

CURRICULUM VITAE

TEDI DRAGHICI

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Department of Mathematics
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EDUCATION

Ph.D.	Michigan State University	Mathematics	1997
M.S.	University of Bucharest	Mathematics	1991
B.S.	University of Bucharest	Mathematics	1990

FIELDS OF INTEREST

AMS Subject Classification– Primary: 53, Secondary: 58
Differential Geometry, Riemannian and Symplectic Geometry, Gauge Theory

FULL-TIME ACADEMIC EXPERIENCE

Florida International University	Associate Professor - 08/05 - present
Florida International University	Assistant Professor - 09/00 - 08/05
Northeastern Illinois University	Assistant Professor - 09/97 - 08/00
Michigan State University	Teaching Assistant - 09/91 - 07/97

REFEREED PUBLICATIONS

- [1] T. Draghici, Cem Sayar, *Some remarks on almost Hermitian functionals*, Annals of Global Analysis and Geometry, 65(1), 2024, 10.1007/s10455-023-09943-8
- [2] T. Draghici, Hector Leon, *On the Cohomology of Four-dimensional Almost Complex Lie Algebras*, Journal of Lie Theory 27 (2017), no. 1, 43–49.
- [3] Andres Cubas, T. Draghici, *A note on tame/compatible almost complex structures on four-dimensional Lie algebras*, J. Geom. Phys. 98 (2015), 292-299.
- [4] T. Draghici, Tian-Jun Li, Weiyi Zhang, *On the J -anti-invariant cohomology of almost complex 4-manifolds*, Quarterly J. Math. 64 (2013), no. 1, 83-111.
- [5] T. Draghici, Weiyi Zhang, *A note on exact forms on almost complex manifolds* Math. Research Letters, Volume 19 (2012), Number 3, p. 691–697.
- [6] T. Draghici, Ph. Rukimbira, *Sasakian Metrics with an Additional Contact Structure*, Special Volume in Honor of Prof. Augustin Banyaga, African Diaspora J. Math, Vol. 14, Number 2, pp. 118–133 (2012).
- [7] T. Draghici, Tian-Jun Li, Weiyi Zhang, *Geometry of tamed almost complex structures in dimension 4*, Proceedings of 2010 International Congress of Chinese

- Mathematicians - AMS/IP Studies in Advanced Math, Vol. 51, 2012, p. 233–251.
- [8] T. Draghici, Tian-Jun Li, Weiyi Zhang, *Symplectic forms and cohomology decomposition of almost complex 4-manifolds*, Int. Math. Research Notices; Vol. 2010, No. 1, pp. 1-17.
 - [9] David E. Blair, Tedi Draghici, *Remarks on Weyl Curvature in Almost Kähler Geometry*, Bull. Romanian Math. Soc. 52(100) 2009, 241-249.
 - [10] Vestislav Apostolov, Tedi Draghici, Andrei Moroianu, *The odd dimensional Goldberg conjecture*, Math. Nachr. 279 (2006), no. 9-10, 948–952.
 - [11] Tedi Draghici, *Symplectic obstructions to the existence of ω -compatible Einstein metrics*, Diff. Geom. and Applications, 22 (2005), no. 2, 147–158.
 - [12] Vestislav Apostolov, Tedi Draghici, *The curvature and the integrability of almost Kähler manifolds: a survey*, in “Symplectic and Contact Topology; Interactions and Perspectives”, 25-53, Fields Institute Communications, 35, American Mathematical Society, Providence, RI, 2003.
 - [13] Vestislav Apostolov, John Armstrong, Tedi Draghici, *Local models and integrability of certain almost Kähler 4-manifolds*, Mathematische Annalen 323 (2002), 633-666.
 - [14] Vestislav Apostolov, John Armstrong, Tedi Draghici, *Local rigidity of certain classes of almost Kähler 4-manifolds*, Annals of Global Analysis and Geometry, Vol. 21, 2002, 151-176.
 - [15] Vestislav Apostolov, Tedi Draghici, Andrei Moroianu, *A splitting theorem for Kähler manifolds whose Ricci tensors have constant eigenvalues*, International Journal of Mathematics 12 (2001), 769–789.
 - [16] Vestislav Apostolov, Tedi Draghici, *Almost Kähler 4-manifolds with J-invariant Ricci tensor and special Weyl tensor*, Quarterly Journal of Mathematics, Oxford series, 51 (2000), 275-294.
 - [17] Vestislav Apostolov, Tedi Draghici, Dieter Kotschick, *An integrability theorem for almost Kähler 4-manifolds*, Comptes Rendues Acad. Sci. Paris, t. 329, ser. I (1999), 413-418.
 - [18] Tedi Draghici, *Almost Kähler 4-manifolds with J-invariant Ricci tensor*, Houston Journal of Mathematics, Vol. 25, No.1, 1999, 133-145.
 - [19] Vestislav Apostolov, Tedi Draghici, *Hermitian conformal classes and almost Kähler structures on 4-manifolds*, Differential Geometry and its Applications, 11 (1999), 179-195.
 - [20] Tedi Draghici, *The Kähler cone versus the symplectic cone*, Bull. Romanian Math. Soc. 42(90) (1999), no. 1, 41–49.
 - [21] Tedi Draghici, *Seiberg-Witten Invariants when Reversing Orientation*, Turkish Journal of Mathematics, Vol. 21, No. 1, 1997, 83-86.

- [22] Tedi Draghici, *On Some 4-Dimensional Almost Kähler Manifolds*, Kodai Mathematical Journal, Vol. 18, No. 1, 1995, 156-163.
- [23] Tedi Draghici, *On the Almost Kähler Manifolds with Hermitian Ricci Tensor*, Houston Journal of Mathematics, Vol. 20, No. 2, 1994, 293-298.
- [24] Tedi Draghici, *Pseudo-Riemannian Manifolds in Geodesic Correspondence*, (in Romanian) Studii si Cercetari Matematice, Vol. 43, No. 1-2, 1991, 25-36.

PRESENTATIONS AND LECTURES – outside residing department

1. *On a question of Blair and Ianus recast to Einstein-Maxwell metrics*, invited plenary talk at DiMOGeCH Conference, May 22-25, 2019, Iasi, Romania.
2. *Critical almost Kähler metrics*, invited 1 hour talk at *Interactions in Geometry* – Conference in honor of Johann Davidov and Oleg Muskarov, August 15-17, 2017 Sofia, Bulgaria.
3. *On almost complex 4-dimensional Lie algebras*, invited 1 hour seminar talk, Univ. of Minnesota, Nov. 22, 2013.
4. *On almost complex 4-dimensional Lie algebras*, invited 30min talk, special session on Geometric Structures, Union College Math. Conference, Oct. 19-20, 2013.
5. *Cohomology decomposition of almost complex 4-manifolds*, invited 1 hour seminar talk, Michigan State University - February 17, 2011.
6. *Remarks on the second cohomology group of almost complex 4-manifolds*, invited 1 hour seminar talk, University of Quebec at Montreal - January 14, 2011.
7. *Cohomology decomposition of almost complex 4-manifolds*, invited 1 hour talk, I.N.d.A.M. Meeting on Complex Geometry, Levico Terme, Italy, May 31-June 4, 2010.
8. *Cohomology decomposition of almost complex 4-manifolds*, invited 1 hour talk, Generalized Geometries Workshop, Brandeis University, March 25-28, 2010.
9. *Integrability results for almost Kähler 4-manifolds*, invited 1 hour seminar talk, Univ. of Minnesota, March 27, 2008.
10. *On the contact Goldberg conjecture*, 30 minutes invited talk, Special session “Geometric structures on manifolds”, AMS Sectional Meeting, Albuquerque, NM, October 2007.
11. *Weyl curvature and almost Kähler geometry*, 20 minutes talk, AMS Sectional Meeting, Albuquerque, NM, October 2004.
12. *Symplectic obstructions for the existence of ω -compatible Einstein metrics*, 20 minutes invited talk, Special session “Complex, Contact and Quaternionic Geometry”, UMI-AMS Meeting, Pisa, Italy, June 2002.

13. *Almost Kähler 4-manifolds with curvature symmetries*,
Geometry of low dimensional manifolds and special geometries,
1 hour invited talk, EDGE conference, Luminy, France, June 2002.
14. *Kähler manifolds whose Ricci tensors have constant eigenvalues*,
20 minutes invited talk, Special session “Ricci curvature and related topics”,
AMS Sectional Meeting, Stevens Institute, Hoboken, NJ April 2001.
15. *Almost Kähler 4-manifolds with curvature symmetries*,
seminar talk, University of Miami, February 2001.
16. *Rigidity of certain classes of almost Kähler manifolds*, 1 hour invited talk,
4-th International Conference on Geometry, Varna, Bulgaria, August 1999.
17. *On Donaldson’s moment map approach*,
2 seminar talks, Michigan State University, March 1999.
18. *The Kähler cone versus the symplectic cone*, 30 minutes invited talk,
Geometry and Topology conference, Lehigh University, June 1998.
19. *Hermitian conformal classes and almost Kähler structures*,
20 minutes talk, Special session, AMS Sectional Meeting,
Wayne State University, May 1997.
20. *Seiberg-Witten Invariants when Reversing Orientation*,
1 hour talk, Geometry-Topology Conference, Gokova, Turkey, May 1996.
21. *Seiberg-Witten Invariants on Complex Surfaces with the Reversed Orientation*,
20 minutes talk, Special session, AMS Sectional Meeting,
University of Iowa, March 1996.
22. *Einstein and Critical Metrics on Symplectic Manifolds*,
1 hour talk, Midwest Geometry Conference, Washington University, June 1995.
23. *Problems on Almost Kähler Manifolds*, 1 hour talk, International Workshop on
Complex Structures and Vector Fields, Sofia, Bulgaria, August 1994.
24. *On the Goldberg Conjecture and Related Problems*, 1 hour talk,
National Geometry and Topology Conference, Timisoara, Romania, June 1994.

FUNDED RESEARCH

- 2001 FIU Summer research grant for proposal
Almost Kähler 4-manifolds with curvature symmetries, \$5000.
- 2002 FIU Summer research grant for proposal
Einstein metrics on compact symplectic manifolds, \$4000.
- 2004 FIU Summer research grant for proposal
Weyl curvature and almost Kähler geometry, \$4000.
- 99-02 Co-participant in the NSF grant INT-9903302 (P.I. David Blair, MSU).
Collaborative grant between three US and three Bulgarian mathematicians.

STUDENTS and POSTDOCS:

- 2023-2024 Undergraduate project advisor and mentor for Philip Son
Constructible sandwich cuts, published paper by Philip in
FIU Undergraduate Research Journal, Vol. 2, (1), 2024 .
- 2021-2023 Postdoc advisor for Cem Sayar - visited FIU on a Tubitak grant.
- 2014-2015 Undergraduate project advisor for Andres Cubas
The tame-compatible property for 4-dimensional symplectic Lie Algebras
- 2012-2013 Master's project advisor for Hector Leon
On the Cohomology of Almost Complex Lie Algebras
- 2006-2007 Master's project advisor for Adrian Iorgoni
Hadamard matrices and the maximum determinant problem
- 2006-2007 Co-advisor (with G. Grantcharov) of the McNair project of Richard Campanha
Spinors and Minimal Surfaces.

PROFESSIONAL SERVICE, SYNERGETIC ACTIVITIES

1. Co-organizer of the FIU international conference
"Geometry, Topology and Applications", January 2017.
2. Co-organizer with G. Grantcharov and Ph. Rukimbira of the special session
"Symplectic, Contact, and Complex Structures on Manifolds",
AMS meeting, Penn State Univ., October 2009.
3. Co-designer and co-organizer of Algebra Summer Institutes for Miami Dade
high-school and middle school teachers, June 2009 and June 2010,
sponsored by Florida PROMiSE grant.
4. Co-organizer with G. Grantcharov and Ph. Rukimbira of the special session
"Geometry of Riemannian Manifolds with Additional Structures",
AMS meeting, Florida Int. Univ., April 2006.
5. Member of the local organizing committee for the AMS meeting at FIU, April 2006.
6. Co-organizer with G. Grantcharov and Ph. Rukimbira of the special session
"Geometric structures on manifolds", AMS annual meeting, Phoenix, AZ, Jan. 2004.
7. Referee of one book published in Springer's Lecture Notes in Math series.
8. Referee of 3 NSF proposals and of more than 40 articles for various journals, e.g.
Advances in Math, J. Geometric Analysis, J. Symplectic Geometry , Geom. Dedicata,
Proc. London Math Society, Bull. London Math Society, Forum Mathematicum,
Proceedings of AMS, J. Geometry & Physics, J. Math. Soc. Japan, Tohoku J. Math .
9. Reviewer of over 50 articles for "Mathematical Reviews".