CURRICULUM VITAE

EUROPEAN FORMAT

INFORMAZIONI PERSONALI/ PERSONAL INFORMATION

Nome, Cognome/Name, Surname	Pierluigi, Colli
Indirizzo/Address Via, numero civico, c.a.p., città, nazione/ House number, street name, postcode, city, country	Dipartimento di Matematica "F. Casorati" Universita' di Pavia, Via Ferrata 1 27100 Pavia, ITALY
Telefono/Telephone	+ 39 0382 98 5617
Fax	+ 39 0382 98 5602
E-mail	pierluigi.colli@unipv.it
Sito web/Website	http://www-dimat.unipv.it/pier/
Nazionalità/Nationality	Italian
Luogo e data di nascita/ Place and Date of birth	Vigevano (Italy), September 15, 1958

ESPERIENZA PROFESSIONALE /WORK EXPERIENCE

Se dipendente CNR indicare:	**N. MATRICOLA** **QUALIFICA** **LIVELLO**
In ordine di data /Dates (from – to) [Iniziare con le più recenti ed elencare separatamente ciascun incarico ricoperto/ Add separate entries for each relevant post occupied, starting with the most recent.]	Current position: full professor of Mathematical Analysis at the Faculty of Sciences of the University of Pavia, since November 1, 1997. Research Associate at the Istituto di Matematica Applicata e Tecnologie Informatiche "Enrico Magenes", Consiglio Nazionale delle Ricerche, Pavia since since March 1, 2012 (before this date, Collaborator in the Reaserch Activities of the IMATI). Previous positions: 1) researcher of Mathematical Analysis at the Faculty of Engineering of the University of Pavia, from June 1983 to October 1992; 2) associate professor of Mathematical Analysis at the Faculty of Engineering of the University of Pavia, from November 1992 to October 1994; 3) full professor of Mathematical Analysis at the Faculty of Sciences of the University of Torino, from November 1994 to October 1997.
Nome e indirizzo del datore di lavoro / Name and address of employer	Universita' degli Studi di Pavia, Strada Nuova 65, 27100 Pavia, ITALY
Tipo o settore di attività / Type of business or sector	Education and Research

Funzione o posto occupato / Occupation or position held	Full professor in a public university
Principali mansion e responsabilità / Main activities and responsibilities	Teaching, research activity, direction and other administrative duties

ISTRUZIONE E FORMAZIONE / EDUCATION AND TRAINING

In ordine di data /Dates (from – to)	**Educational Background.**
[Iniziare con le più recenti ed elencare separatamente ciascun corso frequentato con successo/ Add separate entries for each relevant course you have completed, starting with the most recent.]	**Doctor Degree.** I have no official Doctor Degree in Mathematics in the sense of a PhD. The reason is that at that time in Italy there was not the possibility of performing doctoral studies, which started later, and obviously a Doctor title was not necessary to start an academic career. **University.** Studies in Mathematics at Universita' degli Studi di Pavia, Strada Nuova 65, 27100 Pavia, Italy, with graduation on October 19, 1981.
Nome e tipo d'istituto di istruzione o formazione / Name and type of organisation providing education and training	See above
Principali materie e competenze professionali apprese / Principal subjects occupational skills covered	Mathematics, in particular Mathematical Analysis
Certificato o diploma ottenuto /Title of qualification awarded	Master degree in Mathematics
Livello nella classificazione nazionale o internazionale / Level in National classification	Master level

ATTIVITA' DI RICERCA / RESEARCH ACTIVITIES

Attuali campi di ricerca / Research sectors	Nonlinear Partial Differential Equations; Parabolic equations and evolution problems; Phase transition systems; Well-posedness, regularity, asymptotics, optimal control; Variational approach.
Recenti attività scientifiche/ Recent Scientific Activities.	Concerning the research activity, the recent research subjects regard the • well-posedness and control problems for Allen-Cahn or Cahn-Hilliard or phase-field systems with dynamic boundary conditions and mass constraints; • modeling and local existence for the motion of a solid with large deformations; • analysis and time discretization for a nonstandard viscous Cahn-Hilliard system; • well-posedness, asymptotic analyses and error estimates for a Cahn–Hilliard type phase field system modelling tumor growth; • global existence of solutions for a model of microwave heating; • well-posedness for a non-smooth regularization of a forward-backward parabolic equation.

Edited Volumes

P. Colli, I. Mueller & A. Visintin, Special issue: Symposium on Trends in Applications of Mathematics to Mechanics (STAMM) 2008, Editorial, *Contin. Mech. Thermodyn.* 21 (2009), 83.

P. Colli, G. Gilardi, D. Hoemberg, P. Krejčí& E. Rocca, Preface: Special issue dedicated to Jürgen Sprekels on the occasion of his 65th birthday, *Discrete Contin. Dyn. Syst.* 35 (2015), no. 6, i-ii.

Recent Papers (2013-2017)

P. Colli, G. Gilardi, P. Podio-Guidugli & J. Sprekels, Global existence and uniqueness for a sin- gular/degenerate Cahn–Hilliard system with viscosity, J. Differential Equations 254 (2013), 4217- 4244.

G. Canevari & P. Colli, Convergence properties for a generalization of the Caginalp phase field system, Asymptot. Anal. 82 (2013), 139-162.

L. Calatroni & P. Colli, Global solution to the Allen–Cahn equation with singular potentials and dynamic boundary conditions, Nonlinear Anal. 79 (2013), 12-27.

E. Bonetti, P. Colli & M. Fr´emond, The motion of a solid with large deformations, C. R. Math. Acad. Sci. Paris 351 (2013), 579-583.

P. Colli & J. Sprekels, Optimal control of an Allen–Cahn equation with singular potentials and dynamic boundary condition, SIAM J. Control Optim. 53 (2015), 213-234.

P. Colli, G. Gilardi, P. Krej˘c´ı & J. Sprekels, A vanishing diffusion limit in a nonstandard system of phase field equations, Evol. Equ. Control Theory 3 (2014), 257-275.

E. Bonetti, P. Colli & G. Gilardi, Singular limit of an integrodifferential system related to the entropy balance, Discrete Contin. Dyn. Syst. Ser. B 19 (2014), 1935-1953.

P. Colli, G. Gilardi, P. Krej˘c´ı & J. Sprekels, A continuous dependence result for a nonstandard system of phase field equations, Math. Methods Appl. Sci. 37 (2014), 1318-1324.

P. Colli, G. Gilardi & J. Sprekels, Regularity of the solution to a nonstandard system of phase field equations, Rend. Cl. Sci. Mat. Nat. 147 (2013), 3-19.

P. Colli, G. Gilardi, P. Krej˘c´ı, P. Podio-Guidugli & J. Sprekels, Analysis of a time discretization scheme for a nonstandard viscous Cahn–Hilliard system, ESAIM Math. Model. Numer. Anal. 48 (2014), 1061-1087.

E. Bonetti, P. Colli & M. Fr´emond, 2D motion with large deformations, Boll. Unione Mat. Ital. 7 (2014), 19-44.

E. Bonetti, P. Colli, M. Fabrizio & G. Gilardi, Existence of solutions for a mathematical model related to solid-solid phase transitions in shape memory alloys, Arch. Ration. Mech. Anal. 219 (2016), 203-254.

P. Colli, M.H. Farshbaf-Shaker & J. Sprekels, A deep quench approach to the optimal control of an Allen–Cahn equation with dynamic boundary conditions and double obstacles, Appl. Math. Optim. 71 (2015), 1-24.

E. Bonetti, P. Colli & M. Fr´emond, The 3D motion of a solid with large deformations, C. R. Math. Acad. Sci. Paris 352 (2014), 183-187.

P. Colli, G. Gilardi & D. Hilhorst, On a Cahn-Hilliard type phase field system related to tumor growth, Discrete Contin. Dyn. Syst. 35 (2015), 2423-2442.

P. Colli, G. Gilardi & J. Sprekels, On the Cahn–Hilliard equation with dynamic boundary conditions and a dominating boundary potential, J. Math. Anal. Appl. 419 (2014), 972-994.

P. Colli, G. Marinoschi & E. Rocca, Sharp interface control in a Penrose-Fife model, ESAIM Control Optim. Calc. Var. 22 (2016), 473-499.

P. Colli & T. Fukao, The Allen–Cahn equation with dynamic boundary conditions and mass con- straints, Math. Methods Appl. Sci. 38 (2015), 3950-3967.

P. Colli, G. Gilardi & J. Sprekels, A boundary control problem for the viscous Cahn–Hilliard equa- tion with dynamic boundary conditions, Appl. Math. Optim. 73 (2016), 195-225.

P. Colli, M.H. Farshbaf-Shaker, G. Gilardi & J. Sprekels, Optimal boundary control of a viscous Cahn–Hilliard system with dynamic boundary condition and double obstacle potentials, SIAM J. Control Optim. 53 (2015), 2696-2721.

P. Colli, G. Gilardi, D. H¨omberg, P. Krejˇc´ı & E. Rocca, Preface: Special issue dedicated to Ju¨rgen Sprekels on the occasion of his 65th birthday, Discrete Contin. Dyn. Syst. 35 (2015), no. 6, i-ii.

P. Colli, G. Gilardi, G. Marinoschi & E. Rocca, Optimal control for a phase field system with a possibly singular potential, Math. Control Relat. Fields 6 (2016), 95-112.

P. Colli, M.H. Farshbaf-Shaker, G. Gilardi & J. Sprekels, Second-order analysis of a boundary control problem for the viscous Cahn–Hilliard equation with dynamic boundary condition, Ann. Acad. Rom. Sci. Ser. Math. Appl. 7 (2015), 41-66.

P. Colli & T. Fukao, Cahn–Hilliard equation with dynamic boundary conditions and mass constraint on the boundary, J. Math. Anal. Appl. 429 (2015), 1190-1213.

P. Colli, G. Gilardi & G. Marinoschi, A boundary control problem for a possibly singular phase field system with dynamic boundary conditions, J. Math. Anal. Appl. 434 (2016), 432-463.

P. Colli, G. Gilardi, E. Rocca & J. Sprekels, Vanishing viscosities and error estimate for a Cahn– Hilliard type phase field system related to tumor growth, Nonlinear Anal. Real World Appl. 26 (2015), 93-108.

P. Colli & T. Fukao, Equation and dynamic boundary condition of Cahn–Hilliard type with singular potentials, Nonlinear Anal. 127 (2015), 413-433.

P. Colli, G. Gilardi, E. Rocca & J. Sprekels, Asymptotic analyses and error estimates for a Cahn– Hilliard type phase field system modelling tumor growth, Discrete Contin. Dyn. Syst. Ser. S 10 (2017), 37-54.

P. Colli, G. Gilardi & J. Sprekels, A boundary control problem for the pure Cahn–Hilliard equation with dynamic boundary conditions, Adv. Nonlinear Anal. 4 (2015), 311-325.

P. Colli & L. Scarpa, Existence of solutions for a model of microwave heating, Discrete Contin. Dyn. Syst. 36 (2016), 3011-3034.

E. Bonetti, P. Colli, & G. Tomassetti, A non-smooth regularization of a forward-backward parabolic equation, Math. Models Methods Appl. Sci. 27 (2017), 641-661.

P. Colli, G. Gilardi & J. Sprekels, On an application of Tikhonov's fixed point theorem to a nonlocal Cahn–Hilliard type system modeling phase separation, J. Differential Equations 260 (2016), 7940- 7964.

P. Colli & T. Fukao, Nonlinear diffusion equations as asymptotic limits of Cahn–Hilliard systems, J. Differential Equations 260 (2016), 6930-6959.

P. Colli, G. Gilardi, E. Rocca & J. Sprekels, Optimal distributed control of a diffuse interface model of tumor growth, Nonlinearity 30 (2017), 2518-2546.

P. Colli, G. Gilardi & J. Sprekels, Constrained evolution for a quasilinear parabolic equation, J. Optim. Theory Appl. 170 (2016), 713-734.

E. Bonetti, P. Colli & G. Tomassetti, Non-smooth regularization of a forward-backward parabolic equation, in New Trends in Differential Equations, Control Theory and Optimization, V. Barbu, C. Lefter, I.I. Vrabie (ed.), World Scientific, 2016, pp. 41-51.

P. Colli & L. Scarpa, From the viscous Cahn–Hilliard equation to a regularized forward-backward parabolic equation, Asymptot. Anal. 99 (2016), 183-205.

P. Colli, G. Gilardi & J. Sprekels, Distributed optimal control of a nonstandard nonlocal phase field system, AIMS Mathematics 1 (2016), 225-260.

V. Barbu, P. Colli, G. Gilardi & G. Marinoschi, Feedback stabilization of the Cahn–Hilliard type system for phase separation, J. Differential Equations 262 (2017), 2286-2334.

P. Colli, G. Gilardi & J. Sprekels, Distributed optimal control of a nonstandard nonlocal phase field system with double obstacle potential, Evol. Equ. Control Theory 6 (2017), 35-58.

P. Colli, G. Gilardi & J. Sprekels, Global existence for a nonstandard viscous Cahn–Hilliard system with dynamic boundary condition, SIAM J. Math. Anal. 49 (2017) 1732-1760.

P. Colli, G. Gilardi, R. Nakayashiki & K. Shirakawa, A class of quasi-linear Allen–Cahn type equations with dynamic boundary conditions, Nonlinear Anal. 158 (2017), 32-59.

Accepted papers and preprints

V. Barbu, P. Colli, G. Gilardi, G. Marinoschi & E. Rocca, Sliding mode control for a nonlinear phase-field system, preprint arXiv:1506.01665 [math.AP] (2015), pp. 1-28.

P. Colli, G. Gilardi & J. Sprekels, Distributed optimal control of a non-standard nonlocal phase field system with double obstacle potential, preprint arXiv:1607.01991 [math.AP] (2016) 1-26.

P. Colli, G. Gilardi & J. Sprekels, Optimal boundary control of a non-standard viscous Cahn–Hilliard system with dynamic boundary condition, preprint arXiv:1609.07046 [math.AP] (2016), pp. 1-30.

P. Colli, G. Gilardi & J. Sprekels, On a Cahn–Hilliard system with convection and dynamic boundary conditions, preprint arXiv:1704.05337 [math.AP] (2017), pp. 1-34.

ULTERIORI INFORMAZIONI / ADDITIONAL INFORMATION

The teaching experience includes courses in Calculus and Advanced Calculus for students of Mathematics, Physics, Science and Engineering, and courses in Nonlinear Partial Differential Equations for PhD students.

Concerning the research activity, he is author or coauthor of more than 150 papers. The main research subject regards nonlinear evolution problems arising from differential models in Thermodynamics, Mechanics and Physics, Physiology.

Basically interested in proving existence and uniqueness theorems; other issues are regularity, asymptotic behaviour of the solution with respect to time or to special parameters, stability and convergence as well as error estimates for time discretization or for other approximations, optimal control problems for systems of partial differential equations.

Pierluigi Colli spent one year in Paris VI in 1985-86 and visited several foreign universities.
He attended and contributed to a number of congresses and workshops, being involved in the organization for some of them.
He serves as an editorial board member of the journals *Mathematical Methods in the Applied Sciences* (since 1997) and *Advances in Mathematical Sciences and Applications* (since 2002).

Further infomation can be found at the web page
http://www-dimat.unipv.it/pier/

TRATTAMENTO DEI DATI PERSONALI, INFORMATIVA E CONSENSO

Il D.Lgs. 30/6/2003, n. 196 "*Codice in materia di protezione dei dati personali*" regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento .
La norma in considerazione intende come "trattamento" qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati.
In relazione a quanto riportato, autorizzo il CNR al trattamento dei dati contenuti nel presente *curriculum vitae* e nella documentazione della quale fa parte integrante

(*barrare la casella*) x Si, acconsento