

Bref CV

1. Fonctions:

Maître de Conférences Hors-Classe, HDR à l'Université d'Orléans jusqu'en 2005.
Depuis membre associé du MAPMO (Unité mixte CNRS 6628).

2. Contact Adresse:

Department de Mathématique , BP 6759
Université d'Orléans
45067 ORLEANS CEDEX 2, FRANCE

Adresse personnelle: 19 rue Erard, 75012 Paris

Fax: 02.38.41.72.05

Email: alain.pham@univ-orleans.fr
(ou) ngocdinh_pham91@yahoo.fr

3. Qualifications:

- DEA Mathématiques pures (Mathématiques Approfondies, Orsay)
- DEA Analyse Numérique Approfondie (Paris 6)
- Doctorat 3è Cycle (Université Pierre et Marie Curie- Paris 6)
- Doctorat d'Etat ès Sciences Mathématiques (Université Pierre et Marie Curie- Paris 6, 1975): " Sur l'étude d'équations différentielles du second ordre associées aux groupes $SO(n)$ et $E(n)$. " Jury: C.Pisot (président), G.Petiau (directeur de thèse), P.A.Raviart (2è thèse).

4. Direction de Thèses:

- 1) Nguyen Thanh Long: " Sur l'étude de quelques problèmes nonlinéaires d'évolution " (HoChiMinh-Ville, 1992)
- 2) Durand William: "Sur quelques problèmes de valeurs au bord dans une bande infinie et application à la diffraction par un dièdre" (Université d'Orléans, 1999)
- 3) Duong Thi Thanh Binh: "Application of real and functional analysis to solve boundary value problems " (Université de New South Wales, Australie, 2002)- Cotutelle avec Nguyen Thanh Long
- 4) Hassan Taha: " Homogénéisation et propagation des ondes " (Université d'Orléans, 2004) - Coencadrement avec R.Alexandre

5. Expeience Professionnelle:

Professeur invité à L'université de Louvain, Imperial College (Professor Ortiz), Ho-Chi-Minh University etc...

Consultant extérieur pour la Hong-Kong University, Ho-Chi-Minh University

Coopération active et continue avec l'Université d'HoChiMinh-Ville depuis une vingtaine d'années (cours DEA, encadrement de thèses)

Plus de 60 publications (voir ci-après une liste des publications de ces vingt dernières années)

6. Specialisation - Domaine de Recherche:

Problèmes inverses ou mal posés (Chaleur rétrograde nonhomogène, Stefan)

Problèmes de diffraction par un dièdre

Problèmes cinétiques (évaporation et diffusion de gouttes dans un gaz)

Nonlinear PDE, ODE

PUBLICATIONS (EDP et Analyse Numérique)

(Journaux à comité de lecture)

[1] - Sur un problème hyperbolique faiblement nonlinéaire en dimension 1: *Demonstratio Mathematica*, 16 (1983), 269-289.

[2] - An error analysis of the Tau method for a class of singularly perturbed problems for differential equations (with E.L. Ortiz): *Math. Methods in the Appl. Sciences*, 6 (1984), 457-466.

[3] - Convergence of the Tau method for nonlinear differential equations of Riccati's type (with E.L. Ortiz): *Nonlinear Analysis*, 9 (1985), 53-60.

[4] - Linear approximation and asymptotic expansion associated to the nonlinear wave equation in 1 dim (avec N.T.Long): *Demonstratio Mathematica*, 19 (1986), 45-63.

[5] - On a generalization of the regularization of zero and first orders of Tikhonov (avec Y. Martinez): *Computers and Math. Appl.*, 12B (1986), 1203-1208.

[6] - Linear recursive schemes associated with some nonlinear partial differential equations in 1 dim (with E.L. Ortiz): *SIAM J. on Math. Analysis*, 18 (1987), 452-464

[7] - On the strongly damped wave equation: $u_{tt} - \Delta u - \Delta u_t + f(u) = 0$ (with D.D.Ang): *SIAM J. on Math. Analysis*, 19 (1988), 1409-1418

[8] - Strong solutions of a quasilinear wave equation with nonlinear damping (with D.D.Ang): *SIAM J. on Math. Analysis*, 19 (1988), 337-347.

[9] - Mixed problem for some semi-linear wave equation with a nonhomogeneous condition (with D.D.Ang): *Nonlinear Analysis*, 12 (1988), 581-592.

- [10] - Some viscoelastic equations (with D.D.Ang): *Intern. Journal of Fracture*, 39 (1989), 35-43.
- [11] - The Dirichlet boundary value problem for B.G.K. equation (with B.Perthame): *Proceedings "Advances in kinetic theory and continuum mechanics", Paris 1991, R.Gatignol and Soubbaramayer (Eds.), Springer-Verlag.*
- [12] - On the quasilinear wave equation: $u_{tt} - \Delta u + f(u, u_t) = 0$ associated with a mixed nonhomogeneous condition (with N.T.Long): *Nonlinear Analysis*, 19 (1992), 613-623.
- [13] - Periodic solution of a nonlinear parabolic equation involving Bessel's operator (with N.T.Long): *Computers and Math. Appl.*, 25 (1993), 11-18.
- [14] - Nonlinear parabolic problem associated with the penetration of a magnetic field into a substance (with N.T.Long): *Math. Methods in the Appl. Sciences*, 16 (1993), 281-295.
- [15] - Approximation of a parabolic nonlinear evolution equation backwards in time (with N.T.Long): *Inverse Problems* 10 (1994), 905-914.
- [16] - On the existence of a solution of a boundary value problem for a nonlinear Bessel equation on an unbounded interval (with N.T.Long and E.L.Ortiz): *Proc. Royal Irish Acad.* 95A (1995), 237-247.
- [17] - A semilinear wave equation associated with a linear differential equation with Cauchy data (with N.T.Long): *Nonlinear Analysis*, 24 (1995), 1261-1279.
- [18] - Periodic solution of a nonlinear parabolic equation associated with penetration of a magnetic field into a substance (with N.T.Long): *Computers and Math. Appl.*, 30 (1995), 63-78.
- [19] - Regularization of an inverse Stefan problem (avec D.D.Ang et D.N.Thanh): *Differential and Integrals*, 9 (1996), 371-380.
- [20] - An inverse Stefan problem: identification of boundary value (avec D.D.Ang et D.N.Thanh): *Journal of Computational & Appl. Maths.*, 66 (1996), 75-84.
- [21] - Note on a regularization of a parabolic nonlinear evolution equation backwards in time (with N.T.Long): *Inverse Problems* 12 (1996) 455-462.
- [22]- A nonlinear Bessel differential equation associated with Cauchy conditions (with N.T.Long and E.L.Ortiz): *Computers and Math. Appl.*, 31 (1996), 131-139.

[23] - Regularization of a two-dimensional two-phase inverse Stefan problem (avec D.D.Ang et D.N.Thanh): *Inverse Problems* 13 (1997) 607-619.

[24] - The semi-linear wave equation associated with a non-linear boundary condition (avec N.T. Long): *Demonstratio Mathematica*, 30 (1997) 557-572.

[25] - Some remarks on structural relations between the Tau method and the finite element method (with E.L.Ortiz): *Computers and Math. Appl.*, 33 (1997), 105-113.

[26] - A bidimensional inverse Stefan problem: identification of boundary value (avec D.D.Ang et D.N.Thanh): *Journal of Computational & Appl. Maths.*, 80 (1997), 227-240.

[27] - Regularization of an inverse two-phase Stefan problem (avec D.D.Ang et D.N.Thanh): *Nonlinear Analysis*, 34 (1998) 719-731.

[28] - Mixed problem for some semilinear wave equation involving Bessel's operator (avec D. Thanh Binh et N.T. Long): *Demonstratio Mathematica*, 32 (1999), 77-94.

[29] - Mathematical model for a shock problem involving a linear viscoelastic bar (avec N.T. Long et M. Bergou-nioux): *Nonlinear Analysis*, 43 (2001), 547-561

[30] - Linear recursive schemes associated with the non-linear wave equation involving Bessel's operator (avec D. Thanh Binh et N.T. Long): *Mathematical and Computer Modelling*, 34 (2001) 541-556.

[31] - Linear Recursive Schemes and Asymptotic Expansion Associated with the Kirchoff-Carrier Operator (avec N.T.Long et T.N.Diem): *Journal of Mathematics Analysis and Applications*, 267 (2002), 116-134

[32] - The backward heat equation: regularization by Cardinal series (avec N.V.Nhan et N.Cam): *Archives of Inequalities and Applications*, 2 (2004), 355-364.

[33] - Surface temperature determination from borehole measurements: regularization by Cardinal series (avec N.V.Nhan, T.T.Le et D.N.Thanh): *Nonlinear Analysis*, 50 (2002), 1055-1063.

[34] - A mathematical model for the evaporation of a liquid fuel droplet inside an infinite vessel (avec R. Alexandre, A. Simon et N.T. Long): *Nonlinear Analysis and Applications: To V. Lakshmikantham o on his 80th. Birthday, vol.1, 117-140 (2003)*-Kluwer Academic Publishers.

[35] - Diffraction by a wedge at a skew incidence: integral representations of Cauchy-Carleman for the electromagnetic fields: *Journal of Mathematics Analysis and Applications*, 282(2003), 95-106.

[36] - Asymptotic expansion of the solution for nonlinear wave equation with mixed non-homogeneous conditions (avec N.T. Long et T.N.Diem): *Demonstratio Mathematica*, 36 (2003) 683-695.

[37] - Mathematical model for a shock problem involving a nonlinear viscoelastic bar (avec N.T. Long et T.N.Diem): *Journal for Analysis and its Applications (ZAA)*, 22 (2003), 1-12.

[38] - Nonhomogeneous heat equation: identification and regularization for the inhomogeneous term (avec D.D. Trong et N.T. Long): *Journal of Mathematical Analysis and Applications*, 312(2005), 93-104.

[39] - On a shock problem involving a nonlinear viscoelastic bar (N.T.Long et T.N.Diem): *J.Boundary and Value Problems*, 3(2005), 337-358.

[40] - Determination of a two-dimensional heat source: Uniqueness, regularization and error estimate (avec D.D.Trong et P.H.Quan): *Journal of Computational and Applied Mathematics*,191(2006),50-67.

[41] - On a nonlinear parabolic equation involving Bessel's operator associated with a mixed inhomogeneous condition (avec N.T.Long): *Journal of Computational and Applied Mathematics*,196 (2006), 267-284.

[42] - Sinc approximation of the heat flux on the boundary of a two-dimensional finite slab (avec D.D.Trong et P.H.Quan): *Numerical and Functional Analysis and Optimization*, 27(2006), 685-695.

[43] - Sinc approximation of the heat distribution on the boundary of a two-dimensional finite slab (avec D.D.Trong et P.H.Quan): *Nonlinear Analysis- Real World Applications*, 9 (2008), 1103-1111.

[44] - Mathematical model for the evaporation of a liquid fuel droplet, subject to nonlinear constraints (avec R. Alexandre et Nguyen Thanh Long): *Applied Mathematics and Computations*, 199 (2008), 139-154.

[45] - A nonlinearly ill-posed problem of reconstructing the temperature from interior data (avec D.D.Trong et P.H.Quan): *Numerical and Functional Analysis and Optimization* 29(3-4) (2008), 445-469.

[46] - Laguerre polynomials and the inverse Laplace transform using discrete data (avec D.D.Trong, T.N.Lien): *Journal of Mathematical Analysis and Applications*, 327(2008), 1302-1314.

[47] - Existence and decay of solutions of a nonlinear viscoelastic problem with a mixed nonhomogeneous condition (avec N.T.Long and L.X.Truong): *Numerical and Functional Analysis and Optimization* 29(11-12)(2008), 1363-1393.

[48] - The regularity and exponential decay of solution for a linear wave equation associated with two -point boundary conditions (avec N.T.Long, L.X.Truong and L.T.Phuong Ngoc): *Nonlinear Analysis - Real World Applications* 11(3) (2010) 1289-1303 .

[49] - Determine the spacial term of a two-dimensional heat source (avec D.D.Trong, P.T.Nam): *Applicable Analysis* 88 (2009), 457-474.

[50] - Holder-type approximation for the spatial source term of a backward heat equation (avec D.D.Trong, P.T.Nam and Mach Nguyet Minh), *Numerical and Functional Analysis and Optimization* 31(12) (2010),1386-1405.

[51] - Determination of the body force of a two dimensional isotropic elastic body (avec D.D.Trong, P.T.Nam and T.T.Tuyen): *Journal of Computational and Applied Mathematics*, 229 (2009), 192-207.

[52] - Mathematical model for ice formation in the Artic during summer (avec P.T.Nam) (submitted, 2008).

[53] - Large time behavior of differential equations with drifted periodic coefficients and modeling Carbon storage in soil (avec S.Cordier,N.T.Long and L.X.Truong), to appear in *Applied Mathematics and Computations* (2011).

[54] - A new stability results for the backward heat equation (avec D.D.Trong, P.H.Quan, N.H.Tuan) (submitted, 2009).

[55] - On a nonlinear heat equation associated with Dirichlet-Robin conditions (avec N.T.Long, N.Van Y, and L.T.Phuong Ngoc): to appear in *Numerical and Functional Analysis and Optimization* (2011).

[56] - Existence, blow up and exponential decay estimates for a nonlinear wave equation with boundary conditions of two point type (avec N.T.Long, L.X.Truong and L.T.Phuong Ngoc): to appear in *Nonlinear Analysis TMA* (2011).