

JACOPO CIAMBELLA

Curriculum Vitae

Rome, December 12th, 2019

Part I – General Information

Full Name	Jacopo Ciambella
E-mail	jacopo.ciambella@uniroma1.it
Spoken Languages	Italian, English

Part II – Education

Type	Year	Institution	Notes
PhD	2010	Sapienza University of Rome	PhD in Structural Engineering in collaboration with Bridgestone Technical Centre Europe S.p.A. Title: "Experimental Testing and Nonlinear Viscoelastic Modelling of Filled Rubber"
University graduation	2006	Sapienza University of Rome	MSc (Laurea specialistica) in Electronic Engineering Grade: 110/110 cum laude
University graduation	2003	Sapienza University of Rome	BEng (Laurea di primo livello) in Electronic Engineering Grade: 110/110 cum laude

Part III – Appointments

IIIA – Academic Appointments (permanent positions)

Start	End	Institution	Position
11/2012	-	Sapienza University of Rome	Assistant Professor in Solid and Structural Mechanics (Ricercatore Universitario in Scienza delle Costruzioni) Department of Structural and Geotechnical Engineering, Faculty of Engineering.

2/2012	6/2013	University of Bristol	Lecturer in Composites Engineering, Department of Civil Engineering.
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IIIB – Academic Appointments (non-permanent positions)

Start	End	Institution	Position
2/2017	-	Sapienza University of Rome	Member of the Management Committee. PhD programme in Theoretical and Applied Mechanics. Director Prof. A. Carcaterra. (Membro del Collegio di Dottorato in Meccanica Teorica e Applicata)
8/2013	8/2017	University of Bristol	Visiting Fellow, Department of Aerospace Engineering.
2/2012	6/2014	University of Bristol	Member of the Management Committee. Doctoral Training Centre in Advanced Composites at the Advanced Composite Centre for Innovation and Science, ACCIS. Director Prof. P. M. Weaver
2/2010	1/2012	Sapienza University of Rome	Post-doc (Assegno di ricerca biennale) at the Department of Structural and Geotechnical Engineering. Supervisors: Achille Paolone and Fabrizio Vestroni
3/2008	4/2008	Université Pierre et Marie Curie	Visiting PhD student at the Institut Jean Le Rond d'Alembert, UPMC, Paris, France. Supervisor: Michel Destrade
5/2005	6/2005	Tohoku University	Visiting graduate students at the Institute of Fluid Science, Tohoku University, Sendai, Japan. Supervisor: Toshiyuki Takagi

IIIC – Other Appointments

Start	End	Company	Position
12/2012	-	Diamonds s.r.l.	Member and Founder of DIAMONDS s.r.l., Spin-off company of Sapienza University of Rome working in the field of structural identification and monitoring. http://www.e-diamonds.it .

Part IV – Administrative Responsibilities

Start	End	Institution	Position
10/2018	-	Sapienza University of Rome	Member of the management committee of the Chemical Engineering degree programme (Membro del Consiglio di Area Didattica in Ingegneria Chimica)
2/2018	-	Sapienza University of Rome	Designated tutor by the Faculty of Civil and Industrial Engineering for the first QUID course (“Qualità ed Innovazione della Didattica”).

1/2017	-	Sapienza University of Rome	Member of the Web Committee of the Department of Structural and Geotechnical Engineering (Membro della commissione web di Dipartimento)
10/2016	-	Sapienza University of Rome	Member of the management committee of the Civil and Industrial Engineering degree programme (Membro del Consiglio di Area Didattica in Ingegneria Civile e Industriale)
7/2015	-	Sapienza University of Rome	ERASMUS coordinator for the PhD Programme in Structural and Geotechnical Engineering, Faculty of Engineering (Coordinatore Accademico di Mobilità per il Dottorato di Ingegneria Strutturale e Geotecnica – Carica elettiva).
7/2015	-	Sapienza University of Rome	ERASMUS coordinator for Civil Engineering, Faculty of Engineering (Coordinatore Accademico di Mobilità per il CdL in Ingegneria Civile – Carica elettiva).
1/2015	-	Sapienza University of Rome	Erasmus Agreement promoter (Responsabile di accordo Erasmus) with the following partners: - Salzburg University of Applied Sciences, Austria - Universidad Politécnica De Cataluña, Spain - Universidad De Castilla - La Mancha, Spain - Ecole Nationale Supérieure De Mécanique, Nantes, France - Vilniaus Gedimino Technikos Universitetas (Vgtu), Lithuania - Universidade Nova De Lisboa, Portugal
7/2013	7/2015	University of Bristol	Promoter and organizer (with S.S. Rahatekar) of the Master Programme in Advanced Composites still delivered at Bristol Composite Institute, University of Bristol (http://www.bristol.ac.uk/study/post-graduate/2019/eng/msc-adv-composites/)

Part IV – Teaching and mentoring experience

IVa – Teaching activities

Start	End	Course	CFU	Degree Programme
27/06/2019	2/07/2019	Magneto-elastic instabilities in soft-actuators	4h	Master Degree in Mechanical Engineering Istanbul Teknik Universitesi (ITU)
2018/2019	-	Scienza delle Costruzioni (Structures and Materials)	6	Bachelor's Degree in Chemical Engineering, Sapienza University of Rome
26/03/2018	28/03/2018	Materials and Structures in their Environment	8h	École centrale de Nantes
2015/2016	-	Scienza delle Costruzioni (Structures and Materials)	9	Bachelor's Degree in Civil and Industrial engineering, Sapienza University of Rome in Latina
2015/2016	2015/2016	Scienza delle Costruzioni I (Structures and Materials I)	1	Teaching support (1 CFU over 6 CFU) for the course Scienza delle Costruzioni I for the bachelor's degree in Civil Engineering, Sapienza University of Rome

2014/2015	2014/2015	Scienza delle Costruzioni e Meccanica Applicata (Structure and Materials and Applied Mechanics)	3	First module (Scienza delle Costruzioni – 3CFU over 6 CFU) for the master’s degree in Electrical Engineering (Ingegneria Elettrotecnica), Sapienza University of Rome
2013/2014	2013/2014	Fisica Tecnica e Scienza delle Costruzioni (Technical Physics and Structures and Materials)	4	Second module (Scienza delle Costruzioni – 4 CFU over 12 CFU) for the master’s degree in Electrical Engineering (Ingegneria Elettrotecnica), Sapienza University of Rome
2012/2013	2012/2013	Experimental Solid Mechanics	6h	Course for the Doctoral Training Centre in Advanced Composites, University of Bristol
2012/2013	2012/2013	Structures and Materials 2C	12	Degree in Civil Engineering, University of Bristol
2007/2008	2010/2011	Scienza delle Costruzioni (Structures and Materials)	-	Teaching support (Tutor) 150 h per academic year for the bachelor’s degree in Civil Engineering, Sapienza University of Rome

IVc – Supervision of graduate/undergraduate students

Year	Student	Degree	Title	Role
2015-2018	C. Da Silva	PhD in Structural Engineering, Sapienza University of Rome	Analytical and numerical models for simulating the mechanical behaviour of discrete and continuous reinforcements in cracked cement composites	Primary supervisor
2012-2016	D. C. Stanier	PhD in Advanced Composites, Department of Aerospace Engineering, University of Bristol	Multifunctional Elastomers with Tailored Anisotropic Response	Primary supervisor
2012-2016	E. Eckstein	PhD in Advanced Composites, Department of Aerospace Engineering, University of Bristol	Thermally-Driven Morphing with High Temperature Composites	Secondary supervisor with Paul M. Weaver
2012-2016	S. White	PhD in Advanced Composites, Department of Aerospace Engineering, University of Bristol	Post-buckling of variable-stiffness shell structures	Secondary supervisor with Paul M. Weaver
2018	R. Orlandi	MEng in Civil Engineering, Sapienza University of Rome	Identificazione di un modello strutturale di una pala eolica	Co-supervisor with Achille Pao-lone
2017	A. Tardio	BEng in Civil and Industrial Engineering, Sapienza University of Rome	Un modello di trave magno-elastica non-lineare. Teoria ed applicazioni	Primary supervisor

2017	D. Broccolletti	BEng in Mechanical Engineering, Università di RomaTre	Proprietà meccaniche degli elastomeri magnetoreologici	Co-supervisor with Giuseppe Tomassetti
2017	A. Cazzulani	BEng in Aerospace Engineering, Sapienza University of Rome	Production of Magnetorheological Soft Anisotropic Composites with Micro and Nano Reinforcements	Co-supervisor with Paola Nardinocchi and Susanna Laurenzi
2016	A. Ciummo	MEng in Civil Engineering, Sapienza University of Rome	Modellazione di un apparato sperimentale per prove di creep su elementi strutturali in composito	Co-supervisor with Achille Paolone
2016	G. Marino	MEng in Civil Engineering, Sapienza University of Rome	Prototipazione Rapida di strutture cellulari con applicazioni allo smorzamento delle vibrazioni	Co-supervisor with Achille Paolone
2015	L. Feliciani	MEng in Civil Engineering, Sapienza University of Rome	Long term behaviour of a post-tensioned modular GFRP footbridge	Co-supervisor with Achille Paone and Alberto Pirrera
2015	M. Zanini Astaldi	BEng in Civil Engineering, Sapienza University of Rome	Verifiche di fattibilità su una passerella pedonale in materiale composito	Co-supervisor with Achille Paolone
2015	A. Paciacconi	MEng in Civil Engineering, Sapienza University of Rome	Sperimentazione dinamica e identificazione del danno su strutture in scala ridotta	Co-supervisor with Achille Paolone and Egidio Lofrano

Part V - Memberships, Awards, Achievements and Patents

Va - Memberships of scientific/technical societies

Start	End	Affiliation	Note
2018	-	ISIMM	Member of the The International Society for the Interaction of Mechanics and Mathematics (Elected member)
2016	2019	AIPCR	Membro del Comitato Tecnico Nazionale AIPCR (Associazione internazionale permanente dei congressi della strada) ponti D3 "Trasformazione energetica, Vibrazione, Rumore, Vento" quadriennio 2016-2019. (Carica elettiva)

2014	2016	ASME	Member of The American Society of Mechanical Engineers ASME
2014	-	GMA	Member of Gruppo Materiali AIMETA
2010	-	AIMETA	Member of the Associazione Italiana di MEccanica Teorica e Applicata
2010	-	Euromech	Member of the European Mechanics Society EuroMech
2007	-	GNFM	Member of Gruppo Nazionale per la Fisica Matematica dell'Istituto Nazionale di Alta Matematica (Italian national group of mathematical physics)

Vb - Awards

Year	Title
2014	VQR Valutazione: 1/1 Prodotto Eccellente (Paper n. 9 see the list below).
2012	Sapienza Doctoral Award for best PhD dissertation in engineering. Phd thesis currently published by Sapienza Editrice (http://www.editricesapienza.it/node/7270).
2006	Ceradini PhD fellowship at the Department of Structural and Geotechnical Engineering, Sapienza University of Rome
2006	PhD scholarship in Theoretical and Applied Mechanics at Sapienza University of Rome (scholarship declined)
2006	PhD scholarship in Applied Mathematics at Sapienza University of Rome (scholarship declined)
2005	International Internship student award at Tohoku University in the framework of the 21st Century COE Program under the supervision of Profs. J. Qiu and T. Takagi (http://www.ifs.tohoku.ac.jp/21coe/intern_E/2005_Ciambella.html)

Part VI - Funding Information

VIa – Research project as Principal Investigator (PI)

Year	Role	Funding agency	Project Title
2019	PI	Sapienza (Progetto Medio di Ateneo)	Modelli e problemi per elementi fibro-rinforzati ottenuti con stampa 3D (Importo richiesto 15000€, ottenuto 15000€).
2019	PI	Sapienza Visiting Professor	Studio della propagazione delle instabilità meccaniche nei processi di stampa 3D di materiali polimerici fibro-rinforzati (Professore Invitato Giuseppe Zurlo, University of Galway, Irlanda)
2018	PI	MIUR	Fondi FFABR (Fondi per il Finanziamento per le Attività Base di Ricerca)
2018	PI	Sapienza funding for workshop organisation	Title of the workshop “Recent Advances in Mechanics and Mathematics (2nd edition)” to be held in November 2019

2017	PI	GNFM funding for workshop organisation	Title of the workshop “Recent Advances in Mechanics and Mathematics (1st edition)”
2016-2017	PI	GNFM Young researchers funding	“Elasticità nonlineare di schiume auxetiche anisotrope” with C. Da Silva
2014-2015	PI	GNFM Young researchers funding	“Modellazione costitutiva e risposta meccanica di compositi iper-duttili mediante un approccio variazionale” with R. Alessi
2013-2014	PI	DTC Impact Acceleration Account University of Bristol	Project aimed at improving the interaction between the ACCIS DTC cohorts and industries by exploiting new forms of collaboration with P.M. Weaver.
2013-2014	PI	Pump priming funding University of Bristol	"Micro/Nano VAT Rubber Panels" with A.J. Patil, S.S. Rahatekar, D.C. Stanier
2012-2013	PI	Materials @ Bristol Sandpit, University of Bristol	"Mathematical Modelling and Testing of the Growth Mechanism of Endothelial cells Due to Mechanical Induced Stimuli" with I. Chenchiah, A. Conn and S.S. Rahatekar
2011-2012	PI	GNFM Young researchers funding	"Modellazione della risposta dinamica in regime di deformazioni finite di elastomeri vulcanizzati" with G. Sciarra and S. Vidoli

Via – Research project as Co-Investigator (I)

Year	Role	Funding agency	Project Title
2018-2021	I	EU Research Fund for Coal and Steel 2017 programme	Desdemona – DEtection of Steel Defects by Enhanced MONitoring and Automated procedure for self-inspection and maintenance, project coordinator Prof. Vincenzo Gattulli
2017	I	Getty foundation - Keeping it modern architectural conservation grants 2017	Lo stadio flaminio di Pier Luigi e Antonio Nervi a Roma: un piano di conservazione interdisciplinare, project coordinator Prof. Francesco Romeo
2017-2020	I	Sapienza University (Progetto di Ateneo)	“Mechanics of soft-fibred active materials”, project coordinator Prof. Paola Nardinocchi
2016-2019	I	Sapienza University (Progetto di Ateneo)	"The role of size effects in heterogeneous porous media", project coordinator Prof. Giulio Sciarra
2015-2018	I	Sapienza Awards	"Identification techniques for the assessment of complex structures and materials", project coordinator Prof. Danilo Capecchi
2014-2017	I	Sapienza Awards	"Damage Detection Techniques and Innovative Retrofitting of Monumental Structures", project coordinator Prof. Achille Paolone
2014	I	Sapienza Equipment Awards	"Caratterizzazione statica e dinamica di materiali e strutture", project coordinator Prof. Stefano Vidoli
2014	I	Engineering and Physical Sciences Research Council (EPSRC)	Renewal Bid for the Center of Doctoral Training in Advanced Composites, Coordinator Prof. Paul Weaver.

2008-2010	I	PRIN	“Meccanica dei materiali microstrutturati: identificazione multiscala, ottimizzazione e controllo attivo”, national coordinator Prof. Achille Paolone
2010	I	Sapienza FARI	“Dissipazione e perdite isteretiche nei materiali polimerici con memoria”, coordinator Prof. Stefano Vidoli
2010	I	Sapienza University (Progetto di Università)	“Instabilità e multistabilità per strutture e materiali”, coordinator Prof. Stefano Vidoli
2009	I	Sapienza University (Progetto di Università)	“Metodi computazionali per l'analisi della risposta ciclica di materiali e strutture”, coordinator Prof. Achille Paolone
2009	I	Sapienza (Ricerca di Ateneo Federato di Scienza e della Tecnologia 2009)	“Modelli continui per materiali eterogenei: applicazioni allo studio di mezzi porosi e fratturati”, project coordinator Prof. Stefano Vidoli
2008	I	Sapienza (Progetto di Università)	“Modellazione non lineare di materiali e strutture”, project coordinator Prof. Achille Paolone
2007	I	Sapienza (Progetto di Università)	“Modellazione della risposta di materiali e strutture in presenza di non linearità costitutive e geometriche”, project coordinator Prof. Achille Paolone

Part VIII – Research Activities

VIIIa – Main research topics

Structural health monitoring and Damage Identification

Main Collaborations: F. Vestroni, A. Pau (Sapienza)

Keywords	Brief Description
Damage Detection	The problem of damage identification through modal curvature variations has been studied extensively (Papers [1], [6], [8], [13]). In this framework, a perturbative solution of the Euler-Bernoulli beam equation has been exploited to obtain a closed form expression of the modal curvature variations caused by small changes in the elastic stiffness [8]. Such a solution has led to an effective way to filter out from the modal curvature variations spurious peaks not directly related to the presence of damage, which is one of the main issues of the damage detection methodologies based on modal curvatures. This procedure was applied to beam [8], arches [6] and recently extended to continuous beams [1].
Dynamical systems	
Perturbative solution	

Nonlinear viscoelasticity of filled rubber and composite materials

Main collaborations: A. Paolone, S. Vidoli (Sapienza), D.C. Stanier (Bristol), S.S. Rahatekar (Cranfield)

Keywords	Brief Description
Viscoelasticity	Starting from the work carried out during my PhD in collaboration with the Bridgestone Technical Center Europe in Rome, we have investigated the large strain behaviour of soft elastomers under dynamic loading conditions (Papers [9], [10], [12], [14], [15]). This has led us to correct some shortcomings that were present in the constitutive equation used in the ABAQUS FEA software (ABAQUS 2008) [15]. In order to properly estimate the dynamic moduli of the materials, an identification strategy based on the combined use of creep, relaxation and cyclic experiments was proposed in [14]. The assessment of the dynamic moduli (storage and loss moduli) was carried out by using fractional kernels [10], which must satisfy some decaying properties [12] in order to properly fit the experimental data. The procedure proposed in [14] was applied in [9] to evaluate the viscoelastic properties of graphene reinforced natural rubber.
Rheological models	
Fractional kernels	

Large strain elasticity of auxetic foams

Main collaborations : G. Saccomandi (Perugia), F. Scarpa (Bristol)

Keywords	Brief Description
Nonlinear Elasticity	For the first time, a continuum model to describe solid materials with negative Poisson's ratio at large strain was proposed in [11]. The model is formulated in the framework of large strain hyperelasticity and is based on few physical parameters that makes its identification robust and easy to perform. Experiments were carried out in [7], where an enhanced version of the model was also proposed to catch the behaviour of materials with a vanishing Poisson's ratio.
Negative Poisson's ratio	
Cellular Solids	

Mechanics of fibre-reinforced composites

Main collaborations : D.C. Stanier (Bristol), S.S. Rahatekar (Cranfield), G. Tomassetti (Roma3), A. Favata (Roma1), A. Paolone (Roma1)

Keywords	Brief Description
Multifunctional materials	The behaviour of reinforced composites has been extensively studied both experimentally and theoretically (Papers [2-5]). In the framework of linear elasticity, a one-dimensional model able to describe the behaviour damage and fracture of hybrid composite (composite reinforced with glass and carbon fibres) was proposed in [4]. In [3] the use of magnetic field to steer the orientation of the reinforcing fiber within a PDMS matrix was investigated. Accidentally once the composite was cured, the application of a magnetic field allows the actuation of a thin strip of material, which was described and modelled in [5]. An enhanced model formulated in the framework of large strain magneto-elasticity was recently proposed [2].
Damage and Plasticity	
Magneto-elasticity	

VIIIb- Other research activities

Peer-reviewer	Reviewer for the following journals: Biomechanics and Modeling in Mechanobiology, Composites Science and Technology, International Journal of Nonlinear Mechanics, Journal of Composite Materials, Nonlinear Dynamics, Composites Part B: Engineering, Journal of the Mechanical Behavior of Biomedical Materials, Mathematical Problems in Engineering, Meccanica, Mechanics Research Communications, Mathematics and Mechanics of Solids, Mechanics of Materials, Proceedings of the Royal Society Part A, SIAM Journal on Applied Mathematics
Examiner	Examiner for the following PhD/MEng Thesis: - Huan Wang, “Viscous and second gradient regularization techniques for geomaterials”, PhD Thesis, Ecole Centrale de Nantes, 2019. - Rachel Kurchin, “Pressurised Viscoelastic Shells”, Master by Research, University of Manchester, 2014. - Matthew O’Donnel, “Exploiting Non-Symmetry in Composite Laminates. Application to Stringer Terminations”, PhD Thesis, University of Bristol, 2014. - Shuai He, “Inverse solution methods for In-Situ Characterisation of Damage in Composite Structures”, PhD Thesis, RMIT University of Melbourne, 2014. - Ajit Panesar, “Multistable Morphing Composites Using Variable Angle Tows (VAT)”, PhD Thesis, University of Bristol, 2012.

Part IX – Summary of Scientific outcome

Product type	Number	Source
Journal papers	19	Scopus
Conference papers	9	Scopus
Books	1	https://books.google.it/books?isbn=8895814789

Hirsch (H) index	9
Total Citations	246
Total Citations (Journal papers only)	232
Total Impact factor*	49.79
Average Impact factor*	2.62 = 49.79/19
Average Citations	8.78 = 246/28
Average Citations per Journal paper	12.21 = 232/19

Values retrieved from Scopus on December 14th 2019

*The total and average impact factors (IF) have been computed extracting the IF of each article at the year of publication except for those published after 2017 for which the latest available value (2017) was used.

Part X– Research outcomes

Xa – Journal Paper* (Indexed on Scopus)

* For the list of papers submitted to the scientific evaluation see the list attached to the application

1. Ciambella, J. & Tomassetti, G. A form-finding strategy for magneto-elastic actuators. *Int. J. Non. Linear. Mech.* **119**, (2020).
2. Ciambella, J. & Nardinocchi, P. Magneto-induced remodeling of fibre-reinforced elastomers. *Int. J. Non. Linear. Mech.* **117**, (2019).
3. Ciambella, J. & Nardinocchi, P. Torque-induced reorientation in active fibre-reinforced materials. *Soft Matter* **15**, 2081–2091 (2019).
4. Nonato Da Silva, C. A., Ciambella, J., Barros, J. A. O. & Costa, I. G. Analytical bond model for general type of reinforcements of finite embedment length in cracked cement based materials. *Int. J. of Solids & Structures* **167**, 36–47 (2019).
5. Ciambella, J., Pau, A. & Vestroni, F. Modal curvature-based damage localization in weakly damaged continuous beams. *Mech. Syst. Signal Process.* **121**, 171–182 (2019).
6. Ciambella, J., Favata, A. & Tomassetti, G. A nonlinear theory for fibre-reinforced magneto-elastic rods. *Proc. R. Soc. A Math. Phys. Eng. Sci.* **474**, 20170703 (2018).
7. Ciambella, J., Stanier, D. C. & Rahatekar, S. S. Magnetic alignment of short carbon fibres in curing composites. *Compos. Part B Eng.* **109**, 129–137 (2017).
8. Alessi, R., Ciambella, J. & Paolone, A. Damage evolution and debonding in hybrid laminates with a cohesive interfacial law. *Meccanica* **52**, 1079–1091 (2017).
9. Stanier, D. C., Ciambella, J. & Rahatekar, S. S. Fabrication and characterisation of short fibre reinforced elastomer composites for bending and twisting magnetic actuation. *Compos. Part A Appl. Sci. Manuf.* **91**, 168–176 (2016).
10. Capecchi, D., Ciambella, J., Pau, A. & Vestroni, F. Damage identification in a parabolic arch by means of natural frequencies, modal shapes and curvatures. *Meccanica* **51**, 2847–2859 (2016).
11. Ciambella, J., Bezazi, A., Saccomandi, G. & Scarpa, F. Nonlinear elasticity of auxetic open cell foams modeled as continuum solids. *J. Appl. Phys.* **117**, 184902 (2015).
12. Ciambella, J. & Vestroni, F. The use of modal curvatures for damage localization in beam-type structures. *J. Sound Vib.* **340**, 126–137 (2015).
13. Stanier, D. C., Patil, A. J., Sriwong, C., Rahatekar, S. S. & Ciambella, J. The reinforcement effect of exfoliated graphene oxide nanoplatelets on the mechanical and viscoelastic properties of natural rubber. *Compos. Sci. Technol.* **95**, 59–66 (2014).

14. Ciambella, J., Paolone, A. & Vidoli, S. Identification of the viscoelastic properties of soft materials at low frequency: Performance, ill-conditioning and extrapolation capabilities of fractional and exponential models. *J. Mech. Behav. Biomed. Mater.* **37**, 286–298 (2014).
15. Ciambella, J. & Saccomandi, G. A continuum hyperelastic model for auxetic materials. *Proc. R. Soc. A* **470**, 20130691–20130691 (2014).
16. Ciambella, J., Paolone, A. & Vidoli, S. Memory decay rates of viscoelastic solids: not too slow, but not too fast either. *Rheol. Acta* **80**, 661–674 (2011).
17. Ciambella, J., Vestroni, F. & Vidoli, S. Damage Observability, Localization and Assessment based on Eigenfrequencies and Eigenvectors Curvatures. *Smart Struct. Syst.* **8**, 191–204 (2011).
18. Ciambella, J., Paolone, A. & Vidoli, S. A comparison of nonlinear integral-based viscoelastic models through compression tests on filled rubber. *Mech. Mater.* **42**, 932–944 (2010).
19. Ciambella, J., Destrade, M. & Ogden, R. W. On the ABAQUS FEA model of finite viscoelasticity. *Rubber Chem. Technol.* **82**, 184–193 (2009).

Xb – Conference Proceedings (Indexed on Scopus)

20. Ciambella, J., Pau, A. & Vestroni, F. Effective filtering of modal curvatures for damage identification in beams. in *Procedia Engineering* **199**, 1876–1881 (2017).
21. Brunetti, M., Ciambella, J., Evangelista, L., Lofrano, E., Paolone, A. & Vittozzi, A. Experimental results in damping evaluation of a high-speed railway bridge. in *Procedia Engineering* **199**, 3015–3020 (2017).
22. Stanier, D.C., Rahatekar, S. & Ciambella, J. Magnetic response of aligned nickel coated carbon fibres in a pdms matrix. *Constitutive Models for Rubber IX - Proceedings of the 9th European Conference on Constitutive Models for Rubbers, ECCMR*, 181-188 (2015).
23. Stanier, D.C. & Ciambella, J. Multiscale modelling nano-platelet reinforced composites at large strain. *16th European Conference on Composite Materials, ECCM 2014*, (2014).
24. Ciambella, J. & Stanier, D.C. Orientation effects in short fibre-reinforced elastomers. *ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE)*, **9** (2014).
25. Stanier, D.C., Ciambella, J., Rahatekar, S., Patil, A.J. & Mann, S. The reinforcement effects of graphene oxide nanoplatelets on the mechanical and viscoelastic properties of natural rubber. *Constitutive Models for Rubber VIII - Proceedings of the 8th European Conference on Constitutive Models for Rubbers, ECCMR 2013*, 553-558, (2013).
26. Ciambella, J., Paolone, A. & Vidoli, S. Characterization and identification of the memory decay rates of carbon black-filled rubber. *Constitutive Models for Rubber VII - Proceedings of the 7th European Conference on Constitutive Models for Rubber, ECCMR 2011*, 93-98 (2011).
27. Ciambella, J., Vestroni, F. & Vidoli, S. A combined eigenfrequencies-eigenvectors curvatures technique for damage detection. *Proceedings of the 5th European Workshop - Structural Health Monitoring*, 1051-1056 (2010).
28. Vestroni, F., Ciambella, J., Dell'Isola, F. & Vidoli, S. Damage detection with auxiliary subsystem. *CIMTEC 2008 - Proceedings of the 3rd International Conference on Smart Materials, Structures and Systems - Embodying Intelligence in Structures and Integrated Systems*, 56, 401-413 (2008).

Xa – Books

29. Ciambella, J. An introduction to nonlinear Viscoelasticity of filled Rubber. A continuum mechanics approach. *Sapienza Università Editrice*, ISBN 978-88-95814-78-0 (2012).

Part XI – Invited Seminars, Organization of Conferences, Participation to National and International Conferences

XIa – Invited seminars/presentations

Year	Event	Title
2019	Seminar at the Mathematical Aspects of Nonlinear Wave Propagation in Solid Mechanics, MFO, Oberwolfach Research Institute for Mathematics, to be held on March 2 nd – 9 th , 2019	Large-strain viscoelastic response of fibre reinforced solids
2018	Invited presentation at the European Mechanics of Materials Conference, Nantes, March 26 – 28th 2018	Finite deformation of fibre-reinforced magneto-elastic rods
2017	Seminar at the Noise in Physical Systems Lab – University of Perugia, November 15 th 2017	Damage Detection in Vibrating Structural Systems
2017	Seminar at the Leibniz Institute for Polymer Research, Dresden, October 24 th 2017	Magneto-elasticity of thin-actuators
2017	Seminar at the IDdAM Meeting, Mathematical Physics of Living Systems, Cortona August 27 th –September 2 nd 2017	Magneto-elastic instabilities in soft actuators
2017	Invited presentation at the Assemblea Scientifica GNFM, Montecatini, May 4th-6th 2017	Elasticità nonlineare di schiume auxetiche
2014	Seminar at the Department of Material Science, University of Cambridge, July 31th, 2014	Large strain elastic response of auxetic foams
2013	Invited presentation at the Advances in Applied Mathematics and Mechanics Workshop in Manchester, UK, June 5 th -7 th 2013	Large strain viscoelastic effects in short fibre composites

XIb – Organization of conferences and other events

Year	Event	Location and date	Conference website
2019	ANCRiSST2019 - The 14th International Workshop on Advanced Smart Materials and Smart Structures Technology	Rome, July 19-20, 2019	http://www.desdemonaproject.eu/an-crisst2019/
2019	AIMETA – The XXIV conference of the Italian Association of Theoretical and Applied Mechanics	Rome, September 15-19, 2019	http://www.aimeta2019.it
2019	RAM3 – Recent Advances in Mechanics and Mathematics of Materials. A young researchers' meeting. 2 nd Edition	Rome, November 18-20, 2019	https://sites.google.com/a/uni-roma1.it/ram3/home?authuser=0

2017	Eurodyn 2017 – X International Conference on Structural Dynamics	Rome, September 10-13, 2017	http://www.eurodyn2017.it
2017	RAM3 – Recent Advances in Mechanics and Mathematics of Materials. A young researchers' meeting. 1 st Edition	Rome, November 22-24, 2017	https://sites.google.com/a/uni-roma1.it/ram3/home?authuser=0
2016	MMMS – Mechanics and Mathematics of (soft) Materials and Structures	Spring 2016 - Spring 2017	A series of seminars organised with P. Nardinocchi at the Department of Structural and Geotechnical Engineering with national and international lecturers
2011	ENOC 2011 – 7 th European Nonlinear Dynamics Conference	Rome, July 24-29, 2011	http://enoc2011.sched.com/

XIc – Participation to National/International Conferences

1. Ciambella, J. Passive and Active Remodelling of Fibre-reinforced Hyperelastic Solids. GMA Meeting, Ferrara 13-14 September 2018.
2. Ciambella, J., Favata, A., Tomassetti, G. Finite Deformation of Fibre-reinforced Magneto-elastic rods. EMMC16, Nantes, 26-28 March 2018.
3. Ciambella, J., Favata, A., Tomassetti, G. Magneto-elastic Instabilities in Soft-actuators. Workshop on the Multiphysics Behavior of Rubber, Marseille, France, Nov 30 - Dec 1, 2017.
4. Ciambella, J., Favata, A., Tomassetti, G. A Nonlinear Theory for Magneto-Rheological Elastomeric Beams. Innovative Mathematical Models and Methods for Industrial Applications, Rome, May 15 – 19, 2017.
5. Ciambella, J., Pau, A., Vestroni, F. Effective filtering of modal curvatures for damage identification in beams. Eurodyn X, Rome, September 10-13, 2017.
6. Brunetti, M., Ciambella, J., Evangelista, L., Lofrano, E., Paolone, A. Experimental evaluation of damping factor in a statically determined railway bridge. Eurodyn X, Rome, September 10-13, 2017.
7. Ciambella, J. Magnetic alignment of carbon fibers in curing composites: toward a new class of multifunctional materials. MIMS - Multiscale Innovative Materials and Structures, Cetara, October 29-31, 2016.
8. Ciambella, J. Manipulation of Short Fibres in Elastomer Composites with Magnetic Fields. IRD – Innovation in Rubber Design, London, December 7-8, 2016.
9. Ciambella, J., Rahatekar, S.S., Stanier, D. C. Magnetically aligned carbon fibres in elastomer composites with bending and twisting instabilities. GMA Meeting, Lucca, June 28-30, 2016.
10. Ciambella, J., Bezazi, A., Saccomandi, G., Scapra, F. An Ogden-type Strain Energy for Open Cells Auxetic Foams, ESMC2015 – 9th European Solid Mechanics Conference, Madrid, July 6-10, 2015.
11. Ciambella, J., Lattanzi, P., Ottaviani, A., Paolone, A., Romeo, F. Undergroud FWD measurements for the assessment of soil transfer function. DISS_15 – Dynamic Interaction of Soil and Structure, Rome, November 12-13, 2015.
12. Ciambella, J., Bezazi, A., Saccomandi, G., Scarpa, F. Large strain elasticity of open cells auxetic foams. AIMETA2015, Genova, September 14-17, 2015.
13. Alessi, R., Ciambella, J., Paolone, A. Debonding and fracture of hybrid laminates with cohesive interfacial law. AIMETA2015, Genova, September 14-17, 2015.

14. Ciambella, J., Mendeley: A researcher perspective. 7th UNICA Scholarly Communication Seminar, Rome, November 28th, 2014.
15. Ciambella, J., Millington, S., Stanier, D.C. A comparative study of the effects of graphene oxide, nanoclays and carbon black on the properties of natural and styrene-butadiene rubber. RubberCon2014, Manchester, May 14-15, 2014.
16. Ciambella, J., Stanier, D.C. Orientation Effects in Platelets-Reinforced Elastomers. ASME 2014 International Mechanical Engineering Congress & Exposition, Montreal, November 14-20, 2014.
17. Ciambella, J., Paolone, A., Stanier, D.C., Vidoli, S. Microstructure Evolution in Short Fibre-Reinforced Elastomers. AIMETA2013, Torino, September 19, 2013.
18. Ciambella, J., Patil, A.J., Rahatekar, S.S., Stanier, D.C., Mann, S. Mechanical properties of natural rubber reinforced with graphene oxide nanoplatelets. AIMETA2013, Torino, September 19, 2013.
19. Ciambella, J., Vestroni, F. Damage Detection in Beam: The use of Modal Curvature. AIMETA2013, Torino, September 19, 2013.
20. Ciambella, J., Lattanzi, P., Ottaviani, C., Paolone, A., Determination of Soil Transfer Function Through FWD Measurements. 15th International Conference on Experimental Mechanics. Porto, July 22-27, 2012.
21. Ciambella, J. Viscoelastic Properties of Nanocomposites. 5th Annual Conference ACCIS, Bristol, September 7th, 2012.
22. Ciambella, J., Paolone, A., Vidoli, S. On the proper memory decay rates for the accurate modelling of storage and loss moduli. ENOC2011, Rome, July 24-29, 2011.
23. Ciambella, J., Paolone, A., Vidoli, S. Characterization and identification of the memory decay rates of carbon black-filled rubber. 7th ECCMR, Dublin, September 20-23, 2011.
24. Ciambella, J., Paolone, A., Vidoli, S. Dynamic Behavior of Viscoelastic Solids at Low Frequency: Fractional vs Exponential Relaxation. AIMETA2011, Bologna, September 12-15, 2011.
25. Ciambella, J., Paolone, A., Vidoli, S. Viscoelastic behavior of soft materials at low frequency: theoretical consideration and constitutive modelling. AERC2011, Sudzal, May 11th, 2011.
26. Ciambella, J., Paolone, A., Vidoli, S. Identification of nonlinear viscoelastic models through compression tests on filled rubber. GMA Meeting, Palermo, February 25-26, 2010.
27. Ciambella, J., Paolone, A., Vidoli, S. A comparison of nonlinear viscoelastic models for filled-rubber: analytical formulation, experimental modeling and identification. AIMETA2009, Ancona, September 14-17, 2009.

Part XII – Other activities (Professional activities)

Year	Description
2017	Affidamento di incarico per la "Caratterizzazione dinamica del Viadotto CANNAVINO". Committente: ANAS S.p.A. Tema: Caratterizzazione dinamica tramite misure sperimentali e modellazione FEM del Viadotto Cannavino situato sulla superstrada Ss 107.
2015	Affidamento di incarico per la "Caratterizzazione e verifica strutturale del Viadotto ITALIA". Committente: ANAS S.p.A. Tema: Caratterizzazione dinamica tramite misure sperimentali delle campate di accesso al Viadotto Italia situato sulla autostrada A3 Salerno-Reggio Calabria e loro modellazione FEM.
2011	Affidamento di Incarico occasionale per: "Analisi ed elaborazione delle registrazioni accelerometriche rilevate durante lo scavo della canna pari della linea B1 della metropolitana di Roma sul complesso demaniale del Comando Generale della Guardia di Finanza, caserme Piave e

Sante Laria" presso il Dipartimento di Ingegneria Strutturale e Geotecnica, Sapienza University of Rome

Rome, December 12th 2019

Jacopo CIAMBELLA