: 5.8M TL (approximately 2 5M Euros)
2008-2010	TUBITAK 1001 Research Project, 108T018, Epitaxial growth and characterization of infrared AlGaAs laser diode materials, Scholar, Budget: 358 400 TL (approximately 156k Euros)
2008-2010	TUBITAK (Turkey) – ANCS (Romania) Joint Research Project, TBAG-U/220 (107A584), Studies on synthesis and characterization of TiO <sub>2</sub> thinfilm nanostructures which have applications in ecological physics, Scholar, Budget: 58k TL (approximately 25k Euros)
2006-2009	Military Related Research Project, SAVM005, Researcher, Budget: 4.7 M TL (approximately 2M Euros)

2006-2007 TUBITAK 1007 Research Project, 105A005, Scholar, Budget: 5.5M TL (approximately 2 4M Euros)

## PROFESSIONAL APPOINTMENTS

2018-cont. Full Professor, Department of Physics, Faculty of Science, Gazi University, Ankara Turkey

2013 Academic Visiting Researcher, School of Computer Science and Electronics Engineering, University of Essex, Colchester, UK.

2011-2018 Associate Professor, Department of Physics, Faculty of Science, Gazi University, Ankara Turkey

2009-2011 Assistant Professor, Department of Physics, Faculty of Science and Arts, Gazi University, Ankara Turkey

2008-2009 Post-doctoral Researcher, Nanotechnology Research Center, Bilkent University, Ankara, Turkey <http://www.nanotam.bilkent.edu.tr>

## RESEARCH EXPERIENCE

2013 Academic Visiting Researcher, Department of Computing and Electronic Systems University of Essex, Colchester, UK (6 months)

2008-2009 Post-doctoral Researcher, Nanotechnology Research Center, Bilkent University, Ankara, Turkey <http://www.nanotam.bilkent.edu.tr>

2007-2008 Research Student, Department of Computing and Electronic Systems University of Essex, Colchester, UK (6 months)

## TEACHING EXPERIENCE

These courses correspond to a number of more than 2300 students as of this CV's writing time.

### *Institute of Science, Gazi University, Ankara, Turkey*

2018/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

2017/2 Instructor, Fiz 524 Physics of Low-dimensional Semiconductors

2017/1 Instructor, Fiz 524 Physics of Low-dimensional Semiconductors

2017/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

2016/2 Instructor, Fiz 524 Physics of Low-dimensional Semiconductors

2016/2 Instructor, Fiz 522 Micro and Nanofabrication Methods

2016/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

2015/2 Instructor, Fiz 522 Micro and Nanofabrication Methods

2015/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

2014/2 Instructor, Fiz 522 Micro and Nanofabrication Methods

2014/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

2013/2 Instructor, Fiz 522 Micro and Nanofabrication Methods

2013/2 Instructor, Fiz 524 Physics of Low-dimensional Semiconductors

2013/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

2013/1 Instructor, Fiz 524 Physics of Low-dimensional Semiconductors

2012/1 Instructor, Fiz 522 Micro and Nanofabrication Methods

### *Faculty of Science, Gazi University, Ankara, Turkey*

2018/1 Instructor, Fiz 123 Introduction to Nanotechnology

2017/1	Instructor, Fiz 123 Introduction to Nanotechnology
2016/1	Instructor, Fiz 123 Introduction to Nanotechnology
2015/1	Instructor, Fiz 123 Introduction to Nanotechnology
2014/2	Advisor, Fiz 414 Research Project
2014/1	Advisor, Fiz 413 Research Project
2014/1	Instructor, Fiz 123 Introduction to Nanotechnology
2013/1	Advisor, Fiz 413 Research Project
2012/1	Advisor, Fiz 413 Research Project (2 students)
2011/2	Instructor, Enf 102 Basic Computer Usage and Fortran Language (2 groups)
2011/2	Advisor, Fiz 414 Research Project

*Faculty of Science and Arts, Gazi University, Ankara, Turkey*

2018/1	Advisor, Fiz 413 Research Project
2011/1	Advisor, Fiz 413 Research Project
2009/2	Advisor, Fiz 414 Research Project (2 students)
2009/1	Advisor, Fiz 413 Research Project (2 students)

*Faculty of Engineering, Gazi University, Ankara, Turkey*

2016/2	Instructor, Fiz 104, Physics II (2 groups)
2015/2	Instructor, Fiz 104, Physics II (2 groups)
2014/2	Instructor, Fiz 104, Physics II (2 groups)
2013/2	Instructor, Fiz 104, Physics II (4 groups)
2013/1	Instructor, Fiz 103 Physics I (3 groups)
2012/1	Instructor, Fiz 103 Physics I (2 groups)
2011/2	Instructor, Fiz 156 Physics Lab. (Mechanics)
2011/2	Instructor, Fiz 104, Physics II (3 groups)
2011/1	Instructor, Fiz 103 Physics I (3 groups)
2009/2	Instructor, Fiz 156 Physics Lab. (Mechanics)
2009/2	Instructor, Fiz 104, Physics II (2 groups)

*Faculty of Dentistry, Gazi University, Ankara, Turkey*

2012/1	Instructor, Fzk 111 Physics.
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*Faculty of Science at Polatlı, Gazi University, Polatlı, Ankara, Turkey*

2012/1	Instructor, Fiz 315 Properties of Matter.
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*Faculty of Technology, Gazi University, Ankara, Turkey*

2014/1	Instructor, Fiz 101 Physics I (2 groups).
2011/1	Instructor, Fiz 101 Physics I.

*Faculty of Technical Education, Gazi University, Ankara, Turkey*

2011/1	Instructor, Fiz 101 Physics I.
2009/2	Instructor, Fiz 102 Physics II.
2009/1	Instructor, Fiz 101 Physics I (4 groups).

*Turkish Military Academy, National Defense University, Ankara, Turkey*

2018-2019	Instructor, Physics.
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## PROFESSIONAL ACTIVITIES

- 2017 Scientific Committee Member, VI. ADIM Physics Days, 19-21 July, Balıkesir, Turkey
- 2015 Scientific Committee Member, 1st International Conference on Organic Electronic Material Technologies (OEMT-2015) 25-28 March Elazığ, Turkey
- 2015 Scientific Committee Member, 2nd International Nanoscience and Nanotechnology for Next Generation (NaNONG) 29-31 October Antalya, Turkey
- 2011-2014 Member of board of management of the Photonics Research Center at Gazi University, Ankara, Turkey. <http://fotonik.gazi.edu.tr>
- 2004 Member of organizing group of 11<sup>th</sup> Condensed Matter Ankara Meeting at Gazi University, Ankara, Turkey.

## PROFESSIONAL SERVICES

*Editorial Board Member (SCI-indexed) (2013-2016)*  
PLOS ONE (IF 2013: 3.534)

*Issue Editor (SCI-indexed) (2016)*

Advances in Materials Science and Technology “Recent Progress in Group III-Nitride Electronic and Optoelectronic Devices” (IF 2016: 1.299)

*Reviewer (SCI-indexed)*

Journal of Physics D – Applied Physics,  
Semiconductor Science and Technology,  
Nanotechnology,  
Applied Physics Letters,  
Physica E,  
Physica B,  
AIP Advances,  
Computational Materials Science.

## PROFESSIONAL AFFILIATIONS

- 2005-present **Senior Member**, IEEE (Institute of Electrical and Electronics Engineers)
- 2005-present **Senior Member**, IEEE Electron Devices Society
- 2006 Member, IEEE Communications Society
- 2006 Member, SPIE (Society of Photographic Instrumentation Engineers)
- Member, Hacettepe University Alumni

## SEMINARS

- 12/2014 “Elektriksel Olarak Pompalanan Seyreltik Azotlu Dikey Kaviteli Yarıiletken Optik Yükselteç” Physics Department, Istanbul University, Istanbul, Turkey.
- 05/2008 “AlGaIn/GaN-temelli Yüksek Elektron Hareketliliğine Sahip Transistörlerin (HEMTs) Elektron ve Manyeto-iletim Özelliklerinin İncelenmesi (in Turkish)”, Department of Physics, Akdeniz University, Antalya, Turkey.
- 02/2008 “Investigation of 2DEG parameters in AlGaIn/GaN based heterostructures using QMSA technique” Department of Computing and Electronic Systems, University of Essex, Colchester, UK.

## ATTENDED COURSES AND WORKSHOPS

01/2006	I. Adaligeli, “Solid State Educational Workshop 2006.1 : The Theory of Spin Transport (1 Week)” Feza Gürsey Institute, Istanbul, Turkey.
01/2006	J. Schliemann, “Solid State Educational Workshop 2006.1 : Rashba and Spin-Hall Effects in Quantum Dots (1 Week)” Feza Gürsey Institute, Istanbul, Turkey.
01/2006	E.V. Sukhorukov, “Solid State Educational Workshop 2006.1 : The Physics of Quantum Shot Noise (1 Week)” Feza Gürsey Institute, Istanbul, Turkey.
03-04/2005	R. Gerhardt, “Solid State Educational Workshop 2004.3-2 : Magnetotransport in low-dimensional systems (3 Weeks)”, Bilkent University, Ankara, Turkey.

## PUBLICATIONS

*Cites and h-index*

Index name	Total cite	h-index
<i>Web of Science</i>	613	14
<i>Google Scholar</i>	735	15

### *Books and Book Chapters*

- 2 S. B. Lisesivdin, B. Sarikavak-Lisesivdin, E. Ozbay “Chapter 18: The Effects of the Interaction of Transition Metals on the Electronic Properties of the Graphene Nanosheets and Nanoribbons” Graphene Science Handbook Vol.3, CRCPress, Taylor&Francis, (2016).
- 1 E. L. Wolf, M. Medikonda, (Transl. eds: B. Sarikavak-Lisesivdin, S. B. Lisesivdin) “Nanoteknoloji Devrimini Anlamak” Nobel Press, (2014).

### *SCI-Articles*

- 64 J.-H. Lee, J.-M. Ju, G. Atmaca, J.-G. Kim, S.-H. Kang, Y. S. Lee, S.-H. Lee, J.-W. Lim, H.-S. Kwon, S. B. Lisesivdin, J.-H. Lee “ High Figure-of-Merit (V2BR/RON) AlGa<sub>N</sub>/Ga<sub>N</sub> Power HEMT With Periodically C-Doped Ga<sub>N</sub> Buffer and AlGa<sub>N</sub> Back Barrier” *IEEE J. Electron Dev. Soc.* **6**, 1179 (2018).
- 63 Ö. Ömeroğlu, E. Kutlu, P. Narin, S. B. Lisesivdin, E. Ozbay “Electronic Properties of Graphene Nanoribbons Doped with Zinc, Cadmium, Mercury Atoms” *Physica E* **104**, 124 (2018).
- 62 G. Atmaca, P. Narin, E. Kutlu, T. V. Malin, V. G. Mansurov, K. S. Zhuravlev, S. B. Lisesivdin, E. Ozbay, “Negative Differential Resistance Observation and a New Fitting Model for Electron Drift Velocity in Ga<sub>N</sub>-Based Heterostructures” *IEEE Trans. Electron Dev.* **65**, 950 (2018).

- 61 P. Narin, E. Kutlu, G. Atmaca, A. Atilgan, A. Yildiz, S. B. Lisesivdin, "Structural and optical properties of hexagonal ZnO nanostructures grown by ultrasonic spray CVD" *Optik* **168**, 86 (2018).
- 60 E. Kutlu, P. Narin, S. B. Lisesivdin, E. Ozbay "Electronic and optical properties of black phosphorus doped with Au, Sn and I atoms" *Philos. Mag.* **98**, 155 (2018).
- 59 P. Narin, E. Kutlu, G. Atmaca, S. B. Lisesivdin, E. Ozbay "A first principles investigation of the effect of aluminum, gallium and indium impurities on optical properties of  $\beta$ -Si<sub>3</sub>N<sub>4</sub> structure" *Optik* **147**, 115 (2017).
- 58 J. M. Al Abbas, P. Narin, G. Atmaca, E. Kutlu, B. Sarikavak-Lisesivdin, S. B. Lisesivdin "The effect of doping in different layers on 2DEG for ultrathin-barrier AlN/GaN heterostructures" *Optoelectron. Adv. Mater.-Rapid Comm.* **11**, 328 (2017).
- 57 J. M. Al Abbas, G. Atmaca, P. Narin, E. Kutlu, B. Sarikavak-Lisesivdin, S. B. Lisesivdin "A Comparative Study of AlGa<sub>N</sub> and InGa<sub>N</sub> Back-Barriers in Ultrathin-Barrier AlN/GaN Heterostructures" *J. Elec. Mater.* **46**, 5278 (2017).
- 56 E. Kutlu, P. Narin, G. Atmaca, B. Sarikavak-Lisesivdin, S. B. Lisesivdin, E. Ozbay "Electronic structure of  $\beta$ -Si<sub>3</sub>N<sub>4</sub> crystals with substitutional icosagen group impurities" *J. Optoelectron. Adv. Mater.* **19**, 278 (2017).
- 55 P. Narin, E. Kutlu, B. Sarikavak-Lisesivdin, S. B. Lisesivdin, E. Özbay "Electronic properties of Li-doped zigzag graphene nanoribbons" *Physica E* **84**, 543 (2016).
- 54 E. Kutlu, P. Narin, G. Atmaca, B. Sarikavak-Lisesivdin, S. B. Lisesivdin, E. Özbay "Effect of substitutional As impurity on electrical and optical properties of  $\beta$ -Si<sub>3</sub>N<sub>4</sub> structure" *Mater. Res. Bull.* **83**, 128 (2016).
- 53 G. Atmaca, S. Ardali, E. Tiras, T. Malin, V. G. Mansurov, K. S. Zhuravlev, S. B. Lisesivdin "Scattering analysis of 2DEG mobility in undoped and doped AlGa<sub>N</sub>/AlN/GaN heterostructures with an *in situ* Si<sub>3</sub>N<sub>4</sub> passivation layer" *Solid-State Electron.* **118**, 12 (2016).
- 52 I. Kara, Y. Sarikavak, S. B. Lisesivdin, M. Kasap "Evaluation of Morphological and Chemical Differences of Gunshot Residues in Different Ammunitions Using SEM/EDS Technique" *Environ. Foren.* **17**, 68 (2016).
- 51 G. Atmaca, P. Narin, B. Sarikavak-Lisesivdin, S. B. Lisesivdin "Two Dimensional Electron Gas in a Hybrid GaN/InGa<sub>N</sub>/ZnO Heterostructure with Ultrathin InGa<sub>N</sub> Channel Layer" *Physica E* **79**, 67 (2016).
- 50 G. Atmaca, S. Ardali, P. Narin, E. Kutlu, S. B. Lisesivdin, T. Malin, V. Mansurov, K. Zhuravlev, E. Tiras "Energy relaxation of hot electrons by LO phonon emission in AlGa<sub>N</sub>/AlN/GaN heterostructure with *in situ* Si<sub>3</sub>N<sub>4</sub> passivation" *J. Alloys Compounds* **659**, 90 (2016).
- 49 S. Ardali, G. Atmaca, S. B. Lisesivdin, T. Malin, V. Mansurov, K. Zhuravlev, E. Tiras "The variation of temperature dependent carrier concentration and mobility in AlGa<sub>N</sub>/AlN/GaN heterostructure with Si<sub>3</sub>N<sub>4</sub> passivation" *Phys. Stat. Sol. B* **252**, 1960 (2015).

- 48 B. Sarikavak-Lisesivdin, S. B. Lisesivdin, N. Balkan, G. Atmaca, P. Narin, H. Cakmak, E. Ozbay "Energy relaxation of electrons in InGaN quantum wells" *Metall. Mater. Trans. A* **46**, 1565 (2015).
- 47 G. Atmaca, P. Narin, B. Sarikavak-Lisesivdin, S. B. Lisesivdin, M. Kasap "Electron Transport Properties of Two Dimensional Electron Gas in  $\text{Be}_x\text{Zn}_{1-x}\text{O}/\text{ZnO}$  Heterostructures" *Philos. Mag.* **95**, 79 (2015).
- 46 G. Atmaca, P. Tasli, G. Karakoc, E. Yazbahar and S. B. Lisesivdin "Numerical Investigation of the 2DEG Properties of AlGaIn/GaN HEMT Structures with InGaIn/GaN MQW Back-Barrier Structure" *Physica E* **65**, 110 (2015).
- 45 O. Donmez, F. Sarcan, S. B. Lisesivdin, M. P. Vaughan, A. Erol, M. Gunes, M. C. Arikian, J. Puustinen and M. Guina, "Analytic modeling of temperature dependence of 2D carrier mobility in as-grown and annealed GaInNAs/GaAs quantum well structures" *Semicond. Sci. Technol.* **29**, 125009 (2014).
- 44 S. B. Lisesivdin, G. Atmaca, E. Arslan, S. Cakmakyapan, O. Kazar, S. Butun, Jawad-ul-Hassan, E. Janzén and E. Ozbay "Extraction and scattering analyses of 2D and bulk carriers in epitaxial graphene-on-SiC structure" *Physica E* **63**, 87 (2014).
- 43 E. Arslan, S. Cakmakyapan, O. Kazar, S. Bütün, S. B. Lisesivdin, N. A. Cinel, G. Ertas, S. Ardali, E. Tiras, J. Ul-Hassan, E. Janzén and Ekmel Özbay "SiC substrate effects on electron transport in the epitaxial Graphene layer" *Electron. Mater. Lett.* **10**, 387 (2014).
- 42 S. B. Lisesivdin, N. A. Khan, S. Mazzucato, N. Balkan, M. J. Adams, V.-M. Korpijärvi, M. Guina, G. Mezosi and M. Sorel "Optical gain in 1.3  $\mu\text{m}$  electrically-driven dilute nitride VCSOAs" *Nanoscale Res. Lett.* **9**, 22 (2014).
- 41 K. Elibol, G. Atmaca, P. Tasli, S. B. Lisesivdin "A Numerical Study on Subband Structure of In<sub>x</sub>Al<sub>1-x</sub>N/GaN-Based HEMT Structures with Low-Indium ( $x < 0.10$ ) Barrier Layer" *Solid State Commun.* **162**, 8 (2013).
- 40 A. F. Kuloglu, B. Sarikavak-Lisesivdin, S. B. Lisesivdin, E. Ozbay "First-principles calculations of Pd-terminated symmetrical armchair graphene nanoribbons" *Comp. Mater. Sci.* **68**, 18 (2013).
- 39 B. Sarikavak-Lisesivdin, S. B. Lisesivdin, E. Ozbay "The Effect of In<sub>x</sub>Ga<sub>1-x</sub>N Back-barriers on the Dislocation Densities in Al<sub>0.31</sub>Ga<sub>0.69</sub>N/AlN/GaN/ In<sub>x</sub>Ga<sub>1-x</sub>N/GaN Heterostructures ( $0.05 \leq x \leq 0.14$ )" *Cur. Appl. Phys.* **13**, 224 (2013).
- 38 B. Sarikavak-Lisesivdin, S. B. Lisesivdin, E. Ozbay "Ab initio study of Ru-terminated and Ru-doped armchair graphene nanoribbons" *Mol. Phys.* **110**, 2295 (2012).
- 37 E. Tiras, O. Celik, S. Mutlu, S. Ardali, S. B. Lisesivdin, E. Ozbay "Temperature dependent energy relaxation time in AlGaIn/AlN/GaN heterostructures" *Superlat. Microstruct.* **51**, 733 (2012).



- 36 O. Celik, E. Tiras, S. Ardali, S. B. Lisesivdin, E. Ozbay “Determination of the LO phonon energy by using electronic and optical methods in AlGa<sub>N</sub>/Ga<sub>N</sub>” *Cent. Eur. J. Phys.* **10**, 485 (2012).
- 35 O. Kelekci, S. B. Lisesivdin, S.Ozcelik, E. Ozbay “Numerical optimization of In-mole fraction and layer thicknesses in Al<sub>x</sub>Ga<sub>1-x</sub>N/AlN/GaN high electron mobility transistors with InGa<sub>N</sub> back barrier” *Physica B* **406**, 1513 (2011).
- 34 A. Yildiz, P. Tasli, B. Sarikavak, S. B. Lisesivdin, M. K. Ozturk, M. Kasap, S. Ozcelik, E. Ozbay “Grain boundary related electrical transport in Al-rich Al<sub>x</sub>Ga<sub>1-x</sub>N layers grown by metal organic chemical vapor deposition” *Semiconductors+* **45**, 33 (2011).
- 33 H. Yu, S. B. Lisesivdin, B. Bolukbas, O. Kelekci, M. K. Ozturk, S. Ozcelik, D. Caliskan, M. Ozturk, H. Cakmak, P. Demirel ve E. Ozbay “Improvement of breakdown characteristics in AlGa<sub>N</sub>/Ga<sub>N</sub>/Al<sub>x</sub>Ga<sub>1-x</sub>N HEMT based on a grading Al<sub>x</sub>Ga<sub>1-x</sub>N buffer layer” *Phys. Stat. Sol. a* **207**, 2593 (2010).
- 32 P. Tasli, B. Sarikavak, G. Atmaca, K. Elibol, A. F. Kuloglu ve S. B. Lisesivdin “Numerical Simulation of Novel Ultrathin Barrier n-GaN/InAlN/AlN/GaN HEMT Structures: Effect of In Mole Fraction, Doping and Layer Thicknesses” *Physica B* **405**, 4020 (2010).
- 31 A. Bengi, S. B. Lisesivdin, M. Kasap, T. Mammadov, S. Ozcelik, E. Ozbay “Analysis of defect related optical transitions in AlGa<sub>N</sub>/Ga<sub>N</sub> heterostructures” *Mater. Sci. Semicond. Process.* **13**, 105 (2010).
- 30 S. B. Lisesivdin, A. Yildiz, N. Balkan, M. Kasap, S. Ozcelik, E. Ozbay “Scattering Analysis of Two-dimensional Electrons in AlGa<sub>N</sub>/Ga<sub>N</sub> with Bulk Related Parameters Extracted by Simple Parallel Conduction Extraction Method” *J. Appl. Phys.* **108**, 013712 (2010).
- 29 P. Tasli, A. Yildiz, M. Kasap, E. Ozbay, S. B. Lisesivdin ve S. Ozcelik “Contributions of the impurity band and electron–electron interactions to the magnetoconductance of AlGa<sub>N</sub>” *Philos. Mag.* **90**, 3591 (2010).
- 28 S. B. Lisesivdin, P. Tasli, M. Kasap, M. Ozturk, E. Arslan, S. Ozcelik, ve E. Ozbay, “Double subband occupation of the two-dimensional electron gas in In<sub>x</sub>Al<sub>1-x</sub>N/AlN/GaN/AlN Heterostructures with Low Indium Barrier (0.064 < x < 0.139)” *Thin Solid Films* **518**, 5572 (2010).
- 27 A. Yildiz, S. B. Lisesivdin, M. Kasap, D. Mardare “The substrate temperature dependent electrical properties of titanium dioxide thin films” *J. Mater. Sci.: Mater. Electron.* **21**, 692 (2010).
- 26 S. Gokden, R. Tulek, A. Teke, J. H. Leach, Q. Fan, J. Xie, U. Ozgur, H. Morkoc, S. B. Lisesivdin, E. Ozbay “Mobility limiting scattering mechanisms in nitride-based two-dimensional heterostructures with InGa<sub>N</sub> channel” *Semicond. Sci. Technol.* **25**, 045024 (2010).
- 25 A. Yildiz, S. B. Lisesivdin, P. Tasli, E. Ozbay, ve M. Kasap “Determination of the critical indium composition corresponding to the metal-insulating transition in In<sub>x</sub>Ga<sub>1-x</sub>N (0.06 < x < 0.135) layers” *Curr. Appl. Phys.* **10**, 838 (2010).

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## ADVISING

### PhD's

- 3 E. Kutlu, (Ankara Yıldırım Beyazır University, Institute of Science, Energy Systems Engineering), 2018- present. Second Advisor.
- 2 P. Narin, (Gazi University, Institute of Science, Physics), 2015 - present. Advisor.
- 1 G. Atmaca, (Gazi University, Institute of Science, Physics), 2013 - 2018. Advisor.

### MSc's

- 13 M. Güney, (Gazi University, Institute of Science, Physics), 2018 – present. Advisor.

- 12 K. B. Sönmez, (Gazi University, Institute of Science, Advanced Technologies), *2016 - present*. Advisor.
- 11 M. T. Haliloğlu, (Gazi University, Institute of Science, Advanced Technologies), *2016 - present*. Advisor.
- 10 O. Omeroglu, (Gazi University, Institute of Science, Physics), Investigation of the Electronic Properties of Zn, Cd and Hg-doped Graphene Sheets with Ab-Initio Methods, *2016 - 2018*. Advisor.
- 9 R. Ibrahim, (Gazi University, Institute of Science, Physics), Investigation of Electronic and Optical Properties of Wurtzite MgZnO with First Principles Calculations, *2016 - 2018*. Advisor.
- 8 M. Ozturk, (Gazi University, Institute of Science, Physics), Electrical Characteristics and Scattering Analysis of Ultrathin Barrier GaN-Based High Electron Mobility Transistors, *2015 - 2018*. Advisor.
- 7 J. M. M. J. Al-Abbas, (Gazi University, Institute of Science, Physics), Simulation and optimtion of GaN-based ultrathin barrier high electron mobility transistors, *2014 - 2016*. Advisor.
- 6 E. Kutlu, (Gazi University, Institute of Science, Physics), Investigation of the effects of Cadmium Doping on Electronic and Optical Properties of Graphene Nanoribbons, *2014 - 2016*. Advisor.
- 5 A. F. Kuloglu, (Gazi University, Institute of Science, Physics), Investigation of Electronic Properties of Pa-terminated Graphene Nanoribbons, *2010-2012*. Advisor.
- 4 G. Atmaca, (Gazi University, Institute of Science, Physics), Numerical Investigation of the 2-Dimensional Carriers in AlQN/AlN/GaN-Based (Q=Ga, In) Transistors with Multi-Quantum Well Back-Barriers, *2010-2012*. Advisor.
- 3 K. Elibol, (Gazi University, Institute of Science, Physics), Investigation of Magnetoconductivity and Surface Properties of Exfoliated and Epitaxially Grown Graphene Samples, *2010-2012*. Advisor.
- 2 G. Karakoc, (Gazi University, Institute of Science, Physics), Investigating the Electron Transport Properties of AlInN/AlN/(InGaN)/GaN Heterostructures with InGaN Quantum Wells. *2009-2012*. Advisor.
- 1 C. Gunes, (Gazi University, Institute of Science, Physics), Electron and magnetotransport investigation of two dimensional electron gas in ultrathin barrier GaN-based heterostructures. *2009-2012*. Advisor.

## **PERSONAL INFORMATION AND OTHER EXPERIENCE**

*Birth date:* September 12<sup>th</sup>, 1979

*Social Status:* Have a son.

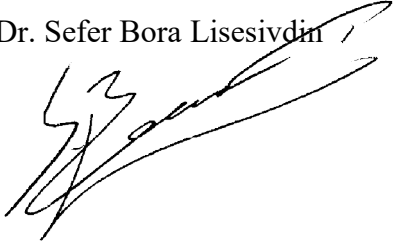
2010-2011 Completed the one-year full-time long military service as Assistant Professor Air Defence Second Lieutenant at Turkish Army Forces, 8. Corps, Air Defence Battalion which is located at Ercis, Van, Turkey.

-End of CV-

Last update: Jan 1<sup>st</sup>, 2019.

Hereby, I am confirming that all information listed on this CV is correct at this date.

Prof. Dr. Sefer Bora Lisesivdin

A handwritten signature in black ink, appearing to be 'Sefer Bora Lisesivdin', written over the printed name.