

# VITA OF MIKHAIL KHENNER

November 17, 2023

Department of Mathematics  
Western Kentucky University  
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## **EDUCATION**

### **Universite de la Mediterranee Aix-Marseille II, France**

1998 Ph.D. in Fluid Mechanics (diploma with honor)  
Advisor: Dr. Bernard Roux  
Thesis: *Stability of the Vibration-Induced Flows in the Continuously Stratified Fluid and in the System of two Immiscible Fluids of Different Densities*

### **Perm Federal University, Russia**

1998 Ph.D. in Physical Applied Mathematics (diploma with honor)  
Advisor: Professor Dmitrii V. Lyubimov  
1994 M.S. in Physics (diploma with honor)  
1992 B.S. in Physics

## **PROFESSIONAL HISTORY**

8/2020 – Professor,  
Department of Mathematics,  
Western Kentucky University, Bowling Green, KY

8/2014 –8/2020 Associate Professor,  
Department of Mathematics,  
Western Kentucky University, Bowling Green, KY

8/2009 –8/2014 Assistant Professor,  
Department of Mathematics,  
Western Kentucky University, Bowling Green, KY

8/2002 – 8/2009 Assistant Professor,  
Department of Mathematics,  
University at Buffalo, SUNY, Buffalo, NY

8/2000 – 8/2002 Postdoctoral Researcher (with teaching responsibilities),  
Department of Mathematical Sciences,  
University of Delaware, Newark, DE,  
Advisor: Prof. Richard J. Braun

12/1998 – 6/2000 Postdoctoral Researcher,  
Department of Computer Science,  
Tel Aviv University, Israel,  
Advisor: Prof. Amir Averbuch

**RESEARCH INTERESTS**

Mathematical modeling of thin liquid and solid films, numerical methods for problems with interfaces and free boundaries, pattern formation and self-organization, stability, bifurcation and control, partial differential equations

**FINANCIAL SUPPORT (FUNDED APPLICATIONS)**

Kentucky NSF EPSCoR Research Enhancement Grant “Integrated modeling and experimental studies of quantum nanoislands: growth, morphology, and coarsening”; P.I.: Mikhail Khenner, Co-P.I.: Vladimir Dobrokhotov, October 2017 – July 2018, \$35,500

Quick Turn Around Grant (QTAG), WKU Ogden College of Science and Engineering, \$1000 to support sabbatical research in October-December 2017

FY 2011 Summer Undergraduate Research Fellowship at the National Institute of Science and Technology (SURF Gaithersburg), \$7,925 for Derrick Johnson (funded on April 25, 2011)

WKU New Faculty Scholarship #10-7016, \$4,000, 10/20/2009-10/20/2011: “Mathematical Models and Numerical Methods for Nanosprings Growth and Solid Film Dewetting”

WKU Summer 2010 Faculty Scholarship #10-7054, \$6,000, 10/20/2009-10/27/2010: “Mathematical and Computational Modeling of Nanostructure Self-Assembly in Pulsed Laser-Melted Metallic Films”

**AWARDS AND HONORS**

Nominee by students for WKU’s Center for Innovative Teaching and Learning Honors Award (Spring 2020)

Nominee by Mathematics Department faculty for WKU’s Ogden College of Science and Engineering Faculty Research Award (Fall 2023)

**TEACHING (u: undergraduate; g: graduate)****Department of Mathematics, Western Kentucky University**

Fall 2023	137	Calculus II (u, HON, two sections)
Summer 2023	137	Calculus II (u)
Spring 2023	136 598	Calculus I (u, HON, two sections) Graduate Seminar (g)
Fall 2022	137	Calculus II (u, HON, two sections)
Summer 2022	331	Differential Equations (u)
Spring 2022	136 137	Calculus I (u) Calculus II (u, two sections)

Fall 2021	136	Calculus I (u, two sections)
	331	Differential Equations (u, two sections)
Summer 2021	117	Trigonometry (u)
Spring 2021	136	Calculus I (u, HON)
	370	Applied Techniques in Mathematics (u)
	331	Differential Equations (u)
Fall 2020	117	Trigonometry (u)
	137	Calculus II (u, one HON section)
	331	Differential Equations (u)
Summer 2020	331	Differential Equations (u)
Spring 2020	137	Calculus II (u, two sections (one HON))
	406/406G	Numerical Analysis II (u/g)
Fall 2019	137	Calculus II (u, two HON sections )
	405/405G	Numerical Analysis I (u/g, includes CS)
Summer 2019	137	Calculus II (u)
Spring 2019	137	Calculus II (u, two sections (one HON))
Fall 2018	136	Calculus I (u, two sections )
	405/405G	Numerical Analysis I (u/g, includes CS)
Summer 2018	331	Differential Equations (u)
Spring 2018	237	Calculus III (u, two section)
Fall 2017		Sabbatical leave
Summer 2017	137	Calculus II (u)
Spring 2017	137	Calculus II (u, one section)
	435/435G	Partial Differential Equations (u/g)
Fall 2016	137	Calculus II (u, two sections (one HON))
	536	Advanced Applied Mathematics II (g)
Summer 2016	331	Differential Equations (u)
	136	Calculus I (u)
Spring 2016	136	Calculus I (u, two sections (one HON))
	535	Advanced Applied Mathematics I (g)
Fall 2015	137	Calculus II (u, two HON sections )
	307	Linear Algebra (u)
Summer 2015	116	College Algebra (u)
	137	Calculus II (u)

Spring 2015	136 406/406G	Calculus I (u, two sections (one HON)) Numerical Analysis II (u/g)
Fall 2014	137 405/405G	Calculus II (u, two sections ) Numerical Analysis I (u/g, includes CS)
Summer 2014	331	Differential Equations (u)
Spring 2014	117 137	Trigonometry (u) Calculus II (u, two sections (one HON))
Fall 2013	137 405/405G	Calculus II (u, two sections (one HON)) Numerical Analysis I (u/g, includes CS)
Summer 2013	117	Trigonometry (u)
Spring 2013	137 535	Calculus II (u, two sections (one HON)) Advanced Applied Mathematics I (g)
Fall 2012	136 370	Calculus I (u, two sections) Applied Techniques in Mathematics (u)
Summer 2012	137	Calculus II (u)
Spring 2012	137 370	Calculus II (u, 2 sections) Applied Techniques in Mathematics (u)
Fall 2011	137	Calculus II (u, three sections (one HON))
Summer 2011	137	Calculus II (u)
Spring 2011	136	Calculus I (u, three sections)
Fall 2010	117 350 471/471G	Trigonometry (u) Advanced Engineering Mathematics (u) Introduction to Operations Research (u/g)
Summer 2010	531	Advanced Differential Equations (g)
Spring 2010	331	Differential Equations (u, two sections)
Fall 2009	331	Differential Equations (u, two sections)

### Department of Mathematics, University at Buffalo

Spring 2009	306 438/538 800 801	Intro to Differential Equations (u) Intro to Numerical Analysis II (u/g) Thesis Guidance (g) Reading and Conference (g)
Fall 2008	306	Intro to Differential Equations (u)

	437/537	Intro to Numerical Analysis I (u/g)
	800	Thesis Guidance (g)
	801	Reading and Conference (g)
Spring 2008	306	Intro to Differential Equations (u)
	438/538	Intro to Numerical Analysis II (u/g)
	800	Thesis Guidance (g)
	801	Reading and Conference (g)
Fall 2007	306	Intro to Differential Equations (u)
	418/518	Survey of Partial Diff. Equations (u/g)
	800	Thesis Guidance (g)
	801	Reading and Conference (g)
Spring 2007		Sabbatical leave
Fall 2006	306	Intro to Differential Equations (u)
	418/518	Survey of Partial Diff. Equations (u/g)
	801	Reading and Conference (g)
Spring 2006	306	Intro to Differential Equations (u)
	438/538	Intro to Numerical Analysis II (u/g)
Fall 2005	306	Intro to Differential Equations (u)
	437/537	Intro to Numerical Analysis I (u/g)
Spring 2005	121	Surv. Calc & Appl I (u)
	438/538	Intro to Numerical Analysis II (u/g)
Fall 2004	306	Intro to Differential Equations (u)
	437/537	Intro to Numerical Analysis I (u/g)
Spring 2004	438/538	Intro to Numerical Analysis II (u/g)
Fall 2003	241	Calculus II (u)
Spring 2003	141	Calculus I (u)
	438/538	Intro to Numerical Analysis II (u/g)
Fall 2002	141	Calculus I (u)

**Department of Mathematical Sciences, University of Delaware (2000-2002)**

Ordinary Differential Equations (u)

Calculus (g)

Calculus for Business and Economics (u)

**Department of Physics, Perm State University, Russia (1994-1998)**

Mathematical Physics (g)

Theoretical Mechanics (g)

**STUDENTS****Undergraduate Students:**

Lars Hebenstiel	Spring 2023 Senior Research Seminar (MATH 498): <i>Adatom self-assembly on Moire superlattices</i> ; Summer/Fall 2020: Independent research project
William Poteet	Fall 2020 Senior Research Seminar (MATH 498): <i>Exploration of a model of bridge vibration</i> .
Sasha Malone	Spring 2019 Independent Study (MATH406G: Numerical Analysis II)
Devon Loomis	Fall 2018 Senior Research Seminar (MATH 498): <i>A PDE Model for Analysis of the Surface Morphology of a Bi-Component Solid Film</i> .
Donald Price, Devon Loomis	Fall 2017, Spring/Summer 2018: supported by NSF Kentucky EPSCoR Research Enhancement Grant .
Austin Gabhart (Gatton Academy)	Spring and Fall 2017, Spring 2018 Independent Study: <i>Steady-state concentrations of carbon species in graphene grown on copper</i> .
William Johnson	Fall 2016 Senior Research Seminar (MATH 498): <i>Linear Stability Analysis and Numerical Approximation of Thin Metal Film Thickness</i> .
Joshua Stewart	Spring 2016 Senior Research Seminar (MATH 498): <i>A Model of Rocket Flight from Venus to Earth</i>
Kurt Woods	Fall 2011 Senior Research Seminar (MATH 498): <i>An Analysis of the Electromigration of Atoms Along a Crystal Surface Using the Method of Lines</i>
Derrick Johnson	Spring 2011 Senior Research Seminar (MATH 498): <i>Polynomial Approximation: Theory and Examples</i>
Derrick Johnson	Fall 2010 Research Seminar (MATH 398): <i>Implementation of the Simplex Method in Mathematica</i>
Jonathan Newton	Fall 2010 Senior Research Seminar (MATH 498): <i>Mathematical Analysis of Equilibrium of Self-Gravitating Spherical Stars</i>
Yingrui Liu	Honor's Thesis, April 2009 (Principal Advisor: Dr. Avner Peleg, University at Buffalo)

**Masters Students:**

Mahdi Bandegi	Graduated in August, 2014; Thesis: <i>A coupled PDE model for the morphological instability of a multi-component thin film during surface electromigration</i> . Mahdi is in Mathematics PhD program at New Jersey Institute of Technology
Selahittin Cinar	Graduated in April, 2014; Thesis: <i>Analysis of a PDE model of surface electromigration</i> . Selahittin is in Mathematics PhD program at the University of Houston
William Chapman	Graduated in June 2006; Thesis: <i>An exploration of modified Mathieu equation</i> (University at Buffalo)

**PhD Students (University at Buffalo):**

Agegnehu Atena	Graduated in December 2009; Thesis title: "Thermocapillary effects in driven dewetting and self-assembly of pulsed laser- irradiated metallic films". Agegnehu is the tenured Associate Professor of Mathematics in
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Phu Doc Vu Savannah State University.  
Graduated in August 2009; Thesis title: "Grid-based and meshless methods for the computation of the curvatures and related local geometric quantities of a 3D surface"

**EDUCATIONAL PUBLICATIONS**

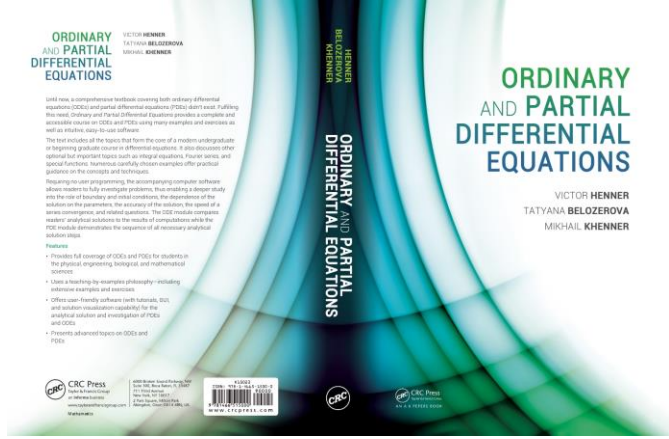
V. Henner, A. Nepomnyashchy, T. Belozeroва, and M. Khenner, "Ordinary Differential Equations: Analytical Methods and Applications". Textbook: Published June 6, 2023 by Springer - 606 Pages.

<https://doi.org/10.1007/978-3-031-25130-6>



V. Henner, T. Belozeroва, and M. Khenner, "Ordinary and Partial Differential Equations". Textbook: Published January 29, 2013 by A K Peters/CRC Press - 644 Pages.

<http://www.crcpress.com/product/isbn/9781466515000>



**RESEARCH PUBLICATIONS (53)**

All publications are in high impact journals by major US or European publishers (except #21,24,52,53) that do not charge a fee for manuscript submissions. All publications are blind peer-reviewed by at least two Referees (with the exception of #52,53).

**Papers published in topical journal issues in response to an invitation by Editor(s) (6):**

1. M. Khenner and M. Bandegi, "Electromigration-driven evolution of the surface morphology and composition for a bi-component solid film", *Mathematical Modelling of Natural Phenomena* **10**(4), 83-96 (2015) (Journal issue on Modeling Phenomena on Micro- and Nanoscale, Ed. Alexander A. Nepomnyashchy, Technion-Israel Institute of Technology).

2. M. Khenner, "Step growth and meandering in a precursor-mediated epitaxy with anisotropic attachment kinetics and terrace diffusion", *Mathematical Modelling of Natural Phenomena* **10**(4), 97-110 (2015) (Journal issue on Modeling Phenomena on Micro- and Nanoscale, Ed. Alexander A. Nepomnyashchy, Technion-Israel Institute of Technology).
3. M. Khenner, "Analysis of a combined influence of substrate wetting and surface electromigration on a thin film stability and dynamical morphologies", in the special issue "Trends and perspectives in solid-state wetting" of the journal *Comptes Rendus Physique* **14**, 607-618 (2013) (Ed. Olivier Pierre-Louis, University of Lyon).
4. S. Yadavali, M. Khenner, and R. Kalyanaraman, "Pulsed laser dewetting of Au films: Experiments and modeling of nanoscale behavior", in the focus issue "Frontiers in thin-film epitaxy and nanostructured materials" of the *Journal of Materials Research*, **28**(13), 1715-1723 (2013) (Ed. Haiyan Wang, Texas A&M University).
5. M. Khenner, S. Yadavali and R. Kalyanaraman, "Controlling nanoparticles formation in molten metallic bilayers by pulsed-laser interference heating", *Mathematical Modelling of Natural Phenomena* **7**(4), 20-38 (2012) (Journal issue on Modeling Phenomena on Micro- and Nanoscale, Ed. Alexander A. Nepomnyashchy, Technion-Israel Institute of Technology).
6. M. Khenner, "Comparative study of a solid film dewetting in an attractive substrate potentials with the exponential and the algebraic decay", *Mathematical Modelling of Natural Phenomena* **3**(5), (2008) 16-29 (Journal issue on Materials Science, Ed. Alexander A. Golovin, Northwestern University).

**Papers published as a result of a manuscript submission (39):**

7. M. Khenner, "Nanowire breakup via a morphological instability enhanced by surface electromigration", *Modelling Simul. Mater. Sci. Eng.* **32**, 015003 (2024).
8. Z. Khuzhakulov, Y. Allamyradov, I. Majidov, M. Khenner, J. Terzic, D. Gurgew, and A. O. Er, "Synthesis and characterization of Zirconium (Zr) thin film on Si(100) by pulsed laser deposition", *Coatings* **13**, 1748 (2023).
9. M. Khenner, "Effect of Electromigration on Onset of Morphological Instability of a Nanowire", *Journal of Engineering Mathematics* **140**, 6 (2023).
10. M. Khenner, "Kinetic models of Quantum Size Effect-directed nanocluster self-assembly in atomic corrals", *J. Phys.: Condensed Matter* **34**, 485002 (2022).
11. M. Khenner, "Vacancy-mediated suppression of phase separation in a model two-dimensional surface alloy by the difference of the atomic jump rates", *Surface Science* **722**, 122100 (2022).
12. M. Khenner and L. Hebenstiel, "A mesoscopic model of nanoclusters self-assembly on a graphene Moire", *Journal of Applied Physics* **130**, 124301 (2021).
13. M. Khenner, "Directed long-range transport of a nearly pure component atom clusters by the electromigration of a binary surface alloy", *Physical Review Materials* **5**, 024001 (2021).
14. M. Khenner and V. Henner, "Modeling evolution of composition patterns in a binary surface alloy", *Modelling and Simulation in Materials Science and Engineering* **29**, 015002 (2020).



15. M. Khenner, "Electromigration-guided composition patterns in thin alloy films: a computational study", *Surface Science* **698**, 121611 (2020).
16. B. Abdisarov, S. Ilhom, K. Kholikov, D. Loomis, V. Dobrokhotov, M. Khenner, and A.O. Er, "Morphology and structure of Pb thin films grown on Si(111) by pulsed laser deposition", *Applied Physics A* **126**, 237 (2020).
17. D.L. Price, V. Hennner, and M. Khenner, "Morphologies, metastability and coarsening of quantum nanoislands on the surfaces of the annealed Ag(110) and Pb(111) thin films", *Journal of Applied Physics* **124**, 174302 (2018).
18. L. Du, M. Khenner, and D. Maroudas, "Kinetics of nanorings formation on surfaces of stressed thin films", *Physical Review Materials* **2**, 083403 (2018).
19. M. Khenner, "Modeling solid-state dewetting of a single-crystal binary alloy thin films", *Journal of Applied Physics* **123**, 034302 (2018).
20. M. Khenner, "Height transitions, shape evolution, and coarsening of equilibrating quantum nanoislands", *Modelling and Simulation in Materials Science and Engineering* **25**, 085003 (2017).
21. N. Iraniparast, L. Nguyen and M Khenner, "Asymptotic behavior of waves in a nonuniform media", *Applications and Applied Mathematics* **12(1)**, 217 – 229 (2017).
22. M. Khenner, "Interplay of quantum size effect, anisotropy and surface stress shapes the instability of thin metal films", *Journal of Engineering Mathematics* **104**, 77-92 (2017).
23. M. Khenner, "Model for computing kinetics of the graphene edge epitaxial growth on copper", *Physical Review E* **93**, 062806 (2016).
24. Wingo, A., Cinar, S., Woods, K., Khenner, M. "Mathematical modeling of a surface morphological instability of a thin monocrystal film in a strong electric field", *Involve, a Journal of Mathematics* **9-4**, 623-638 (2016).
25. S. Shklyaev, A.A. Alabuzhev, and M. Khenner, "Marangoni convection in a thin film on a vertically oscillating plate", *Physical Review E* **92**, 013019 (2015).
26. M. Khenner, "A long-wave model for strongly anisotropic growth of a crystal step", *Physical Review E* **88**, 022402 (2013).
27. S. Shklyaev, A.A. Alabuzhev, and M. Khenner, "Long-wave Marangoni convection in a thin film heated from below", *Physical Review E* **85**, 016328 (2012).
28. M.Khenner, S. Yadavali, and R. Kalyanaraman, "Formation of organized nanostructures from unstable bilayers of thin metallic liquids", *Physics of Fluids* **23**, 122105 (2011). (Selected and featured in the Virtual Journal of Nanoscale Science and Technology 25(2), 2012, published by AIP and APS.)
29. M. Khenner, W.T. Tekalign, and M. Levine, "Stability of a strongly anisotropic thin epitaxial film in a wetting interaction with elastic substrate", *European Physics Letters* **93**, 26001 (2011).

30. H. Krishna, R. Sachan, J. Strader, C. Favazza, M. Khenner, and Ramki Kalyanaraman, ``Thickness-dependent spontaneous dewetting morphology of ultrathin Ag films”, *Nanotechnology* **21**, (2010) 155601.
31. S. Shklyaev, M. Khenner, and A.A. Alabuzhev, ``Oscillatory and monotonic modes of longwave Marangoni convection in a thin film”, *Physical Review E* **82**, (2010) 025302R.
32. P. Du, M. Khenner, and H. Wong, “A tangent-plane marker-particle method for the computation of three-dimensional solid surfaces evolving by surface diffusion on a substrate”, *Journal of Computational Physics* **229**, (2010) 813-827.
33. A. Atena and M. Khenner , “Thermocapillary effects in driven dewetting and self-assembly of pulsed laser- irradiated metallic films”, *Physical Review B* **80**, (2009) 075402. (Selected and featured in the Virtual Journal of Nanoscale Science and Technology 20(7), 2009, published by AIP and APS.) This paper is co-authored by UB student.
34. S. Shklyaev, A.A. Alabuzhev and M. Khenner, “Influences of a longitudinal and tilted vibration on stability and dewetting of a liquid film”, *Physical Review E* **79**, (2009) 051603.
35. M. Khenner , “Morphologies and kinetics of a dewetting ultrathin solid film”, *Physical Review B* **77**, (2008) 245445.
36. M. Khenner , “Dewetting of an ultrathin solid film on a lattice-matched or amorphous substrate”, *Physical Review B* **77**, (2008) 165414.
37. S. Shklyaev, M. Khenner, and A.A. Alabuzhev, “Enhanced stability of a dewetting thin liquid film in the single-frequency vibration field”, *Physical Review E* **77**, (2008) 036320.
38. M. Khenner, “Tailoring of Crystal Surface morphology by Induced Spatio-Temporal Oscillations of Temperature”, *Physical Review E* **75**, (2007) 021605.
39. M. Khenner and V.K. Henner, “Temperature of Spatially Modulated Surface of Solid Film Heated by Repetitive Laser Pulses”, *Journal of Physics D: Appl. Phys.* **38**, (2005) 4196-4201.
40. M. Khenner, “Influence of Pulsed Laser Heating on Morphological Relaxation of Surface Ripple”, *Physical Review E* **72**, (2005) 011604.
41. M. Khenner and R.J. Braun, “Numerical Simulation of Liquid Phase Electro-Epitaxial Selective Area Growth”, *Journal of Crystal Growth* **279**, (2005) 213-228.
42. M. Khenner, “Motion of Contact Line of a Crystal Over the Edge of Solid Mask in Epitaxial Lateral Overgrowth”, *Computational Materials Science* **32**, (2005) 203-216.
43. M. Khenner, “Computation of the Material Indicator Function Near the Contact Line (in Tryggvason’s method)”, *Journal of Computational Physics* **200**, (2004) 1-7.
44. M. Khenner, “Enhancement of Epitaxial Lateral Overgrowth by Vapor-Phase Diffusion”, *International Journal of Engineering Science* **42**, (2004) 1439-1457.
45. M. Khenner, R. J. Braun and M. G. Mauk, “A Model for Anisotropic Epitaxial Lateral Overgrowth”, *Journal of Crystal Growth* **241**, (2002) 330-346.

46. M. Khenner, R. J. Braun and M. G. Mauk, "A Model for Isotropic Crystal Growth from Vapor on a Patterned Substrate", *Journal of Crystal Growth* **235**, (2002) 425-438.
47. M. Khenner, A. Averbuch, M. Israeli, M. Natah and E. Glickman, "Level Set Modeling of Transient Electromigration Grooving", *Computational Materials Science* **20**, (2001) 235-250.
48. M. Khenner, A. Averbuch, M. Israeli and M. Nathan, "Numerical Simulation of Grain Boundary Grooving by Level Set Method", *Journal of Computational Physics* **170**, (2001) 764-784.
49. M. Nathan, E. Glickman, M. Khenner, A. Averbuch and M. Israeli, "Electromigration Drift Velocity in *Cu* Interconnects Modeled with the Level Set Method", *Applied Physics Letters* **77**, (2000) 3355-3357.
50. M. V. Khenner, D.V. Lyubimov, T. S. Belozeroва and B. Roux, "Stability of Plane-Parallel Vibrational Flow in a Two-Layer System", *European Journal of Mechanics B/Fluids* **18**, (1999) 1085-1101.
51. M. V. Khenner, D.V. Lyubimov and M. M. Shotz, "Stability of a Fluid Interface Under Tangential Vibrations", *Fluid Dynamics* **33**, (1998) 318-323.
52. M. V. Khenner and D. V. Lyubimov, "On Stability of Plane-Parallel Vibrational Flow of a Stratified Fluid", *Hydrodynamika* **11**, (1998) 197-207 (in Russian).
53. M. V. Khenner and D.V. Lyubimov, "On Longwave Instability of Fluid-Fluid Interface Under Tangential Vibration", *Hydrodynamika* **11**, (1998) 191-196 (in Russian).

**Papers published in refereed conference proceedings (4):**

54. A.O. Ozer and M. Khenner, "An alternate numerical treatment for the nonlinear PDE models of piezoelectric laminates", *Proceeding of the Society of Photo-Optical Instrumentation Engineers 10967, Active and Passive Smart Structures and Integrated Systems XII, 109671R (21 March 2019)*; doi: 10.1117/12.2514567.
55. M. Khenner, "Control of Growth and Morphology of a Crystal Surface by induced Spatio-Temporal Oscillations of Surface Temperature", *Mater. Res. Soc. Symp. Proc. Vol. 960*, (2007) paper #0960-N03-03.
56. M. Khenner, "Oscillatory Temperature-driven Morphological Relaxation of Surface Ripple Using Weak Pulsed Laser", *Mater. Res. Soc. Symp. Proc. Vol. 890*, (2006) paper #0890-Y07-03.1.
57. M.V. Khenner, D.V. Lyubimov, B. Roux and S.V. Shklyayev, "The Application of Parallel Computations Technique to the Solution of Certain Hydrodynamic Stability Problems", *Lecture Notes in Computer Science* **1277**, (1997) 40-44 (Proceedings of the 4<sup>th</sup> International Conference on Parallel Computing Technologies, Yaroslavl, Russia).

**Papers in press:**

**Papers submitted:**

**INVITED PRESENTATIONS ((O): Oral; (P): Poster)**

1. *Computational Modeling of Moire-regulated Metal Nanocluster Self-Assembly*, Physics Colloquium, Western Kentucky University, October 3, 2022 (O).
2. Canceled due to COVID-19: Two oral presentations at the Society for Industrial and Applied Mathematics Conference on Mathematical Aspects of Materials Science, Bilbao, Spain, May 2020.
3. *Modeling Growth and Instabilities of Thin Solid Films*, Physics Colloquium, Western Kentucky University, October 28, 2019 (O).
4. *Modeling Thin Solid Films: Applied Mathematics and Computation Meets Materials Science*, Savannah State University, March 7, 2019 (O).
5. *Formation of Core-Shell Particles by Solid-State Dewetting of a Binary Alloy Thin Film*, Society for Industrial and Applied Mathematics Conference on Mathematical Aspects of Materials Science, Portland, OR, July 9, (2018) (O).
6. *Kinetics of Nanoring Formation on Surfaces of Stressed Deposited Thin Films*, Society for Industrial and Applied Mathematics Conference on Mathematical Aspects of Materials Science, Portland, OR, July 9, (2018) (O).
7. *A model for solid-state dewetting of a binary alloy thin films and the formation of core-shell particles*, Physics Colloquium, Western Kentucky University, March 26, 2018 (O).
8. *Idealized model of graphene growth on copper*, Perm Federal University, Russia, September 22, 2017 (O).
9. *Model and computation of graphene island growth*, 41<sup>st</sup> Society for Industrial and Applied Mathematics Southeast-Atlantic Section Conference (Tallahassee, FL, March 18-19, 2017) (O)
10. *Stability and Dewetting of Metal Thin Films on Semiconductor Substrates: Clarifying the Role of Quantum Size Effect*, Society for Industrial and Applied Mathematics Conference on Mathematical Aspects of Materials Science, Philadelphia, PA, May 10, (2016) (O).
11. Lecture Series: Mathematical modeling of epitaxial crystal growth, Perm Federal University, Russia, March 10 and March 11, 2015 (O).  
Lecture 1: *PDE model of thin-film crystal growth from molecular precursors: the instabilities of monoatomic steps on a surface;*  
Lecture 2: *Evolution of the surface morphology and composition of a binary alloy film in a strong electric field*
12. *PDE model of thin-film crystal growth from molecular precursors: the instabilities of monoatomic steps on a surface*, Physics Colloquium, Western Kentucky University, March 2, 2015 (O)
13. Lecture Series: Mathematical modeling of epitaxial crystal growth, Perm Federal University, Russia, May 22 and May 29, 2014 (O).

- Lecture 1: *An introductory review: PDE-based models of growth and instabilities of microscopic steps on monocrystalline surfaces;*  
Lecture 2: *Problems in growth and instabilities of microscopic steps on monocrystalline surfaces: The effects of anisotropic step energy*
14. *Modeling impacts of surface electromigration on stability and dynamical morphologies of a wetting, homoepitaxial solid film*, Physics Colloquium, Western Kentucky University, October 14, 2013 (O)
  15. Lecture Series: *Nanoscale liquid and solid films: Dynamics of shape evolution*, Perm Federal University, Russia, May 17, May 24, and May 28, 2013 (O).  
Lecture 1: *Nanoparticles assembly from dewetting of pulsed laser-melted metallic films at the nanoscale;*  
Lecture 2: *Modeling and computational studies of surface shape dynamics of ultrathin single-crystal films with anisotropic surface energy, part I;*  
Lecture 3: *Modeling and computational studies of surface shape dynamics of ultrathin single-crystal films with anisotropic surface energy, part II: Stability and dynamical morphologies of a wetting solid film in the conditions of the surface electromigration.*
  16. *Analysis of a combined influence of substrate wetting and surface electromigration on a thin film stability and dynamical morphologies*, Applied Mathematics/Mathematics of Materials Seminar, Department of Mathematics, University of Kentucky, December 13, 2012 (O)
  17. *New and unique materials from dewetting of pulsed-laser melted, multilayer metallic films at the nanoscale: experiments and modeling*, IMA Special Workshop: Mathematics and the Materials Genome Initiative, University of Minnesota, September 13, 2012 (O)
  18. *Analysis of a model for dewetting of the pulsed laser-melted thin metallic films*, The 9<sup>th</sup> Annual Conference on Frontiers in Applied and Computational Mathematics (FACM'12), New Jersey Institute of Technology, May 18, 2012 (O)
  19. *Modeling diverse physics of nanoparticle self-assembly in pulsed laser-irradiated metallic films*, Physics Colloquium, Western Kentucky University, April 25, 2011 (O)
  20. *Towards new routes of particle self-assembly: modeling effects on morphology of spatiotemporal variations of temperature created by pulsed laser irradiation*, Applied Mathematics Seminar, University of Kentucky, November 8, 2010 (O)
  21. *Morphological Evolution of Single-Crystal Ultrathin Solid Films*, Physics Colloquium, Western Kentucky University, March 29, 2010 (O)
  22. *Mathematical modeling of driven dewetting and self-assembly of pulsed laser-irradiated metallic films*, Applied Mathematics Colloquium, Wright State University (Dayton, OH), October 9, 2009 (O)
  23. *Stability and dynamics of a dewetting ultrathin solid film*, Applied Mathematics Seminar, Western Kentucky University, April 13, 2009 (O)
  24. *Dynamics and morphologies of a dewetting ultrathin solid film*, Applied Mathematics Colloquium, Rochester Institute of Technology, May 22, 2008 (O)

25. *Faceting of a Crystal Surface by Surface Diffusion*, Workshop on Nonlinearity & Randomness in Complex Systems, Department of Mathematics, SUNY at Buffalo, March 31, 2006 (O)
26. *Modeling of Crystal Growth on a Masked Substrate*, Society for Industrial and Applied Mathematics (SIAM) Conference on Mathematics for Industry: Challenges and Frontiers (Toronto, Canada, 2003) (O)
27. *Models for Selective Area Epitaxial Crystal Growth*, SIAM Conference on Applications of Dynamical Systems (Snowbird, UT, 2003) (O)
28. *Computational model for Liquid Phase Electroepitaxial Crystal Growth on Partially Masked Substrate*, Interdisciplinary Seminar, Perm State University, Russia (2003) (O)
29. *Models for Selective Area Epitaxial Crystal Growth*, Applied Mathematics Colloquium, Northwestern University (Evanston, IL, 2002) (O)
30. *Numerical Modeling for Epitaxial Semiconductor Crystal Growth From Vapor on a Masked Substrate*, Thirteenth American Conference on Crystal Growth and Epitaxy (Burlington, VT, 2001) (O)
31. *Numerical Study of Grain Boundary Grooving in Polycrystalline Cu Lines by Level Set Method*, Meeting on Large-Scale Computations in the Simulation of Materials, Carnegie Mellon University (Pittsburgh, PA, 2000) (O)
32. *Stability of Plane-Parallel Vibrational Flow in a Two-Layer System*, Mechanics Seminar, Laboratoire de modelisation en mecanique, Universite Pierre et Marie Curie, Paris, France, (2000) (O)
33. *Surface/Grain Boundary atomic Diffusion Induced by Electric Fields and the Curvature Gradient of the Sample*, Physics Colloquium, University of Louisville (Louisville, KY, 2000) (O)

**CONTRIBUTED CONFERENCE PRESENTATIONS ((O): Oral; (P): Poster):**

1. *GPU-accelerated computational modeling of Moiré-regulated metal nanocluster self-assembly on 2D bilayer surfaces*, NNCI Nano+Additive Manufacturing Summit, Louisville, KY, July 25-26, 2023)(O)
2. *Computational modeling of Moiré-regulated metal nanocluster self-assembly*, Advances in Surfaces, Interfaces, and Interphases 2022 (Online, May 15-18, 2022) (P)
3. *PDE Model for Solid-State Dewetting of a Binary Alloy Thin Film*, 2018 Kentucky Academy of Science Annual Meeting (Bowling Green, KY, November 2-4, 2018) (O).
4. *Morphologies and coarsening of quantum nanoislands on annealed metal surfaces*, KY Nanotechnology and Additive Manufacturing Symposium (Louisville, KY, August 1-2, 2018) (P)
5. *Partial differential equation model of the graphene edge epitaxial growth on copper*, 2016 Kentucky Academy of Science Annual Meeting (Louisville, KY, November 4-5, 2016) (O)

6. *Mathematical model of electromigration-driven evolution of the surface morphology and composition for a bi-component solid film*, 39<sup>th</sup> Society for Industrial and Applied Mathematics Southeast-Atlantic Section Conference (Birmingham, AL, March 20-22, 2015) (O)
7. *Step growth and meandering in a precursor-mediated epitaxy with anisotropic attachment kinetics and terrace diffusion*, 10<sup>th</sup> Mississippi State Conference on Differential Equations and Computational Simulations (Starkville, MS, Oct. 22-25, 2014) (O)
8. *A long-wave model for strongly anisotropic growth of a crystal step*, Dynamics Days 2014 (Atlanta, GA, Jan. 1-5, 2014) (P)
9. *Impact of a vertical vibration on a long-wave Marangoni convection*, Dynamics Days 2014 (Atlanta, GA, Jan. 1-5, 2014) (P)
10. *Stability and evolving morphologies of a thin solid film in the presence of wetting and surface electromigration*, 37<sup>th</sup> SIAM Southeast-Atlantic Section Conference (Knoxville, TN, March 22-24, 2013) (O)
11. *Modeling Nanopatterning of Ultrathin Metallic Bilayers by Pulsed Laser Induced Dewetting*, First Annual Kentucky Nanotechnology Symposium (Bowling Green, KY; March 30-31, 2012) (P)
12. *Model and Computations of Pulsed Laser Induced Dewetting in Thin Metallic Films*, Fall Meeting of the Materials Research Society (Boston, MA; Nov 28-Dec 2, 2011) (P)
13. *Lubrication approximation-based model and computations of pulsed laser-induced dewetting in thin metallic films*, 48<sup>th</sup> Annual Technical Conference of the Society of Engineering Sciences (Evanston, IL, Oct. 11-15, 2011) (O)
14. *Self-organized nanostructures from pulsed-laser melted, unstable bilayers of thin metallic liquids*, 4<sup>th</sup> Annual Nanotechnology Symposium, Sullivan University (Louisville, KY, Sept. 23-24, 2011) (P)
15. *Dynamical models of nanopatterning in pulsed laser-irradiated single layer and bilayer metallic films*, SIAM Southeast-Atlantic Section Conference (Charlotte, NC, March 26-27, 2011) (O)
16. *Effects of Wetting and Anisotropy on Stability and Morphological Evolution of Ultrathin Solid Films*, SIAM Conference on Mathematical Aspects of Materials Science (Philadelphia, PA; May 23-26, 2010) (O)
17. *Thermocapillary effects in driven dewetting and self-assembly of pulsed laser- irradiated metallic films*, MRS Fall Meeting (Boston, MA; Nov. 30 – Dec. 2, 2009) (O)
18. *Stability and dynamics of a dewetting ultrathin solid film*, Pacific Northwest Conference on Comprehensive Mathematical Modeling in the Natural and Engineering Sciences, Organized in the Spirit of L. A. Segel, (Washington State University, WA; June 3-6, 2009) (O)
19. *A tangent plane, marker-particle method for the computation of 3D solid surfaces evolving on a substrate*, SIAM Conference on Mathematical Aspects of Materials Science (Philadelphia, PA; May 11-14, 2008) (O)

20. *Control of Growth and Morphology of a Crystal Surface by induced spatio-temporal oscillations of surface temperature*, Fall Meeting of the Materials Research Society (Boston, MA; Nov 26-Dec 1, 2006) (O)
21. *Oscillatory Temperature- driven morphological relaxation of surface ripples using weak pulsed laser*, Fall Meeting of the Materials Research Society (Boston, MA; Nov 28-Dec 2, 2005) (O)
22. *Motion of Contact Line of a Crystal Over the Edge of Solid Mask in Selective Area Epitaxy*, SIAM Conference on Mathematical Aspects of Materials Science (Los Angeles, CA; May 23-26, 2004) (P)
23. *Computational Model for Liquid Phase Electroepitaxial Crystal Growth on Partially Masked Substrate*, American Physical Society (APS) March Meeting (Austin, TX 2003) (O)
24. *Numerical Modeling for Vapor Phase Epitaxial Lateral Overgrowth*, APS March Meeting (Indianapolis, IN 2002) (O)
25. *Mathematical Model for Epitaxial Semiconductor Crystal Growth On a Masked Substrate by Surface Diffusion*, Interphase – 2001 (University of Maryland, College Park, MD) (O)
26. *Numerical Modeling for Epitaxial Semiconductor Crystal Growth from Vapor on a Masked Substrate*, SIAM Annual Meeting (San Diego, CA 2001) (O)
27. *On Stability of Vibrationally Induced Flow of a Mixture*, XII International School on Fluid Mechanics (Perm, Russia 1999) (O)
28. *The Application of Parallel Computations Technique to the Solution of Certain Hydrodynamic Stability Problems*, Parallel Computing Technologies (Yaroslavl, Russia, 1997; refereed article published in the Proceedings, see publications) (P)
29. *On Stability of a Liquid Interface to Tangential Vibrations*, XI International School on Fluid Mechanics (Perm, Russia; 1997) (O)

#### **AUTHOR-ONLY PRESENTATIONS**

1. *Vibration impact on Marangoni instability in a thin film*, The 66th Annual Meeting of the APS Division of Fluid Dynamics, Nov. 24-26, 2013, Pittsburgh, PA (presented by S. Shklyaev) (O)
2. *Nonlinear regimes of monotonic and oscillatory Marangoni convection*, The 4<sup>th</sup> International symposium “Bifurcation and instabilities in fluid dynamics” (BIFD2011), Barcelona, Spain, 18-21th July 2011 (presented by A. Alabuzhev) (O)
3. *Longwave Marangoni convection in a thin film heated from below*, Seminar of the group Prof. Dr. Michael Bestehorn, Lehrstuhl Theoretische Physik / Statistische Physik und Nichtlineare Dynamik, Brandenburgische Technische Universitaet Cottbus, July 5, 2011 (presented by S. Shklyaev) (O)



4. *Longwave Oscillatory Mode in Marangoni Convection*, The 5<sup>th</sup> International Marangoni Association Conference: Interfacial Fluid Dynamics and Processes, Florence, Italy, June 4 - June 8, 2010 (presented by A. Alabuzhev) (O)
5. *Influence of a vibration on the dynamics of a thin liquid film*, Third Russian Conference ``Free Boundary Problems: theory, experiment and applications'', Byisk, Russia; June 28 – July 3, 2008 (presented by S. Shklyaev) (O)
6. *Grain boundary Grooves as the Carriers of Electromigration*, International Conference on Materials Science and Technologies (AGIL), Jerusalem, Israel 2000 (presented by E. Glickman) (O)

### WORKSHOPS

Mathematical Problems in Industry (Rensselaer Polytechnic Institute, Troy, NY, 2002)

### CONTRIBUTED SEMINARS AND COLLOQUIA TALKS

1. 42<sup>nd</sup> Annual Mathematics Symposium, Western Kentucky University, November 17, 2023
  - *Nonlinear PDE-based model of metal nanocluster self-assembly: analysis and computation*
2. 41<sup>st</sup> Annual Mathematics Symposium, Western Kentucky University, February 20, 2022
  - *PDE model of nanocluster self-assembly via nonlinear diffusion on twisted bilayer graphene*
3. Mathematics Graduate Students Seminar, Western Kentucky University, January 26, 2022
  - *Model of Moiré-regulated metal nanocluster self-assembly on graphene*
4. 40<sup>th</sup> Annual Mathematics Symposium, Western Kentucky University, February 20, 2021
  - *A coupled PDEs model of surface composition dynamics in applied electric field*
5. Mathematics Graduate Students Seminar, Western Kentucky University, October 14, 2020
  - *Modeling Thin Solid Films: Applied Mathematics and Computation Meets Materials Science*
6. 39<sup>th</sup> Annual Mathematics Symposium, Western Kentucky University, November 23, 2019
  - *PDE models of the dynamics of surface instabilities of a thin solid films*
7. WKU Society for Industrial and Applied Mathematics Student Chapter Seminar, Western Kentucky University, April 3, 2017
  - *Thin solid films: PDE models for the dynamics of surface instabilities*
8. Mathematics Graduate Students Seminar, Western Kentucky University, February 24, 2017
  - *Thin solid films: PDE models for the dynamics of surface instabilities*
9. 36<sup>th</sup> Annual Mathematics Symposium, Western Kentucky University, November 11, 2016
  - *Partial differential equation model of the graphene island growth on copper*
10. Mathematics Graduate Students Seminar, Western Kentucky University, November 21, 2014

- *Construction and analysis of PDE-based models for step-flow crystal growth and morphological evolution of thin solid films*
- 11. 31<sup>st</sup> Annual Mathematics Symposium, Western Kentucky University, October 28, 2011
  - *Analysis of Liquid Film Stability Using Differential Equations*
- 12. Mathematics Graduate Students Seminar, Western Kentucky University, September 15, 2011
  - *Stability Analysis of Pulsed Laser-Melted Bilayer Thin Films*
- 13. Mathematics Graduate Students Seminar, Western Kentucky University, February 5, 2010
  - *Analytical and Computational Modeling of the Stability and Dynamics of a Dewetting Ultrathin Solid Film*
- 14. 29<sup>th</sup> Annual Mathematics Symposium, Western Kentucky University, November 5, 2009
  - *Using PDEs to model the dynamics of thin films: A mathematical model of dewetting in pulsed-laser irradiated metallic films*
- 15. Applied Mathematics Seminar, University at Buffalo, Buffalo, NY (2002-2007)
  - *Computational Modeling of three-dimensional Rayleigh instability of deposited thin-film wires-Part I, Numerical Method and its validation*
  - *Geometric Evolution Equations*
  - *Model for Morphological Relaxation of Surface Ripples Due to Pulsed Laser Heating*
  - *Stability of a Fluid Interface under Tangential Vibrations*
  - *Numerical Modeling of Liquid Phase Electroepitaxial Selective Area Crystal Growth (LPEESAG)*
  - *Numerical Modeling for Epitaxial Semiconductor Crystal Growth From Vapor on a Masked Substrate*
- 16. Chemical Engineering Seminar, University at Buffalo, Buffalo, NY (2004)
  - *Modeling of Epitaxy on a Masked Substrate*
- 17. Applied Mathematics Seminar, University of Delaware, Newark, DE (2000-2002)
  - *Survey of the Numerical Modeling for GaAs Epitaxial Crystal Growth on Masked Substrate by Surface-Tracking Method and of the GB Grooving in Polycrystalline Cu Lines by Surface-Capturing (e.g. Level Set) Method*
  - *Numerical Modeling for Epitaxial Semiconductor Crystal Growth From Vapor on a Masked Substrate*
  - *Numerical Study of Grain Boundary Grooving in Polycrystalline Cu Lines by Level Set Method*
- 18. Applied Mathematics Seminar, Tel Aviv University, Israel (2000)
  - *Modeling GB Grooving by Level Sets*
- 19. Fluid Mechanics Seminar, Univeriste de la Mediterranee, Marseille, France (1995-1998)
  - Multiple talks
- 20. Fluid mechanics Seminar, Perm State University, Russia (1995-1998)
  - Multiple talks

### **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

Society for Industrial and Applied Mathematics (SIAM), 2003-2019; SIAM Activity Group on Mathematical Aspects of Materials Science, 2009-2019 (terminated membership in protest over the ever increasing membership fee)

Kentucky Academy of Science, 2010-present

### **CROSS-DISCIPLINARY MEMBERSHIPS**

Applied Physics Institute at WKU, 2010 – present

**REVIEWED SUBMISSIONS TO THE FOLLOWING JOURNALS AND AGENCIES:**

ACS Nano  
ACS Applied Nano Materials  
Applied Physics Letters  
Applied Sciences  
Communications in Nonlinear Science and Numerical Simulation  
Computer Physics Communications  
Entropy  
European Physical Journal B  
IEEE Transactions on Nanotechnology  
Industrial and Engineering Chemistry Research  
Journal of Engineering Mathematics  
Journal of Chemical Physics  
Journal of Computational and Applied Mathematics  
Journal of Computational Physics  
Journal of Applied Physics  
Journal of Applied Mechanics  
Langmuir  
Materials Science and Engineering B  
Microgravity Science and Technology  
Nanomaterials  
National Science Foundation (ad hoc reviewer)  
Nature Communications  
Physical Review Applied  
Physical Review Letters  
Physical Review B, E  
Physical Review Materials  
Physics of Fluids  
Philosophical Magazine  
Thin Solid Films  
WKU RCAP and FUSE programs

**PROFESSIONAL ACTIVITIES**

Co-Founder and advisor, Society for Industrial and Applied Mathematics Student Chapter at WKU, Feb. 1 2017 – present.

Minisymposium organizer (with Dr. Stephen Watson, University of Glasgow), “*Growth, Instabilities and Evolutions of Thin Films and Micro/Nanostructures*”, at the Society for Industrial and Applied Mathematics Conference on Mathematical Aspects of Materials Science (Philadelphia, PA, May 8-16, 2016).

Chair of Organizing Committee, 33<sup>rd</sup> Annual Mathematics Symposium at Western Kentucky University (2013)

Chair of Organizing Committee, 32<sup>nd</sup> Annual Mathematics Symposium at Western Kentucky University (2012)

Co-Chair of Organizing Committee, 31<sup>st</sup> Annual Mathematics Symposium at Western Kentucky University (2011)

Session Organizer, “*Models and methods for capillarity-driven evolution of solid surfaces*”, at the SIAM Conference on Mathematical Aspects of Materials Science (Philadelphia, PA, 2008)

Session Chair, “*Ion and Photon Induced Nanostructures: Characterization and Applications*” at the MRS Fall Meeting (Boston, MA, 2006)

Session Chair, “*Materials Modeling*” at the SIAM Annual Meeting (San Diego, CA, 2001)

### **PRESENT AND PAST COLLABORATORS**

Ali Er (Physics, WKU, faculty)

Ozkan Ahmet Ozer (Mathematics, WKU, faculty)

Dimitrios Maroudas (Chemical Engineering, University of Massachusetts, faculty)

Nezam Iraniparast (Mathematics, WKU, faculty)

Lan Nguyen (Mathematics, WKU, faculty)

Vladimir Dobrokhotov (Physics, WKU, faculty)

Ramki Kalyanaraman (Materials Science & BioChemical Engineering, University of Tennessee at Knoxville, faculty)

Michel Jabbour (Mathematics, University of Kentucky, faculty)

Margo Levine (Department of Radiology at Massachusetts General Hospital and Harvard Medical School, Scientist)

Jae-hun Jung (Mathematics, University at Buffalo, faculty)

Wondimu Tekalign (Mathematics, Rochester Inst. of Technology, faculty)

Sergey Shklyaev (Institute of Continuous Media Mechanics, UB RAS, faculty)

Alexey Alabuzhev (Physics, Perm Federal University, faculty)

Harris Wong (Mechanical Engineering, Louisiana State University, faculty)

Victor Henner (Physics, UofL and Perm Federal University, faculty)

Richard J. Braun (Mathematics, University of Delaware, faculty)

Michael Mauk (Astro Power, Inc., senior scientist)

Amir Averbuch (Computer Science, Tel Aviv University, faculty)

Evgeny Glickman (Materials Science, Tel Aviv University, faculty)

Moshe Israeli (Computer Science, Technion, faculty)

Menachem Nathan (Materials Science, Tel Aviv University, faculty)

### **COMMITTEE MEMBERSHIPS**

#### **University:**

2023 - Member, Graduate Council

2010-12 Member, University Senate

2010-11 Member, University Curriculum Committee

#### **College:**

Fall 2022 Reviewed one FUSE Grant Application

Spring 2020 Member, MS Thesis Committee of Bektur Abdisatarov (Physics)

Fall 2019-Spring 2022 Chair, Scholarly Direction Taskforce

Fall 2019- Member, Ogden College Sabbatical Committee

Spring 2019 Reviewed four FUSE Grant Applications

Fall 2018 Reviewed four FUSE Grant Applications

Spring 2023 - Member, Ogden College Graduate Student Awards Committee

Fall 2015-Spring 2016 Member, Ogden College Faculty Awards Committee  
 2012-13, Fall 2020-Spring 2022 Member, Ogden College Sabbatical Committee  
 2011-12 Member, Ogden College Sabbatical Committee, Informatics Committee

**Department:**

Summer 2023 Member, MS Thesis Committee of Rafi Emran  
 Spring 2023 Chair, MATH 498 (Senior Research Seminar) Committee of Lars Hebenstiel  
 Fall 2022 - Coordinator, MS Program  
 Fall 2022 Member, MS Thesis Committee of Ryan StClair  
 Summer 2022 Member, MS Thesis Committee of Ahmet Aydin  
 Spring 2022 Member, MATH 498 (Senior Research Seminar) Committee of Alex Driehaus  
 Fall 2021, Spring 2022 Member, Department Chair Search Committee  
 Fall 2018-present Member, Sabbatical Committee (Chair, Fall 2019 – Spring 2022)  
 Fall 2013-present Member, Student Scholarships/Awards Committee (Chair, Fall 2016-Spring 2019)  
 Fall 2014 -Summer 2022 Member, Graduate Studies Committee  
 Fall 2021 Member, MATH 498 (Senior Research Seminar) Committee of Mark Clark  
 Spring 2021 Member, Department Head search committee, MS Thesis Committee of Wilson Horner  
 Fall 2020 Chair, MATH 498 (Senior Research Seminar) Committee of William Poteet;  
 Member, MATH 498 (Senior Research Seminar) Committee of Emma Moore  
 Spring 2018 Member, MATH 498 (Senior Research Seminar) Committee of Jessica Spears  
 Spring 2017 Co-Chair (with R. Schugart) of Calculus Textbook Selection Committee  
 Fall 2015-Spring 2016 Member, Hiring Committee  
 Fall 2015-Spring 2016 Chair, Advisory Committee to the Department Head (from the group of the Associate Professors)  
 Fall 2015-Spring 2016 Chair, Faculty Continuance Committee  
 April 2015 Member, MS Thesis Committee of Stephen Guffey  
 July 2014: Chair, MS Thesis Committee of Mahdi Bandegi  
 April 2014: Chair, MS Thesis Committee of Selahittin Cinar  
 2013-2014: Chair, Advisory Committee to the Dept. Head (from the group of Assistant Professors)  
 2011-2016: Chair, Colloquium/Symposium Committee (Chair 2012-2013); Member, Computer Lab Committee  
 2010-11: Member, Undergraduate Studies Committee, Numerical Analysis Course Committee, Colloquium Committee  
 2009-10: Member, Undergraduate Studies Committee, Numerical Analysis Course Committee, Trigonometry Textbook Committee  
 August 2009: Chair, PhD Dissertation Committee of Phu Vu  
 December 2009: Chair, PhD Dissertation Committee of Agegnehu Atena; Member, Undergraduate Honor's Thesis Committee of Brandon Rigsby  
 2005-09: Member, Applied Mathematics Committee  
 Member, Undergraduate Studies Committee  
 Member, Exam Proctors Committee  
 Member, Colloquium Committee  
 April 2008: Member, PhD Dissertation Committee of Antonio Mastroberardino  
 2004-05: Member, Applied Mathematics Committee  
 Member, Exam Proctors Committee  
 Member, Colloquium Committee  
 2002-04: Member, Applied Mathematics Committee  
 Member, Exam Proctors Committee

**Undergraduate Student Advising**

Mark Clark, Andrew Priquette (2019-2020)

Wilson Horner, Dormus Smith, Jon Malone, Carson King, Katelyn Osborne, Richard Pape, Devon Loomis (2017-2018)

Wilson Horner, Dormus Smith, Jon Malone, Carson King, Katelyn Osborne, Richard Pape (2016-2017)

Laura Schoeppner, Dormus Smith, Jon Malone, Matthew Riggle, Rachel Turner, Drue Collins (2015-2016)

Stephen Farmer, Ashley Kern, Jon Malone, Richard Pape, Matthew Riggle, Laura Schoeppner, Rachel Turner (2013-2015)

Stephen Farmer, Ashley Kern, Peter Lussi, Lukas Missik, Richard Pape, Matthew Riggle, Laura Schoeppner (2012-2013)

Kurt Woods, Stephen Farmer, Richard Pape, Tyler Rhoades (2011-2012)

**Professional Development**

**Workshop:** Center for Innovative Teaching & Learning (CITL) - Mid-Career Faculty: So You're Mid-Career: What's Next; **Date:** 2022-07-25; **Time:** 12:45 PM - 02:45 PM  
Webinar: Turing Frustration Into Fun, 02/07/2023.

**MEDIA REPORTS**

**Mathematics major receives summer fellowship at national laboratory (April 4, 2011)**

<http://wkunews.wordpress.com/2011/04/04/nist-johnson/>