CURRICULUM VITAE

Andrei Slavin

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Professional Preparation

Peter the Great St.Petersburg Polytechnic University	St.Petersburg , Russia	Radiophysics	Ph.D	(1977)
Peter the Great St.Petersburg Polytechnic University	St.Petersburg , Russia	Radiophysics	M.S. (Diploma)	(1974)

(b) Appointments

1991-present : Oakland University (Rochester, Michigan, USA), Assistant Professor (1991-1994), Associate Professor (1994-98), Professor of Physics (1998-present) ,

1977-90 St.Petersburg Marine Technical University, Leningrad, USSR, Assistant Professor (1977-84), Associate Professor of Physics (1984-90).

Academic Position: Distinguished Professor and Chair of the Physics Department Oakland University, Rochester, Michigan, U.S.A. (2013-current).

Academic Honors:
2009 **Fellow of the American Physical Society**
2012 **Fellow of the IEEE**
2013 **Distinguished Professor of the Oakland University**

Research Grants: During career at the Oakland University (1991-current) received over **$3.8M in research support** from the U.S. Army , National Science Foundation, DARPA and other funding agencies.
Current funding (2017-2021) from NSF and DARPA: $1.3M

Area of expertise: Currently working in the area of spintronics of dielectric antiferromagnets. Is known internationally due to the research on magnetic solitons and two-dimensional spin wave bullets, discovery of spin wave edge modes, development of the dipolar boundary conditions for magnetization in non-ellipsoidal magnetic samples and theory of spin wave spectra in magnetic films. Developed (with V.S. Tyberkevych) the state-of-the-art theory of spin-torque oscillators, which has numerous potential applications in the computer and communications industries, and had a major impact on the overall field of magneto-dynamics, microwave signal processing, and related magneto-electronic applications.

Listings : Listed in the "American Men and Women of Science", Bowker, 1994, and following editions.

Publications and citations: over **280 papers** published in the leading research journals, including Nature, Nature Materials, Nature Nanotechnology, Nature Communications, Physical Review Letters, Physical Review, etc. .
h-index is 50 (WEB of Science), **cited over 8,000 times.**

C.1 Five publications most closely related to the proposed project

1. **A.N. Slavin** and V.S. Tiberkevich, "Nonlinear auto-oscillator theory of microwave generation by spin-polarized current", IEEE Trans. Mag. , **45**, 1875 (2009).

2. V. E. Demidov, S. Urazhdin, H. Ulrichs, V.S. Tiberkevich, **A.N. Slavin**, D. Baither, G. Schmitz and S. O. Demokritov, "Magnetic nano-oscillator driven by pure spin current", Nature Materials **11**, 1028, doi:10.1038/nmat3459 (2012).

3. V. E. Demidov, S. Urazhdin, A. Zholud, A. V. Sadovnikov, **A. N. Slavin** and S. O. Demokritov, "Spin-current nano-oscillator based on nonlocal spin injection", Scientific Reports **5**, 8578 (2015)

4. R. Khymyn, I. Lisenkov, V. S. Tiberkevich, B. A. Ivanov and **A.N. Slavin**, "Antiferromagnetic THz-frequency Josephson-like Oscillator Driven by Spin Current" , Scientific Reports **7**, 43705 (2017).

5. O. R. Sulymenko, O. V. Prokopenko, V. S. Tiberkevich, A.N. Slavin, B. A. Ivanov, R. S. Khymyn, "Terahertz-Frequency Spin Hall Auto-oscillator Based on a Canted Antiferromagnet", Phys. Rev. Appl. **8,** 064007 (2017).

C.2 Five other significant publications

1. S. O. Demokritov, V. E. Demidov, O. Dzyapko, G. A. Melkov, A. A. Serga, B. Hillebrands, and **A. N. Slavin**, "Bose–Einstein Condensation of Quasi-Equilibrium Magnons at Room Temperature Under Pumping", Nature **443**, 430–433 (2006).

2. A. V. Chumak, V. S. Tiberkevich, A. D. Karenowska, A. A. Serga, J. F. Gregg, **A. N. Slavin**, B. Hillebrands, "All-linear time reversal by a dynamic artificial crystal", Nature Commun. **1**, 141 (2010).

3. S. Jain, V. Novosad, F.Y. Fradin, J.E. Pearson, V. Tiberkevich, **A.N. Slavin** and S.D. Bader, "From chaos to selective ordering of vortex cores in interacting mesomagnets", Nature Commun., doi:10.1038/ncomms2331 **(**2012).

4. V.E. Demidov, H. Ulrichs, S.V. Gurevich, S.O. Demokritov, V.S. Tiberkevich, **A.N. Slavin**, Z. Zholud, and S. Urazhdin, *"Synchronization of spin Hall nano-oscillators to external microwave signals"*, Nature Commun. **5**, 3179 (2014).

5. A.A. Serga, V.S. Tiberkevich, C.W. Sandweg, V.I. Vasyuchka, D.A. Bozhko, A.V. Chumak, T. Neumann, B. Obry, G.A. Melkov, **A.N. Slavin**, and B. Hillebrands, *"Bose-Einstein condensation in an ultra-hot gas of pumped magnons"*, Nature Commun. **5**, 3452 (2014).

D. SYNERGISTIC ACTIVITIES

1. Organized and chaired a session on "Nonlinear and Macroscopic Quantum Phenomena" at the Centennial Meeting of the American Physical Society, March, 1999.

2. Developed an undergraduate course PHY-366 "Vibrations and Waves" incorporating the materials on spin wave research , 2003-2015.

3. Adviser for the Oakland University Program "Engineering Physics", working with minority students.

4. Member of the Organizing Committee of the International Workshops on Magnonics: Varberg, Sweden, August 2013, Seeon, Germany, August 2015, Oxford, U.K., August 2017.

5. Member of the Program Committee of the 61st Annual Conference on Magnetism and Magnetic Materials, New Orleans, USA, October 2016.