

# C.S. I Dr. Dan Tiba

## Curriculum Vitae

Nume: Dan Tiba

Născut: 17. 10. 1953, Iași, România

Stare civilă: căsătorit, doi copii

Poziție actuală: CS 1, dr., Institutul de Matematică, Academia Română, București (din 1994).

### *Studii*

1960-1972: Liceul „C. Negruzzi”, Iași, (șef de promoție)

1972-1976: Facultatea de Matematică, Univ. „Al. I. Cuza”, Iași, (șef de promoție).

1976-1977: masterat, Facultatea de Matematică, Univ. „Al. I. Cuza”, Iași

1982: Doctor în Matematică, Univ. „Al. I. Cuza”, Iași (conducător Acad. V. Barbu)

1991: stagiul postdoctoral INRIA Paris

### *Limbi străine*

Engleză, franceză, germană

### *Distincții și premii*

"G. Tițeica" premiul Academiei Române, România (1984)

**Humboldt Fellow**, Germania (1993, 1997, 2000)

**Docent** al Univ. din Jyväskylä, Finlanda (1995)

**Medalia Jubiliara "Gazeta Matematica"**, România (1999)

**Premiul pentru excelență, "Societatea Matematicienilor"**, România (2000)

**Medalia de Onoare**, Univ. din Jyväskylä, Finlanda (2004)

"N. Teodorescu", premiul AOSR, România (2008)

**Membru in Panel**, European Research Council, Bruxelles, Belgia (din 2013)

**Corresponding Member**, Accademia Peloritana dei Pericolanti | Classe di Scienze (2016), Italia

### *Invitații Principale*

**INRIA**. Paris (Rocquencourt), 12 luni (1991)

**Univ. din Jyväskylä** Finlanda, 47 luni (1990 - 2015)

**Technical University Munchen**, Germania, 6 luni (1993), Humboldt Fellow

**Royal Society** și **Univ. Westminster**, Londra și **Univ. Canterbury**, Anglia, 6 luni (1994-1996)

**Weierstrass Institute**, Berlin, Germania, 18 luni (1997, 2000), Humboldt Fellow

**Weierstrass Institute**, Berlin, Germania, (2001-2005) cercetător angajat

Ecole Polytechnique Paris, Univ. Orleans, Univ. Grenoble, Univ. Perpignan, Univ. Alsace : 8 luni (2004-2012)

### *Afilieri profesională*

membru **AMS** și **SIAM**

membru **International Federation of Information Processing (IFIP)** -Technical Committee 7, Working Group 7.2

membru **SSMR** și asociația "**Recreații Matematice**", Romania

membru titular **AOSR**, Secția de Matematică (din 2011, secretar general din 2016)

### *Activități editoriale, alte activități profesionale*

evaluator de programe de cercetare matematică în **Austria, Romania, ERC**

recenzent și raportor pentru **Mathematical Reviews**, **SIAM J. Control Optimiz.**, **ESAIM**, **Appl. Mathematical Letters**, **Mathematical Models and Methods Appl. Sci**, **Zentralblatt fur Mathematik**, **Computational Optimization and Applications**

series co-editor "**Mathematics and its Applications**", **Annals of ARS** (din 2009)

membru în colectivul editorial "**Mathematical Reports**", București (2009-2012)

membru în colectivul editorial „**Scientific Bulletin**”, București (din 2012)

membru în colectivul editorial „**International Journal of Differential Equations**” **Hindawi**(din 2013)

membru în colectivul editorial **Bulletin of the South Ural Univ.** (din 2016)

membru în colectivul editorial **Mathematica, Cluj, Academia Romana** (din 2016)

membru în colectivul editorial "**Recreatii Matematice**", Iași (din 2007)

cursuri: **Univ.** București , Romania (ecuații diferențiale ordinare pentru anul doi) și **Univ. Jyvaskyla**, Finlanda (capitole speciale de control optimal și optimizarea formelor 1995, 2004, 2007)

### *Conferințe: Organizare și participare*

co-organizator și co-editor volum (Birkhauser) pentru **First French-Romanian Conference in Applied Mathematics**, Iasi 1992

co-organizator și co-editor volum (Kluwer) pentru IFIP conference "**Analysis and optimization of differential systems**", Constanta, 2002

co-organizator "**Optimization of nonlinear systems and of free boundaries**", Constanta 1996 (raportat in **FBP News 12**, Lisbon, December 1996)

**Chair** la 3rd SIAM Conference "**Control and its Applications**", St.Louis, USA, 1995 (sesiunea "Computational and Numerical Methods in Control and Optimization")

**Chair** la **International Congress of Mathematicians**, Berlin, 1998 (sesiunea "Distributed Parameters")

organizator de sesiune speciala "**Optimal Control**" (cu M. Tucsnak, Nancy) la French-Romanian Conference in Applied Mathematics, Craiova 2004

organizator de subdomeniu la **ECCOMAS 2004**, 4th European Congress on Computational Methods in Applied Sciences, Jyvaskyla, Finland, 2004

organizator de sesiune speciala "**Shape analysis and optimization**" (with J. P. Zolesio, Nice, M. Delfour, Montreal, J. Cagnol, Paris) pentru aniversarea a 100 de ani de la teza lui D.Pompeiu și introducerea distanței dintre mulțimi - IFIP meeting "**Systems Modeling and Optimization**", Torino, 2005.

organizator de sesiune speciala "**Dynamic Systems**" (cu M. Tucsnak, Nancy) la French-Romanian conference in Applied Mathematics, Chambery, 2006

co-organizator al Conferinței "**Phase transitions and optimal control**", Berlin, October 23-25, 2008

coordonator al 10th "**French-Romanian Meeting**", Poitiers, France, August 2010

co-organizator al **CAO 2011**, Univ. of Jyvaskyla, Finland, June 2011

co-organizator de sesiune speciala "**Approximation and Optimization in some Systems from Mechanics**" at IFIP 2011, Berlin , September 2011 (cu C.Murea, Univ. Mulhouse, France)

co-organizator de sesiune speciala "**Shape optimization and free boundaries**" at IFIP 2013, Klagenfurt, September 2013 (cu C.Murea, Univ. Mulhouse France)

**Chair** de Invited Session la **International Congress of Mathematicians 2014**, Seul

co-organizator de sesiune speciala **Modelling and Control in Contact Mechanics**, la IFIP 2015, Nice, June 2015 (cu M. Sofonea, Univ. Perpignan, France)

co-organizator de sesiune speciala **Optimal control and design with applications** at ETAMM 2016, Perpignan (cu C.Murea, Univ. Mulhouse, France)

### *Coordonare doctoranzi*

**Ahmed Eljendy**, oponent la susținerea tezei "**Exact controllability and stabilization of hyperbolic systems through boundary control**", Univ. Jyvaskyla, 1992

**Cristian Danet**, teza "**Maximum and Comparison Principles, Applications**", Institutul de Matematica, Academia Romana, Bucuresti, 2006

**Merlusca Diana Rodica**, teza **Aplicatii ale dualitatii in unele probleme de optimizare infinit dimensionale**, Institutul de Matematica, , Academia Romana, Bucuresti, 2014.

**Roxana Mihaela Nicolai**, Institutul de Matematica, Academia Romana, Bucuresti (din 2012)

**Membru în comisia de doctorat sau de abilitare** la Univ. Craiova, Iasi, Constanta, Bucuresti în Romania, Univ. Jyvaskyla în Finlanda, Univ. Orleans în Franta, Univ, Chisinau în Republica Moldova

### *Support Financiar*

Bursa postdoctorala, INRIA, Paris, 1991 (12 luni)

**Humboldt Fellow**, Technical Univ. Munchen și Weierstrass Institute Berlin, 1993, 1997, 2000 (24 luni)

**Grant de Excelență ANCS nr.2 - CEX06-11-18/2006**, oct.2006-sept.2008 (36 luni)

**Program Cooperare "Optimization, identification and control of systems with distributed parameters"** cu Institute of Mathematics and Mechanics, Ekaterinburg (V. Maksimov), finanțat de Academia Romana și Academia Rusa, 2008

**LEA Math-Mode**, (cooperare Franco-Romana 2009-2011) program co-director cu M.Sofonea, Univ. Perpignan. France

**CNCSIS Grant 1192/2008** (36 luni) Grant Director

**Brincusi French-Romanian – program cooperare** (2011-2012) program co-director cu C. Murea, Univ. Mulhouse, France

**CNCS Grant 145/2012** (60 months) Grant Director

### *Prelegeri recente*

Eurogen, Univ. of Jyvaskyla, June 2007 "**A Kalman-type filtering problem in the presence of multiplicative white noise**" (with A.Stoica, Univ. Politehnica Bucuresti)

Jyvaskyla Summer School, August 2007 "**Introduction to Shape Optimization**" (20h lectures)

Weierstrass Institute Berlin, September 2007 "**Optimal control methods in shape optimization**"

Mathematisches Forschungsinstitut Oberwolfach, March 2008 "**An optimal control approach in optimal design**"

Bedlewo Institute of Mathematics, September 2008 "**Existence in shape optimization**"

Weierstrass Institute Berlin, October 2008 "**Optimization problems for thin elastic structures**"

Ecole Polytechnique Paris, November 12, 2008 "**Existence et approximation en optimisation des formes**"

Institut Henri Poincare Paris, November 17, 2008 "**La methode variationelle avec controle**"

University of Bucharest, January 2009 "**Control Problems with Mixed Constraints**"

University of Regensburg, March 2009 "**Existence and Approximation in Shape Optimization**"

Institute of Mathematics Bucharest, April 2009 "**A Schwartz-type algorithms for elliptic ill-posed problems**"

Univ.Perpignan, France, September 2009 "**Applications of the control variational method**"

Weierstrass Institute, Berlin, December 2009 "**Finite element approximation in shape optimization problems**"

Institute of Mathematics, Bucharest, May 2010 "**The control variational method in the nonconvex case**"

Univ. of Iasi, June 2010, "Al.Myller Seminar Centennial Conference" "**Approximation in shape optimization**"

Lambrecht, July 2010 "**Finite element discretization in shape optimization problems with Neumann or mixed boundary conditions**"

Institute of Mathematics, Bucharest, April 2011 "**Extensions of the control variational method**",

BCAM. Bilbao, Spain, May 2011 "**Penalization and regularization in certain shape optimization problems**",

Univ. of Jyvaskyla, Finland, June 2011 "**Approximation in a fixed domain for shape optimization problems**",

Univ. of Toronto, July 2011 (SciCADE Conference) "**A penalization method in a fluid-solid free boundary problem**",

Technische Univ. Berlin, September 2011 (IFIP Conference) "**Approximation in shape optimization for the stationary Navier-Stokes equation**",

Orlando, October 2011 (SIAM meeting) "**Recent results in the approximation of shape optimization problems**",

BCAM, Bilbao. May 2012 "**Penalization and regularization techniques in shape optimization**",

CIRM Luminy, June 2012 "**Finite element methods in shape optimization under weak regularity assumptions**",

Univ. of Bucharest, August 2012 (French-Romanian meeting in applied mathematics) "**Domains of class C; properties and applications**"

Univ. Craiova (Conferința internațională CDPS, iulie 2013) "**Fixed domain methods in shape optimization**"

Weierstrass Institute Berlin, Octombrie 2013 „**Implicit Functions and Parametrizations**”

Univ. Jyvaskyla, Noiembrie 2013 „**Applications in shape optimization of the implicit parametrization theorem**”

Univ. Iasi, Noiembrie 2013, „**Applications in shape optimization of the implicit parametrization theorem**”

Univ. Chisinau, Noiembrie 2013, „**Implicit Functions and Parametrizations in Dimension Three**”

Institute of Mathematics, Bucharest, May 2014, **Implicit systems in arbitrary dimension: local parametrization and generalized solutions.**

Jiaotong Univ., Xi'an, June 2014

ON THE APPROXIMATION OF VARIATIONAL INEQUALITIES

Romanian Academy, Bucharest, March 2015, **A Hamiltonian Approach to implicit systems and applications**

Univ. Nice, June 2015 (IFIP meeting), **Fixed domain approaches in shape optimization**

Univ. Iasi, September 2015, **Generalized solutions of implicit systems and applications**

Inst. Of Mathematics, Bucharest, April 2016, **A duality approach to some nonlinear PDEs**

Cortona, Italia, June 2016, **A Hamiltonian approach to implicit systems and applications in nonlinear programming**

Boston, USA, SIAM meeting, July 2016, **Iterated Hamiltonian systems and applications**

Univ. Craiova, Romai meeting, September 2016, **Applications of fixed domain methods in shape optimization problems and free boundary problems**

Jiaotong Univ., Xi'an, **June 2017 A direct approach to variational inequalities and free boundary problems**

## LIST OF PUBLICATIONS

February 2017

### *Books*

**I Dan Tiba**, *"Optimal control of nonsmooth distributed parameter systems"*, Lecture Notes in Mathematics 1459, Springer Verlag, Berlin (1990) viii+159 pp.

**II Dan Tiba, Pekka Neittaanmaki**, *"Optimal control of nonlinear parabolic systems. Theory, algorithms and applications"*, Marcel Dekker, New York (1994) xvi+399 pp.

**III Dan Tiba**, *"Lectures on the optimal control of elliptic equations"*, LN 32, Univ. of Jyvaskyla Press, Jyvaskyla, Finland (1995) vi+147 pp.

**IV Dan Tiba, Pekka Neittaanmaki, Juergen Sprekels**, *"Optimization of elliptic systems. Theory and applications"*, Springer Monographs in Mathematics, Springer, New York (2006) xv+507 pp.

### *EDITED VOLUMES*

**V Dan Tiba, Viorel Barbu, Frederic Bonnans**, *"Optimization, optimal control and partial differential equations"*, Proceedings of the first Franco-Romanian conference, ISNM 107, Birkhauser Verlag, Basel (1992) xiii+349 pp.

**VI Dan Tiba, Viorel Barbu, Irena Lasiecka, Constantin Varsan, "Analysis and optimization of differential systems"**, IFIP TC7/WG7.2 international conference (Constanta 2002) Kluwer Acad.Publ. Boston, Ma (2003) x+442 pp.

**VII Dan Tiba, Temistocle Birsan, "Recreatii Stiintifice"**, vol. I-VI, Iasi 1883-1888, edited together with Introduction, Index and other supplements, "Recreatii Matematice" Publishing House, Iasi 2008.

## ARTICLES

### 2017

123-I) C.M. Murea, D. Tiba , **Approximation of a simply supported plate with obstacle**, *Math. And Mech. of Solids*, DOI: <https://doi.org/10.1177/1081286517718228>

(2017).

### 2016

122-I) A. Halanay, C.M. Murea, D. Tiba, Existence of a steady flow of Stokes fluid past a linear elastic structure using fictitious domain, *J. Math. Fluid Mech.*, vol.18, DOI **10.1007/s00021-015-f10247-0** (2016), pp. 397-413.

121-I) Cornel Murea, Dan Tiba, A direct algorithm in some free boundary problems, *Journal of Numerical Mathematics*; Vol. 24, Is. 4, Pages 253–271, DOI 10.1515/jnma-2015-0048 (2016).

120)M. R. Nicolai, D. Tiba: Implicit parametrizations and applications, Springer International Publishing AG 2016, L. Bociu et al. (Eds.): CSMO 2015, IFIP 494, pp. 390-□398, DOI: 10.1007/978-3-319-55795-3 37, 2016

119) Dan Tiba, A duality approximation of some nonlinear PDE's, *Mathematics and its Applications. Annals of ARS*, vol.8, no.1, (2016), pp.68-77.

118) Dan Tiba, Boundary Observation in Shape Optimization, in *New Trends in Differential Equations, Control Theory and Optimization: Proceedings of the 8th Congress of Romanian Mathematicians*, V. Barbu, C. Lefter, I. Vrabie Eds., World Scientific (2016), pp. 301 – 315, ISBN:9789813142855

117) T. Birsan, D. Tiba, "Neculai Culianu" (29.08.1832, Iasi - 28.11.1915, Iasi), *Recreatii Matematice*, vol.XVIII, no.1 (2016) pp. 1-3.

### 2015

116-I) Mihaela R. Nicolai, Dan Tiba, **Implicit functions and parametrizations in dimension three: generalized solution**, *DCDS-A* vol. 35, no. 6 (2015), pp. 2701-2710. doi:10.3934/dcds.2015.35.2701 .

115-I)Dan Tiba, **An example on some conditions in the calculus of variations**, *U.P.B. Sci. Bull., Series A*, Vol. 77, Iss. 2, (2015), pp.3-8

114) Dan Tiba, **UNILATERAL CONDITIONS ON THE BOUNDARY FOR SOME SECOND ORDER DIFFERENTIAL EQUATIONS** , *Ann. Acad. Rom. Sci. Ser. Math. Appl.* Vol. 7, No. 1/2015, pp. 121-136.

### 2014

113) Temistocle Birsan, Dan Tiba, *Gazeta Matematica* a în anii Primului Război Mondial, *Recreatii Matematice*, vol.XVI, no.2 (2014) pp.140-143.

112) Cornel Murea, Dan Tiba, A Penalization Method for the Elliptic Bilateral Obstacle Problem, in C. Pötzsche et al. (Eds.): CSMO 2013, IFIP AICT 443, pp. 1–10, Springer, (2014). DOI: 10.1007/978-3-662-45504-3 18

## 2013

- 111-I) Dan Tiba, Peter Philip, **A PENALIZATION AND REGULARIZATION TECHNIQUE IN SHAPE OPTIMIZATION PROBLEMS**, SIAM J. Control and Optim., vol.51, no.6, p.4295-4317 (2013).
- 110) Dan Tiba, Andrei Halanay, Cornel Murea, **Existence and approximation for a steady fluid-structure interaction problem using fictitious domain approach with penalization**, Ann. Acad. Rom. Sci. Ser. Math. Appl. Vol. 5, No.1-2, (2013), pp. 120 – 147.
- 109) Dan Tiba, **THE IMPLICIT FUNCTION THEOREM AND IMPLICIT PARAMETRIZATIONS**, Ann. Acad. Rom. Sci. Ser. Math. Appl. Vol. 5, No.1-2, (2013), pp. 193 – 208
- 108) Dan Tiba, **Domains of class C: properties and applications**, Annals of the University of Bucharest (mathematical series) 4 (LXII) (2013), pp. 89-102.
- 107) Dan Tiba, **Finite element discretization in shape optimization problems for the stationary Navier-Stokes equation**, in “System Modeling and Optimization”: 25th IFIP TC 7 Conference, Berlin, Germany, September 12-16, 2011, Revised Selected Papers, D.Hoemberg and F.Troitzsch Eds., IFIP AICT 391, Springer, Heidelberg, p. 437-444 (2013).
- 106) Dan Tiba, Peter Philip, **Shape optimization via control of a shape function on a fixed domain: theory and numerical results**, in Numerical Methods for Differential Equations, Optimization and Technological Problems, S.Repin, T.Tiihonen, T.Tuovinen Eds., Comp. Meth. In Appl. Sc. 27, Springer Verlag, Dordrecht (2013), pp.305-320.
- 105) Dan Tiba, **Optimal Control Methods and the Variational Approach to Differential Equations**, Lecture Notes in Engineering and Computer Science: Proceedings of IMECS 2013, S.I. Ao, O. Castillo, D. Craig, D.D. Feng, J.-A. Lee, Eds., Newswood Limited, Hong Kong, (2013) pp.127-132, ISBN 978-988-19251-8-3.

## 2012

- 104-I) Dan Tiba, Pekka Neittaanmaki, **Fixed domain approaches in shape optimization problems**, Inverse Problems, vol.28, p.1-35, (2012) [doi:10.1088/0266-5611/28/9/093001](https://doi.org/10.1088/0266-5611/28/9/093001)
- 103-I) Dan Tiba, Mikael Barboteu, Mircea Sofonea, **The control variational method for beams in contact with deformable obstacles**, Z. Angew. Math. Mech. **92**, No. 1, 25 – 40 (2012)
- 102) Dan Tiba, **Optimal Control Approaches for Some Geometric Optimization Problems**, Lecture Notes in Engineering and Computer Science: Proceedings of WCECS 2012, 24-26 October, 2012, San Francisco, USA, S. I. Ao, Craig Douglas, W. S. Grundfest and Jon Burgstone Editors, Newswood Limited, Hong Kong, p.1248-1252, (2012) ISBN 978-988-19252-4-4

## 2011

- 101-I) Dan Tiba, **”Finite element approximation for shape optimization problems with Neumann and mixed boundary conditions”**, SIAM J. Control Optimiz., vol.49, no.3, p.1064-1077 (2011)
- 100-I) Dan Tiba, **Approximation in shape optimization problems**, in Alexandru Myller Mathematical Seminar Centennial Conference, V. Barbu, O. Carja Eds., AIP Conference Proceedings Volume: 1329 Pages: 236-245, DOI: 10.1063/1.3546088 (2011).
- 99) Dan Tiba, Juergen Sprekels, **Extensions of the control variational method**, Control and Cybernetics, vol. 40, no.4 (2011), pp. 1099-1108.

## 2010

- 98) Dan Tiba, Mircea Sofonea, **”The control variational method for elastic contact problems”** , Mathematics and its Applications, vol.2, no.1 (2010), p.99-122
- 97) Dan Tiba, Temistocle Birsan, **A forgotten episode in the Romanian Mathematics before the second world war”** (Romanian), Recreatii Matematice, vol.XII, no.2 (2010), p.128-131



## 2009

- 96-I) Dan Tiba, Juergen Sprekels, **"The Control Variational Approach For Differential Systems"**, SIAM J. Control Optim., vol. 47, no.6 (2009), p.3220-3236
- 95-I) Dan Tiba, Frederic Bonnans, **"Control problems with mixed constraints and application to an optimal investment problem"**, Mathematical Reports (Bucharest), vol.11(61), no.4 (2009), p.293-306
- 94-I) Dan Tiba, Andrei Halanay, **"Shape optimization for stationary Navier-Stokes equations"**, Control and Cybernetics, vol.38, no4B (2009), p.1359-1374
- 93-I) Dan Tiba, Pekka Neittaanmaki, Anssi Pennanen, **Fixed domain approaches in shape optimization problems with Dirichlet boundary conditions**, Inverse Problems, 25 (2009), p.1-18
- 92-I) Dan Tiba, Juergen Sprekels, **Optimization of thin elastic structures**, in OPTIMAL CONTROL OF COUPLED SYSTEMS OF PARTIAL DIFFERENTIAL EQUATIONS, Kunisch, K; Leugering, G; Sprekels, J; et al EDS., ISNM 158 pp. 255-273 Birkhauser Verlag, Basel, DOI: 10.1007/978-3-7643-8923-9\_15 (2009)
- 91) Dan Tiba, Mircea Sofonea, **"The control variational method for contact of Euler-Bernoulli beams"**, Bull. Transilvania Univ. Brasov, vol.2(51), Series III (2009), p.127-136

## 2008

- 90-I)- Dan Tiba, Pekka Neittaanmaki, **A fixed domain approach in shape optimization problems with Neumann boundary conditions**, in PARTIAL DIFFERENTIAL EQUATIONS: MODELING AND NUMERICAL SIMULATION, R. Glowinski, P. Neittaanmaki EDS., Computational Methods in Applied Sciences 16, Springer Verlag, pp. 235-244 (2008).
- 89) Dan Tiba, Adrian M. Stoica, **"A Kalman-type filtering problem in the presence of multiplicative white noise"**, in "Evolutionary and deterministic methods for design, optimization and control", P.Neittaanmaki, J.Periaux and T.Tuovinen (Eds.), CIMNE, Barcelona (2008), pag.228-233.
- 88) Dan Tiba, Temistocle Birsan, **"Recreatii Stiintifice - 125 years since its publication"** (Romanian), Recreatii Matematice, vol X, no1, pp.1-6 (2008)
- 87) Dan Tiba, Temistocle Birsan, **"Recreatii Stiintifice - 125 years since its publication"** (Romanian), Gazeta Matematica A, vol XXVI (CV), nr.2 (2008), pp.150-154 (reprint of 22)).

## 2007

- 86) Dan Tiba, Masahiro Yamamoto, Gengsheng Wang, **"Applications of convexity in some identification problems"**, Mathematical Reports, vol.9(59), no.1 (2007), pp.123-133.

## 2006

- 85-I) Dan Tiba, Temistocle Birsan, **One hundred years since the introduction of the set distance by Dimitrie Pompeiu**, in System Modeling and Optimization, Ceragioli, F; Dontchev, A; Futura, H, V.Marti, L.Pandolfi EDS., Springer Verlag, New York, pp. 35-39.

## 2005

- 84) Dan Tiba, Temistocle Birsan, **"A century since the publication of the Ph.D. work of Dimitrie Pompeiu"** (Romanian), Recreatii Matematice, vol.vii, no.2 (2005), p.85-89
- 83-I) Dan Tiba, Viorel Arnautu, Juergen Sprekels, **"Optimization of curved mechanical structures"** SIAM J.Control Optim. vol.44, no.2 (2005), p.743-775.
- 82) Dan Tiba, Rostislav Vodak, **"A general asymptotic model for Lipschitzian curved rods"** Adv.Math.Sci. Appl. vol.15, no.1 (2005), p.137-198.

**81-I) Dan Tiba, Viorel Arnautu, Juergen Sprekels, "A reduction approximation method for curved rods"**, Numer. Funct. Anal. Optim. vol.26, no.2 (2005), p.139-155.

**80-I) Dan Tiba, Juergen Sprekels, Optimal Design of Mechanical Structures**, in Control Theory of Partial Differential Equations, Imanuvilov, O; Leugering, G; Triggiani, R; et al EDS., PURE AND APPLIED MATHEMATICS 242, Chapman and Hall / CRC, Boca Raton, pp: 259-271 (2005)

## **2004**

79) Dan Tiba, Juergen Sprekels **"An approximation method for curved rods"** in "Nonlinear partial differential equations and their applications", Gakuto Internat.Ser.Math.Sci.Appl. 20, Gakkotosho, Tokyo (2004), p.305-314.

78-I) Dan Tiba, Constantin Zalinescu, **"On the necessity of some constraint qualification conditions in convex programming"**, J.Convex Anal. vol.11, no.1 (2004), p.95-110

## **2003**

77-I) Dan Tiba, **"A property of Sobolev spaces and existence in optimal design"**, Appl.Math. Optim. vol.47, no.1 (2003), p.45-58.

**76-I) Dan Tiba, Juergen Sprekels, "Optimization of clamped plates with discontinuous thickness"** Systems Control Lett. vol.48, no.3-4, (2003) p.289-295.

**75) Dan Tiba, "New results in shape optimization"** Math.Rep. (Bucharest) vol.5(55), no.4, (2003) p.389-398.

**74-I) Dan Tiba, Juergen, "Optimization of differential systems with hysteresis"** in "Analysis and optimization of differential systems" (Constanta 2002), Kluwer Acad.Publ., Boston, MA (2003), p. 387-398.

73-I) Dan Tiba, Wenbin Liu, Pekka Neittaanmaki **"Existence for shape optimization problems in arbitrary dimension"**, SIAM J.Control Optim. vol.41, no.5 (2003), p.1440-1454.

## **2002**

**72) Dan Tiba, Juergen Sprekels, "An analytic approach to a generalized Nagdhi shell model"** Adv.Math.Sci. Appl. vol.12, no.1 (2002), p.175-190.

**71-I) Dan Tiba, Anca Ignat, Juergen Sprekels, "A model of a general curved rod"** Math.Methods Appl.Sci. vol.25, no.10, (2002) p.835-854.

70-I) Dan Tiba, Juergen Sprekels, **"Control variational methods for differential equations"** in "Optimal control of complex structures", Hoffmann, KH; Lasiecka, I; Leugering, G; et al. EDS., ISNM 139 Birkhauser, Basel (2002), p.245-257

## **2001**

69-I) Dan Tiba, Anca Ignat, Juergen Sprekels, **36) "Analysis and optimization of nonsmooth arches"** SIAM J. Control Optim. vol.40, no.4 (2001), p.1107-1133.

**68) Dan Tiba, "On the optimization of nonsmooth Kirchhoff-Love arches"** Bul.Acad.St. Rep.Moldova Mat. no.3 (2001), p.23-26.

**67-I) Dan Tiba, Wenbin Liu, "Error estimates in the approximation of optimization problems governed by nonlinear operators"** Numer. Funct. Anal. Optim. vol.22, no.7-8 (2001), p.953-972.

**2000**

**66-I) Dan Tiba, Juergen Sprekels, Viorel Arnautu, Hartmut Langmach, "On the approximation and optimization of plates"** Numer. Funct. Anal. Optim. vol.21, no.3-4 (2000) p.337-354

**65-I) Dan Tiba, Wenbin Liu, Pekka Neittaanmaki, "Sur les problemes d'optimization structurelle"** (French) C.R.A.S. Paris Ser.I Math. vol.331, no.1 (2000), p.101-106.

**64-I) Dan Tiba, Juergen Sprekels, "Sur les arches lipschitziennes"** (French) C.R.A.S. Paris Ser.I Math. vol.331, no.2 (2000), p.179-184.

**63) Dan Tiba, Pekka Neittaanmaki, "Shape optimization in free boundary systems"** in "Free boundary problems: theory and applications II" (Chiba 1999), Gakuto Internat. Ser. Math. Sci. Appl. 14, Gakkotosho, Tokyo (2000), p.334-343

**1999**

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