

CURRICULUM VITAE

Domingo Alberto TARZIA
May 2020

I. PERSONAL DATA AND ADDRESS

CONICET and Depto. Matemática,

FCE, Universidad Austral,

Paraguay 1950, S2000FZF Rosario, ARGENTINA.

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Argentine Passport # 08444474M valid to 18 September 2021

Italian Passport # YA9096069 valid to 2 March 2026

Position:

- **Retired Superior Researcher at CONICET** (Argentina) from 1 May 2017; Beginning 5 November 1983.
- **Professor on Applied Mathematics at Universidad Austral** (Rosario, Argentina) from 1 February 1991; Beginning 10 August 1970.
- **Vicepresident for Research at Universidad Austral** (Pilar, Argentina) from January 2018 to December 2020.

Web page at Austral University: <https://austral.edu.ar/investigadores/tarzia-domingo-alberto/>

Web page at CONICET:

http://www.conicet.gov.ar/new_scp/detalle.php?id=22798&keywords=Domingo+alberto+tarzia&datos_academicos=yes

at CONICET Digital: <https://ri.conicet.gov.ar/author/6182>

Areas of interest are:

Primary: Partial differential equations (elliptic and parabolic), Free and moving boundary problems, Phase-change processes, Elliptic and parabolic variational inequalities, Optimal control theory by PDE, Corporate finance (financial break-even point).

Secondary: Numerical analysis, Optimization, Derivatives in Finance.

Languages:

- Spanish: native
- French: very good, written and spoken (4 years of residence in France)
- Italian: very good, written and spoken (2 years of residence in Italy)
- English: good, written and spoken

Professional Associations:

- AMCA: Argentinean Society of Computational Mechanics (Argentina);
- AMS: American Mathematical Society (USA);
- AR-SIAM: Argentinean Section of SIAM (Argentina-USA). Vice-Chair from January 2007 to May 2014;
- ASAMACI: Argentinean Society for Industrial, Computational and Applied Mathematics (Argentina). Vice-chair from October 2008 to May 2011; President from May 2011 till May 2017;
- SADAF: Argentinean Society of Teachers in Finance (Argentina);
- SIAM: Society for Industrial and Applied Mathematics (USA);
- UMA: Argentinean Mathematical Society (Argentina).

- Formerly: UMI (Unione Matematica Italiana (Italy)), SBMAC (Sociedade de Matematica Aplicada e Computacional (Brazil)), MAA (Mathematical Association of America (USA)), NCTM (National Council of Teachers of Mathematics (USA)), MA (Mathematical Association (UK)), AFA (Asociación Física Argentina (Argentina)).

II. ACADEMIC DEGREES

1) **Bachelor in Mathematics** (Licenciado en Matemática), Facultad de Ciencias Exactas e Ingeniería, Universidad Nacional de Rosario, Rosario (Argentina), 1972.

2) **Bachelor in Physics** (Licenciado en Física), Facultad de Ciencias Exactas e Ingeniería, Universidad Nacional de Rosario, Rosario (Argentina), 1977.

3) **Magister in Numerical Analysis (Diplome d'Etudes Approfondies d'Analyse Numérique)**, Laboratoire Jacques-Louis Lions (ex Laboratoire d'Analyse Numérique), Université Pierre-et-Marie-Curie (Univ. Paris VI), Paris (France), 1977.

Advisor: Prof. Roland Glowinski.

4) **Doctorat de 3ème Cycle en Mathématiques Appliquées, Spécialité: Analyse Numérique - Mécanique Théorique des Solides**, Laboratoire de Mécanique Théorique, Université Pierre-et-Marie-Curie (Univ. Paris VI), Paris (France), 1979.

Advisor: Prof. Georges Duvaut.

5) **Habilitation à Diriger des Recherches, Spécialité: Mathématiques**, Laboratoire Jacques-Louis Lions (ex Laboratoire d'Analyse Numérique), Université Pierre-et-Marie-Curie (Univ. Paris VI), Paris (France), 1991.

Advisors: Prof. A. Damlamian - G. Duvaut (Paris, France), Prof. A. Fasano - M. Primicerio (Florence, Italy).

Referees from Univ. Paris VI: G. Bayada (Lyon), P. Bénilan (Beçanson), J. Mossino (Paris).

Jury: G. Bayada, A. Bossavit, A. Damlamian, G. Duvaut (President), M. Frémond, D. Hilhorst, J. Mossino.

6) **Specialist in Finance**, Facultad de Ciencias Económicas y Estadísticas, Universidad Nacional de Rosario, Rosario (Argentina), 2007.

7) **Magister in Finance**, Facultad de Ciencias Económicas y Estadísticas, Universidad Nacional de Rosario, Rosario (Argentina), 2010.

Advisor: Prof. Guillermo López Dumrauf.

III. AWARD

Award "Alberto González Domínguez" in Mathematics –Year 1996- from Argentine Science National Academy, Buenos Aires, 22 November 1996.

Advisor:

11 PhD Thesis in Mathematics;

1 PhD Thesis in Physics;

1 PhD Thesis in Chemical Engineering (co-advisor);

5 Master Thesis in Applied Mathematics;

1 Master Thesis in Business Administration;

1 Master Thesis in Finance;

6 Bachelor Thesis in Physics;

8 Bachelor Thesis in Mathematics.

Personal Mathematics Genealogy Project: <http://genealogy.math.ndsu.nodak.edu/id.php?id=154850>

ORCID iD: <https://orcid.org/0000-0002-2813-0419>

Google Scholar: <https://scholar.google.com.ar/citations?user=WMzU7UUAAA&hl=es>

Research Gate: www.researchgate.net/profile/Domingo_Tarzia

IV. BOOKS and BOOKLETS

- 1) D.A. TARZIA, "Introducción a las ecuaciones variacionales elípticas y sus aplicaciones a problemas de frontera libre", CLAMI-CONICET, No. 5, Buenos Aires (1981), (206 pages)
- 2) D.A. TARZIA, "The two-phase Stefan problem and some related conduction problems", Reuniões em Matemática Aplicada e Computação Científica, Vol. 5, Sociedade Brasileira de Matemática Aplicada e Computacional, Río de Janeiro (1987), (137 pages).
- 3) D.A. TARZIA, "A bibliography on moving-free boundary problems for the heat diffusion equation. The Stefan problem", Firenze (1988) (with 2528 titles on the subject), (103 pages).
- 4) D.A. TARZIA, "Transferencia de calor y materia con cambio de fase", en "Transferencia de Calor y Materia. Aspectos Fundamentales", 1ra Escuela de Postgrado en Transferencia de Calor y Materia ECAMAT'92, J.C. Ferreri (Ed.), CAMAT, Tandil (1992), Capítulo 2, pp. 2.1-2.46 (46 pages)
- 5) D.A. TARZIA, "A bibliography on moving-free boundary problems for the heat diffusion equation. The Stefan and related problems", MAT - Serie A, 2 (2000), 1-297 (with 5869 titles on the subject). Available from:
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia-MAT-SerieA-2\(2000\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia-MAT-SerieA-2(2000).pdf)
- 6) D.A. TARZIA, "Curso de nivelación de Matemática", McGraw-Hill Interamericana, Santiago de Chile (2000), (381 pages).
- 7) D.A. TARZIA, "Cómo pensar, entender, razonar, demostrar y crear en Matemática", MAT -Serie B, # 1, Rosario (2000), (76 pages).
- 8) D.A. TARZIA, "Matemática: Operaciones numéricas y geometría del plano", MAT - Serie B, # 2, Rosario (2003), (80 pages).
- 9) D.A. TARZIA, "Explicit and Approximated Solutions for Heat and Mass Transfer Problems with a Moving Interface", Chapter 20, In Advanced Topics in Mass Transfer, Mohamed El-Amin (Ed.), Rijeka (Croatia) (2011), pp. 439-484. ISBN: 978-953-307-333-0, INTECH Open Access Publisher (626 pages). Available from:
<http://www.intechopen.com/articles/show/title/explicit-and-approximated-solutions-for-heat-and-mass-transfer-problems-with-a-moving-interface>.
The book containing the chapter is available from:
<http://www.intechopen.com/books/show/title/advanced-topics-in-mass-transfer>
- 10) J. BOLLATI – M.F. NATALE – J.A. SEMITIEL - D.A. TARZIA, "Approximate solutions to the one-phase Stefan problem with non-linear temperature-dependent thermal conductivity", Chapter 1 , In Heat Conduction: Methods, Applications and Research, J. Hristov – R. Bennacer (Eds.), Nova Science Publishers, Inc. (2019), pp1-20.

V. EDITOR OF CONGRESS

- 1) D.A. TARZIA (Ed.), "Seminario sobre el problema de Stefan y sus aplicaciones", CUADERNOS del Instituto de Matemática "Beppo Levi", No. 11 (178 pages) and 12 (196 pages), Rosario (1984). ISSN: 03250690.
- 2) D.A. TARZIA (Ed.), "II Seminario sobre el problema de Stefan y sus aplicaciones", CUADERNOS del Instituto de Matemática "Beppo Levi", No. 13 (60 pages) and 14 (172 pages), Rosario (1987). ISSN: 03250690.
- 3) D.A. TARZIA (Ed.), "III Seminario sobre problemas de frontera libre y sus aplicaciones", Cuadernos del Instituto de Matemática "Beppo Levi", No. 17 (152 pages) and 18 (100 pages), Rosario (1989). ISSN: 03250690.
- 4) D.A. TARZIA (Ed.), "IV Seminario sobre problemas de frontera libre y sus aplicaciones", Cuadernos del Instituto de Matemática "Beppo Levi", No. 23 (129 pages) and 24 (130 pages), Rosario (1993). ISSN: 03250690.

- 5) D.A. TARZIA (Ed.), "V Seminario sobre problemas de frontera libre y sus aplicaciones", Cuadernos del Instituto de Matemática "Beppo Levi", No. 25 (106 pages) and 26 (102 pages), Rosario (1995). ISSN: 03250690.
- 6) D.A. TARZIA (Ed.), "VI Seminario sobre problemas de frontera libre y sus aplicaciones", MAT-Serie A, # 3 (44 pages), # 4 (40 pages), # 5 (44 pages), Rosario (2001). ISSN: 1515-4904. Available from:
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia\(Ed\)-MAT-SerieA-3\(2001\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia(Ed)-MAT-SerieA-3(2001).pdf)
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia\(Ed\)-MAT-SerieA-4\(2001\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia(Ed)-MAT-SerieA-4(2001).pdf)
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia\(Ed\)-MAT-SerieA-5\(2001\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia(Ed)-MAT-SerieA-5(2001).pdf)
- 7) D. A. TARZIA (Ed.), "Primeras Jornadas Sobre Ecuaciones Diferenciales, Optimización y Análisis Numérico", MAT – Serie A, # 7 (42 pages), # 8 (27 pages), Rosario (2004). ISSN: 1515-4904. Available from:
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia\(Ed\)-MAT-SerieA-7\(2005\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia(Ed)-MAT-SerieA-7(2005).pdf)
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia\(Ed\)-MAT-SerieA-8\(2005\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia(Ed)-MAT-SerieA-8(2005).pdf)
- 8) D. A. TARZIA – C. V. TURNER (Eds.), "Segundas Jornadas Sobre Ecuaciones Diferenciales, Optimización y Análisis Numérico", MAT – Serie A, # 10 (22 pages), Rosario (2005). ISSN: 1515-4904. Available from:
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia-Turner\(Eds\)-MAT-SerieA-10\(2005\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia-Turner(Eds)-MAT-SerieA-10(2005).pdf)
- 9) M.C. MACIEL - D. A. TARZIA (Eds.), "Terceras Jornadas Sobre Ecuaciones Diferenciales, Optimización y Análisis Numérico", MAT – Serie A, # 14 (40 pages), Rosario (2007). ISSN: 1515-4904. Available from:
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Maciel-Tarzia\(Eds\)-MAT-SerieA-14\(2007\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Maciel-Tarzia(Eds)-MAT-SerieA-14(2007).pdf)
- 10) D. A. TARZIA – R.H. MASCHERONI (Eds.), "Workshop on Mathematical Modelling of Energy and Transfer Processes, and Applications", MAT – Serie A, # 15 (53 pages), Rosario (2008). ISSN: 1515-4904. Available from:
[http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia\(Ed\)-MAT-SerieA-15\(2008\).pdf](http://web.austral.edu.ar/descargas/facultad-cienciasEmpresariales/mat/Tarzia(Ed)-MAT-SerieA-15(2008).pdf)
- 11) E.M. MANCINELLI - E. A. SANTILLAN MARCUS - D. A. TARZIA (Eds.), II Congreso de Matemática Aplicada, Computacional e Industrial (II MACI 2009), ASAMACI, MACI, Vol. 2 (506 pages), Rosario (2009). Available from:
<http://asamaci.org.ar/wp-content/uploads/2012/03/MACI-Vol-2-2009.pdf>
- 12) G. ACOSTA – J. ETCHEVERRY – F. REITICH – R. SPIES – D. TARZIA – C. TURNER – A. WILL (Eds.), "TAMI 2010 – Taller de Matemática Industrial", Cursos y Seminarios de Matemática, Serie B, Fascículo 6 (57 pages), Depto. Matemática, Fac. Cs. Exactas y Nat., UBA, Buenos Aires (2010). Available from:
<http://cms.dm.uba.ar/depto/public/CyS6.pdf>
- 13) D.A. TARZIA (Ed.), "VII Italian–Latin American Conference on Industrial and Applied Mathematics – Part 1", MAT – Serie A, # 19 (42 pages), Rosario (2014). Available from:
[http://www.austral.edu.ar/cienciasempresariales/wp-content/uploads/2015/05/Tarzia\(Ed\)-MAT-SerieA-19\(2014\).pdf](http://www.austral.edu.ar/cienciasempresariales/wp-content/uploads/2015/05/Tarzia(Ed)-MAT-SerieA-19(2014).pdf)
- 14) D.A. TARZIA (Ed.), "VII Italian–Latin American Conference on Industrial and Applied Mathematics – Part 2", MAT – Serie A, # 20 (38 pages), Rosario (2015). Available from:
[http://www.austral.edu.ar/cienciasempresariales/wp-content/uploads/2016/04/Tarzia\(Ed\)-MAT-SerieA-202015.pdf](http://www.austral.edu.ar/cienciasempresariales/wp-content/uploads/2016/04/Tarzia(Ed)-MAT-SerieA-202015.pdf)

VI. RESEARCH PUBLICATIONS (since 1979)

Areas of research [numbers of papers published in scientific journals]:

- Free and moving boundary problems:
 - ✓ 1-dimensional Stefan-like Problem (phase-change and related processes): [5, 6, 7, 9, 12, 13, 14, 15, 16, 17, 18, 21, 22, 26, 29, 33, 35, 37, 38, 41, 44, 46, 47, 49, 50, 54, 55, 57, 59, 60, 61, 62, 66, 69, 71, 73, 75, 76, 79, 80, 82, 83, 84, 87, 89, 90, 92, 94, 97, 100, 101, 102, 103, 105, 106, 108, 109, 114, 115, 118, 125, 126, 128, 129, 130, 133, 135, 138, 139, 140, 141, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 154, 155, 156, 157, 158]

- ✓ n-dimensional Stefan Problem (phase-change processes): [1, 2, 3, 4, 6, 8, 11, 19, 20, 23, 25, 48]
- ✓ Freezing of high-water content material: [96, 111]
- ✓ Fractional Stefan problem: [120, 126, 135, 146, 148, 149, 150]
- ✓ Diffusion-consumption of oxygen: [13, 99, 112, 123]
- ✓ Binary-alloy solidification: [51]
- ✓ Saturated-unsaturated flow: [53]
- ✓ Heat –diffusion equation with absorption: [24, 28, 72]
- ✓ Gas-solid systems: [42, 64]
- ✓ Reaction-diffusion problems: [67]
- ✓ Obstacle problem: [10, 113, 127, 132]
- Elliptic variational/quasivariational inequalities: [2, 3, 4, 10, 19, 20, 23, 25, 27, 36, 39, 48, 56, 74, 77, 78, 85, 88, 93, 95, 98, 113, 119, 122, 127, 132, 160, 161]
- Parabolic variational inequalities: [1, 8, 11, 91, 107, 116, 159]
- Optimal control problems: [74, 78, 91, 93, 95, 98, 107, 113, 116, 119, 122, 127, 132, 159, 160, 161]
- Optimization: [27, 32, 77, 160]
- Numerical analysis: [39, 45, 48, 56, 77, 81, 90, 96, 109, 119, 121, 127]
- Explicit solution for elliptic problems: [4, 10, 19, 23, 27, 32, 36, 85, 160]
- Explicit solution for parabolic problems: [1, 5, 7, 9, 12, 14, 15, 18, 21, 26, 29, 33, 35, 37, 41, 44, 47, 50, 51, 53, 54, 55, 58, 60, 61, 62, 70, 71, 75, 76, 79, 80, 82, 83, 84, 87, 89, 92, 94, 97, 100, 101, 102, 103, 106, 118, 120, 124, 125, 126, 128, 133, 135, 136, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 152, 154, 155, 157]
- Unknown thermal coefficients: [7, 9, 12, 14, 17, 18, 21, 35, 42, 47, 50, 54, 58, 92, 97, 105, 108, 115, 126, 128, 130, 135]
- Integrals equations: [30, 52, 63, 66, 69, 82, 83, 84, 104, 110, 124, 136, 142, 153]
- Fractional differential equations [120, 126, 135, 146, 148, 149, 150, 151]
- Approximate methods (heat balance, quasi steady-state, etc.): [17, 28, 31, 34, 37, 40, 43, 65, 81, 96, 112, 123, 143, 145, 152, 156]
- Root growth – Nutrient uptake – water uptake (agronomy-soil science): [31, 34, 37, 40, 43, 65, 71, 81, 86, 121, 137]
- Non-classical heat equations: [30, 52, 63, 69, 82, 84, 101, 104, 110, 117, 124, 136, 142, 153]
- Ordinary differential equations: [134, 139, 142, 145, 152, 154, 158]
- Contact Mechanics: [162]
- Quantitative finance: [131]

VI.1. Journal Articles:

- 1) D.A. TARZIA, "Sur le problème de Stefan à deux phases", Comptes Rendus de l'Académie des Sciences de Paris, 288 A (1979), 941-944.
- 2) D.A. TARZIA, "Aplicación de métodos variacionales en el caso estacionario del problema de Stefan a dos fases", Mathematicae Notae, 27 (1979-1980), 145-156.
- 3) D.A. TARZIA, "Una familia de problemas que converge hacia el caso estacionario del problema de Stefan a dos fases", Mathematicae Notae, 27 (1979-1980), 157-165.
- 4) D.A. TARZIA, "Sobre el caso estacionario del problema de Stefan a dos fases", Mathematicae Notae, 28 (1980-1981), 73-89.
- 5) D.A. TARZIA, "An inequality for the coefficient σ of the free boundary $s(t)=2\sigma\sqrt{t}$ of the Neumann solution for the two-phase Stefan problem", Quarterly of Applied Mathematics, 39 (1981-1982), 491-497.

- 6) D.A. TARZIA, "Una revisión sobre problemas de frontera móvil y libre para la ecuación del calor. El problema de Stefan", *Mathematicae Notae*, 29 (1981-1982), 147-241.
- 7) D.A. TARZIA, "Determination of the unknown coefficients in the Lamé -Clapeyron problem (or one-phase Stefan problem)", *Advances in Applied Mathematics*, 3 (1982), 74-82.
- 8) D.A. TARZIA, "Etude de l'inéquation variationnelle proposée par Duvaut pour le problème de Stefan à deux phases, I", *Bollettino dell'Unione Matematica Italiana*, 1B (1982), 865-883.
- 9) M.B. STAMPELLA - D.A. TARZIA, "Determinación de coeficientes desconocidos en el problema de Stefan a dos fases", *SIGMA (Revista de Matemáticas Aplicadas)*, 8 (1982), 83-98.
- 10) G.G. GARGUICHEVICH - M.B. STAMPELLA - D.A. TARZIA, "On the obstacle problem", *Mathematicae Notae*, 30 (1983), 67-79.
- 11) D.A. TARZIA, "Etude de l'inéquation variationnelle proposée par Duvaut pour le problème de Stefan à deux phases, II", *Bollettino dell'Unione Matematica Italiana*, 2B (1983), 589-603.
- 12) D.A. TARZIA, "Simultaneous determination of two unknown thermal coefficients through an inverse one-phase Lamé-Clapeyron (Stefan) problem with an overspecified condition on the fixed face", *International Journal of Heat and Mass Transfer*, 26 (1983), 1151-1158.
- 13) E. COMPARINI - R. RICCI - D.A. TARZIA, "Remarks on a one dimensional Stefan problem related to the diffusion-consumption model", *Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM)*, 64 (1984), 543-550.
- 14) D.A. TARZIA, "A new variant for the simultaneous calculation of some thermal coefficients of a semi-infinite material through a phase-change problem with an over-condition on the fixed face", *Latin American Journal on Heat and Mass Transfer (now Latin American Applied Research)*, 8 (1984), 227-235.
- 15) A.B. BANCORA - D.A. TARZIA, "On the Neumann solution for the two-phase Stefan problem including the density jump at the free boundary", *Latin American Journal on Heat and Mass Transfer (now Latin American Applied Research)*, 9 (1985), 215-222.
- 16) E. COMPARINI - D.A. TARZIA, "A Stefan problem for the heat equation subject to an integral condition", *Rendiconti Seminario Matematico dell'Università di Padova*, 73 (1985), 119-136.
See: http://archive.numdam.org/article/RSMUP_1985_73_119_0.pdf
- 17) G.G. GARGUICHEVICH - M.C. SANZIEL - D.A. TARZIA, "Comparison of approximate methods for the determination of thermal coefficients through a phase-change problems", *International Communications in Heat and Mass Transfer*, 12 (1985), 451-464.
- 18) D.A. TARZIA, "Determination of unknown thermal coefficients of a semi-infinite material for the one-phase Lamé-Clapeyron (Stefan) problem through the Solomon-Wilson-Alexiades mushy zone model", *International Communications in Heat and Mass Transfer*, 14 (1987), 219-228.
- 19) D.A. TARZIA, "An inequality for the constant heat flux to obtain a steady-state two-phase Stefan problem", *Engineering Analysis with Boundary Elements (formerly Engineering Analysis)*, 5 (1988), 177-181.
- 20) D.A. TARZIA, "Mixed elliptic problems with solutions of non-constant sign", *Revista de la Unión Matemática Argentina*, 34 (1988), 31-55.
See: <http://inmabb.criba.edu.ar/revuma/pdf/v34/p031-055.pdf>
- 21) M.B. STAMPELLA - D.A. TARZIA, "Determination of one or two unknown thermal coefficients of a semi-infinite material through a two-phase Stefan problem", *International Journal of Engineering Science*, 27 (1989), 1407-1419.
- 22) D.A. TARZIA - L.T. VILLA, "On the free boundary problem in the Wen-Langmuir shrinking core model for noncatalytic gas-solid reactions", *Meccanica*, 24 (1989), 86-92.
- 23) E.D. TABACMAN - D.A. TARZIA, "Sufficient and/or necessary conditions for the heat transfer coefficient on Γ_1 and the heat flux on Γ_2 to obtain a steady-state two-phase Stefan problem", *Journal of Differential Equations*, 77 (1989), 16-37.

- 24) R. RICCI - D.A. TARZIA, "Asymptotic behavior of the solution of the dead-core problems", *Nonlinear Analysis, Theory, Methods and Applications*, 13 (1989), 405-411.
- 25) J.E. BOUILLET - M. SHILLOR - D.A. TARZIA, "Critical outflow for a steady-state Stefan problem", *Applicable Analysis*, 32 (1989), 31-51.
- 26) M.C. SANZIEL - D.A. TARZIA, "Necessary and sufficient condition to obtain n phases in a one-dimensional medium with a flux condition on the fixed face", *Mathematicae Notae*, 33 (1989), 25-32.
- 27) R.L.V. GONZALEZ - D.A. TARZIA, "Optimization of heat flux in a domain with temperature constraints", *Journal on Optimization, Theory and Applications*, 65 (1990), 245-256.
- 28) D.A. TARZIA, "A variant of the heat balance integral method and a new proof of the exponentially fast asymptotic behavior of the solutions in heat conduction problems with absorption", *International Journal of Engineering Science*, 28 (1990), 1253-1259.
- 29) D.A. TARZIA, "Neumann-like solution for the two-phase Stefan problem with a simple mushy zone model", *Computational and Applied Mathematics (ex Matemática Aplicada e Computacional)*, 9 (1990), 201-211.
- 30) D.A. TARZIA - L.T. VILLA, "Remarks on some nonlinear initial boundary value problems in heat conduction", *Revista de la Unión Matemática Argentina*, 35 (1990), 265-275.
See: <http://inmabb.criba.edu.ar/revuma/pdf/v35/p265-275.pdf>
- 31) J.C. REGINATO - D.A. TARZIA - A. CANTERO, "On the free boundary problem for the Michaelis-Menten absorption model for root growth", *Soil Science*, 150 (1990), 722-729.
- 32) R.L.V. GONZALEZ - D.A. TARZIA, "On some thermic flux optimization problems in domain with Fourier boundary condition and state restrictions", *Mathematicae Notae*, 34 (1990), 21-32.
- 33) D.A. TARZIA - L.T. VILLA, "Mathematical considerations on the heat transfer with phase change with negligible latent heat", *Latin American Applied Research*, 21 (1991), 1-6.
- 34) J.C. REGINATO - D.A. TARZIA - A. CANTERO, "On the free boundary problem for the Michaelis-Menten absorption model for root growth II. High concentrations", *Soil Science*, 152 No. 2 (1991), 63-71.
- 35) D.A. TARZIA, "Sobre una nueva variante para el cálculo simultáneo de coeficientes térmicos de un material semi-infinito a través de un problema directo o inverso de Stefan a dos fases", *Mathematicae Notae*, 35 (1991), 25-41.
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VI.2. International Conference Proceedings articles:

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VI.3. Seminars or conferences given in:

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Communications given in:

Aguas do Lindoia (San Pablo, Brazil), Chiba (Japan), Cambridge (UK), Chiemsee (Germany), Coimbra (Portugal), Erice (Italy), Falerna (Italy), Gaeta (Italy), Hamburg (Germany), Heraklion-Crete (Greece), Irsee-Bavaria (Germany), Lyon (France), Madrid (Spain), Maubuisson (France), Milan (Italy), Montreal (Canada), Natal (Brazil), Perpignan (France), Seville (Spain), Sophia-Antipolis (Antibes, France), Stockholm (Sweden), Vancouver (Canada), Zakopane (Poland), Zurich (Switzerland).

In Argentina at: Bahía Blanca, Bariloche, Buenos Aires, Carlos Paz, Cruz Alta, Córdoba, Formosa, La Falda, La Plata, Mar del Plata, Mendoza, Neuquén, Paraná, Rafaela, Río Cuarto, Río Gallegos, Rosario, Rufino, Salta, San Juan, San Luis, Santa Fe, Santiago del Estero, Tandil, Tucumán, Valle Hermoso, Villa Giardino.