

CURRICULUM VITAE OF

T. TACHIM MEDJO

DEPARTMENT OF MATHEMATICS

EDUCATION

PhD.	Université de Paris-Sud (France)	Applied Mathematics	1995
DEA (M.S).	Université de Paris-Sud (France)	Applied Mathematics	1991
Licence (B.S).	Université de Yaoundé (Cameroon)	Mathematics	1989

FULL-TIME ACADEMIC EXPERIENCE

FIU,	Associate Professor,	Mathematics,	Fall 2003-Present,
FIU,	Assistant Professor,	Mathematics,	Fall 1997-Summer 2003,
Indiana University,	Research Associate,	Mathematics,	01/97 – 07/97,
Indiana University,	Visiting researcher,	Mathematics,	02/95 – 12/96.

PART-TIME ACADEMIC EXPERIENCE

Indiana University,	Visiting researcher,	Mathematics,	June-August 2001,
Universié de Paris 12,	Assistant Instructor,	Mathematics,	09/91 – 12/93.

EMPLOYEMENT RECORD AT FIU

Assistant Professor,	Fall 1997-Summer 2003.
Associate Professor,	Fall 2003-Present.

PUBLICATIONS IN DISCIPLINE

- [1] T. Tachim Medjo. *On strong solutions of a planetary geostrophic model of the ocean.* Accepted in Advances in Differential Equations. (2008)
- [2] T. Tachim Medjo. *Multi-layer quasi-geostrophic equations of the ocean with delays.* Accepted in Discrete and Continuous Dynamical Systems, Series B, (2008), **10**, no. 1.
- [3] T. Tachim Medjo. *The primitive equation of the ocean with delays.* To appear in Nonlinear Analysis, Series B: Real World Applications. (2008)
- [4] T. Tachim Medjo. *Attractors for the multi-layer quasi-geostrophic equations of the ocean with delays.* Applicable Analysis,(2008), **87**, no. 3, 325-347.
- [5] T. Tachim Medjo, R. Temam and M. Ziane. *Optimal and robust Control of fluid flows: Some theoretical and computational aspects.* Applied Mechanical Reviews, (2008), **61**/010802-1.

- [6] T. Tachim Medjo and R. Temam. *A two-grid finite difference method for the primitive equations of the ocean* Nonlinear Analysis: Theory, Methods and Applications, (2008), **69**, 1034-1056.
- [7] T. Tachim Medjo. *On the convergence of the primitive equations of the ocean as the aspect ratio goes to zero*. Accepted in Applicable Analysis (2007)
- [8] T. Tachim Medjo. *Robust control problems for the multi-layer quasi-geostrophic system*. Nonlinear Analysis, serie B: Real World Applications, (2008), **9**, 1425-1443.
- [9] T. Tachim Medjo. *On strong solutions of the multi-layer quasi-geostrophic equations of the ocean*. Nonlinear Analysis: Theory, Methods and Applications, (2008), **68**, 3550-3564.
- [10] T. Tachim Medjo. *A small eddy correction method for a 3D Navier-Stokes type system of equations related to the primitive equations of the ocean*. SIAM J. of Numerical Analysis. (2008), **45**, no. 5, 1843-1870.
- [11] T. Tachim Medjo. *Robust control problems associated with the multilayer quasi-geostrophic equations of the ocean*. Applied Mathematics and Optimization,(2005), **51**, no. 3, 333-360.
- [12] T. Tachim Medjo. *Barotropic-baroclinic time splitting for the primitive equations of the ocean*. Multiscale Modeling and Simulation, (2005), **4**, no. 1, 194-212.
- [13] E. Simmonnet, T. Tachim Medjo. and R. Temam. *On the order of magnitude of the baroclinic flow in the primitive equations of the ocean*. Annali di Matematica Pura ed Applicata, (2006), **185**, 293-313.
- [14] T. Tachim Medjo and R.L. Tcheugoue Tebou. *Robust control problems in fluid flows*. Discrete and Continuous Dynamical Systems, (2005), **2**, no. 3, 437-463.
- [15] T. Tachim Medjo and R.L. Tcheugoue Tebou. *Adjoint-based iteration method for nonlinear robust control problems in fluid mechanics*. SIAM Journal of Numerical Analysis, (2004),**42**, no. 1, 302-325.
- [16] E. Simmonnet, T. Tachim Medjo. and R. Temam. *Barotropic-baroclinic formulation of the primitive equations of the ocean*. Applicable Analysis, (2003), **82**, no. 6, 439-456.
- [17] T. Tachim Medjo. *On the Newton method in robust control of fluid flow*. Discrete and Continuous Dynamical Systems, **9**, no. 5, (2003), 1201-1222.
- [18] T. Tachim Medjo. *Fixed-point iteration method for nonlinear robust control problems in fluid mechanics*. Numerical Functional Analysis and Optimization, **23**, no. 7-8, (2002), 849-873.
- [19] T. Tachim Medjo. *Iterative methods for robust control problems in fluid mechanics*. Siam Journal on Numerical Analysis, **39**, no. 5, (2002), 1625-1647.
- [20] T. Tachim Medjo. *A note on the existence and uniqueness of plane steady viscous flow in exterior domains*. Asymptotic Analysis, **29**, no. 3-4, (2002), 283-291.
- [21] T. Tachim Medjo. *Numerical solutions of a robust control problem associated with the quasi-geostrophic equations of the ocean*. Nonlinear Analysis. Real World Applications, **3**, no. 3, (2002), 317-337.
- [22] T. Tachim Medjo. *New formulations of a Stokes type problem related to the primitive equations of the atmosphere and applications*. Numerische Mathematik, **87**, (2001), 503-522.

- [23] T. Tachim Medjo. *Robust control problems in fluid mechanics*. Physica D, **149**, no. 4, (2001), 278-292.
- [24] T. Tachim Medjo. *Numerical simulations of a two-layer quasi-geostrophic equation of the ocean*. SIAM Journal on Numerical Analysis, **37**, no. 6, (2000), 2002-2022.
- [25] T. Tachim Medjo. *Mixed formulation of a two-layer quasi-geostrophic equations of the ocean*. Numerical Methods for Partial Differential Equations, **15**, no. 4, (1999), 489-502.
- [26] J. Shen, T. Tachim Medjo and S. Wang. *On a wind-driven, double gyre, quasi-geostrophic ocean model: Numerical simulations and structural analysis*. Journal of Computational Physics, **155**, (1999), 387-409.
- [27] T. Tachim Medjo, R. Temam and S. Wang. *High order approximation equations for the primitive equations of the atmosphere*, Journal of Engineering Mathematics. Special issue on Large-Scale Numerical Modeling of Problems involving the Navier-Stokes equations. **32** (1997), 237-256.
- [28] T. Tachim Medjo. *On an equivalent form of the quasi-geostrophic equations of the atmosphere*. Computational and Applied Mathematics, **16**, (1997), 267-285.
- [29] T. Tachim Medjo. *A Vorticity-velocity variational formulation for the exterior Stokes problem in weighted Sobolev spaces*. Numerical Functional Analysis and Optimization, **18**, (1997), 857-863.
- [30] T. Tachim Medjo. *Numerical solutions of the Navier-Stokes equations using wavelet-like incremental unknowns*. Mathematical Modeling and Numerical Analysis, **31**, no. 7, (1997), 827-844.
- [31] T. Tachim Medjo. *Vorticity-velocity formulation for the stationary Navier-Stokes equations: the three dimensional case*. Numerical Methods for Partial Differential Equations, **12** (1996), 1-20.
- [32] T. Tachim Medjo. *Navier-Stokes equations in the vorticity-velocity formulation: the two-dimensional case*. Applied Numerical Mathematics, **21** (1996), 185-206.
- [33] T. Tachim Medjo. *Vorticity-velocity formulation for the stationary Navier-Stokes equations: the three dimensional case*. Applied Mathematics Letters, **8**, no. 4, (1995), 63-66.

Proceedings

- [1] T. Tachim Medjo and R. Temam. *A small eddy correction algorithm for the primitive equations of the ocean*. In Mathematical modeling, simulation, visualization and e-learning: Proceedings of the Bellagio international conference, (2007), 107-150.

Chapter in Books.

- [1] Book title: Variational Analysis and Applications.
 Series: Nonconvex Optimization and Its Applications , Vol. 79, (2005)
 Editors: Giannesi, Franco; Maugeri, Antonino
 Publisher: Springer
 Chapter title: *Higher order approximation equations for the primitive equations of the ocean*.
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