Herve Di Benedetto

List of Publications by Year
in descending order

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136 papers	4,234 citations	101543 36 h-index	128289 60 g-index
140 all docs	140 docs citations	140 times ranked	1315 citing authors

#	Article	IF	Citations
1	Linear viscoelastic behaviour of bituminous materials: From binders to mixes. Road Materials and Pavement Design, 2004, 5, 163-202.	4.0	248
2	Nonlinearity, Heating, Fatigue and Thixotropy during Cyclic Loading of Asphalt Mixtures. Road Materials and Pavement Design, 2011, 12, 129-158.	4.0	191
3	General â€œ2S2P1Dâ€•Model and Relation Between the Linear Viscoelastic Behaviours of Bituminous Binders and Mixes. Road Materials and Pavement Design, 2003, 4, 185-224.	4.0	185
4	Time-Dependent Shear Deformation Characteristics of Geomaterials and their Simulation. Soils and Foundations, 2002, 42, 103-129.	3.1	180
5	Three-Dimensional Linear Behavior of Bituminous Materials: Experiments and Modeling. International Journal of Geomechanics, 2007, 7, 149-157.	2.7	161
6	Time-Dependent Shear Deformation Characteristics of Sand and their Constitutive Modelling. Soils and Foundations, 2002, 42, 1-22.	3.1	151
7	General 2S2P1D Model and Relation Between the Linear Viscoelastic Behaviours of Bituminous Binders and Mixes. Road Materials and Pavement Design, 2003, 4, 185-224.	4.0	151
8	Modelling the rheological properties of bituminous binders using the 2S2P1D Model. Construction and Building Materials, 2013, 38, 395-406.	7.2	110
9	Various Viscosity Types of Geomaterials in Shear and Their Mathematical Expression. Soils and Foundations, 2008, 48, 41-60.	3.1	93
10	Assessment of Existing Micro-mechanical Models for Asphalt Mastics Considering Viscoelastic Effects. Road Materials and Pavement Design, 2008, 9, 31-57.	4.0	81
11	Behaviour of asphalt mixtures containing reclaimed asphalt pavement and asphalt shingle. Road Materials and Pavement Design, 2014, 15, 330-347.	4.0	77
12	Time Temperature Superposition Principle Validation for Bituminous Mixes in the Linear and Nonlinear Domains. Journal of Materials in Civil Engineering, 2013, 25, 1181-1188.	2.9	72
13	Time-temperature superposition principle for bituminous mixtures. European Journal of Environmental and Civil Engineering, 2009, 13, 1095-1107.	2.1	71
14	From the Behavior of Constituent Materials to the Calculation and Design of Orthotropic Bridge Structures. Road Materials and Pavement Design, 2010, 11, 111-144.	4.0	71
15	Determination of thermal properties of asphalt mixtures as another output from cyclic tension-compression test. Road Materials and Pavement Design, 2012, 13, 85-103.	4.0	68
16	Influence of Asphalt Mixture Stiffness on Fatigue Failure. Journal of Materials in Civil Engineering, 2004, 16, 516-525.	2.9	64
17	Linear Viscoelastic Properties of Bituminous Binders and Mixtures at Low and Intermediate Temperatures. Road Materials and Pavement Design, 2003, 4, 77-107.	4.0	63
18	Determination of bituminous mixtures linear properties using ultrasonic wave propagation. Construction and Building Materials, 2012, 36, 638-647.	7.2	63

#	Article	IF	Citations
19	Linear Viscoelastic Properties of Bituminous Materials Including New Products Made with Ultrafine Particles. Road Materials and Pavement Design, 2009, 10, 7-38.	4.0	62
20	Complex modulus and complex Poissonâ€™s ratio from cyclic and dynamic modal testing of asphalt concrete. Construction and Building Materials, 2015, 88, 20-31.	7.2	59
21	Effect of Binder Characteristics on Fatigue of Asphalt Pavement Using an Intrinsic Damage Approach. Road Materials and Pavement Design, 2005, 6, 147-174.	4.0	58
22	Viscous Energy Dissipation in Asphalt Pavement Structures and Implication for Vehicle Fuel Consumption. Journal of Materials in Civil Engineering, 2012, 24, 568-576.	2.9	58
23	Stiffness of Bituminous Mixtures Using Ultrasonic Wave Propagation. Road Materials and Pavement Design, 2009, 10, 789-814.	4.0	57
24	New method to obtain viscoelastic properties of bitumen blends from pure and reclaimed asphalt pavement binder constituents. Road Materials and Pavement Design, 2014, 15, 312-329.	4.0	57
25	Analysis of Fatigue Test for Bituminous Mixtures. Journal of Materials in Civil Engineering, 2013, 25, 701-710.	2.9	55
26	Rutting of bituminous mixtures: wheel tracking tests campaign analysis. Materials and Structures/Materiaux Et Constructions, 2011, 44, 969-986.	3.1	52
27	Modeling of viscous bituminous wearing course materials on orthotropic steel deck. Materials and Structures/Materiaux Et Constructions, 2012, 45, 1115-1125.	3.1	52
28	Small Strain Behavior of Geomaterials: Modelling of Strain Rate Effects. Soils and Foundations, 1997, 37, 127-138.	3.1	51
29	Effect of colloidal structure of bituminous binder blends on linear viscoelastic behaviour of mixtures containing Reclaimed Asphalt Pavement. Materials and Design, 2016, 111, 126-139.	7.0	51
30	3Dim experimental investigation of linear viscoelastic properties of bituminous mixtures. Materials and Structures/Materiaux Et Constructions, 2016, 49, 4813-4829.	3.1	48
31	Linear and nonlinear viscoelastic behaviour of bituminous mixtures. Materials and Structures/Materiaux Et Constructions, 2015, 48, 2339-2351.	3.1	47
32	Validation of the timeâ€“temperature superposition principle for crack propagation in bituminous mixtures. Materials and Structures/Materiaux Et Constructions, 2013, 46, 1075-1087.	3.1	44
33	Comparing Linear Viscoelastic Properties of Asphalt Concrete Measured by Laboratory Seismic and Tensionâ€“Compression Tests. Journal of Nondestructive Evaluation, 2014, 33, 571-582.	2.4	43
34	Three-dimensional Thermo-viscoplastic Behaviour of Bituminous Materials: The DBN Model. Road Materials and Pavement Design, 2007, 8, 285-315.	4.0	39
35	Approximation of Linear Viscoelastic Model in the 3 Dimensional Case with Mechanical Analogues of Finite Size. Road Materials and Pavement Design, 2011, 12, 897-930.	4.0	37
36	Three-dimensional Thermo-viscoplastic Behaviour of Bituminous Materials. The DBN Model. Road Materials and Pavement Design, 2007, 8, 285-315.	4.0	37

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37	Thermo-viscoplastic law for bituminous mixes. Road Materials and Pavement Design, 2001, 2, 71-95.	4.0	36
38	Thermomechanical characterization of asphalt mixtures modified with high contents of asphalt shingle modifier (ASMÂ®) and reclaimed asphalt pavement (RAP). Materials and Structures/Materiaux Et Constructions, 2013, 46, 1747-1763.	3.1	33
39	Use of a bituminous mixture layer in high-speed line trackbeds. Construction and Building Materials, 2016, 125, 398-407.	7.2	33
40	Complex modulus and fatigue performances of bituminous mixtures with reclaimed asphalt pavement and a recycling agent of vegetable origin. Road Materials and Pavement Design, 2017, 18, 315-330.	4.0	31
41	Modelling and Simulation of Rate-Dependent Stress-Strain Behaviour of Granular Materials in Shear. Soils and Foundations, 2008, 48, 175-194.	3.1	30
42	Numerical simulation of the five-point bending test designed to study bituminous wearing courses on orthotropic steel bridge. Materials and Structures/Materiaux Et Constructions, 2010, 43, 319-330.	3.1	30
43	Reversible phenomena and fatigue damage during cyclic loading and rest periods on bitumen. International Journal of Fatigue, 2019, 124, 303-314.	5.7	30
44	Effect of Ultrafine Particles on Linear Viscoelastic Properties of Mastics and Asphalt Concretes. Transportation Research Record, 2008, 2051, 41-48.	1.9	29
45	French wheel tracking round robin test on a polymer modified bitumen mixture. Materials and Structures/Materiaux Et Constructions, 2011, 44, 1031-1046.	3.1	29
46	New fatigue test on bituminous binders: Experimental results and modeling. Construction and Building Materials, 2012, 37, 197-208.	7.2	29
47	Contraction and expansion of partially saturated hot mix asphalt samples exposed to freezeâ€“thaw cycles. Road Materials and Pavement Design, 2015, 16, 277-299.	4.0	29
48	Degradation of asphalt mixtures with glass aggregates subjected to freeze-thaw cycles. Cold Regions Science and Technology, 2017, 141, 8-15.	3.5	29
49	Reclaimed asphalt pavement and additivesâ€™ influence on 3D linear behaviour of warm mix asphalts. Road Materials and Pavement Design, 2015, 16, 569-591.	4.0	28
50	Application of the theory of viscoelasticity to evaluate the resilient modulus test in asphalt mixes. Construction and Building Materials, 2017, 149, 648-658.	7.2	27
51	Approximation of Linear Viscoelastic Model in the 3 Dimensional Case with Mechanical Analogues of Finite Size. Road Materials and Pavement Design, 2011, 12, 897-930.	4.0	26
52	Modelling of Ageing Effects on the Elasto-Viscoplastic Behaviour of Geomaterial. Soils and Foundations, 2008, 48, 155-174.	3.1	25
53	Influence of transient effects for analysis of complex modulus tests on bituminous mixtures. Road Materials and Pavement Design, 2016, 17, 271-289.	4.0	25
54	Viscous behaviour of dry sand. International Journal for Numerical and Analytical Methods in Geomechanics, 2007, 31, 1631-1658.	3.3	24

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55	Recovery of asphalt mixture stiffness during fatigue loading rest periods. Construction and Building Materials, 2018, 158, 591-600.	7.2	24
56	Effects of Particle Characteristics on the Viscous Properties of Granular Materials in Shear. Soils and Foundations, 2009, 49, 25-49.	3.1	23
57	Degradation of hot mix asphalt samples subjected to freeze-thaw cycles and partially saturated with water or brine. Road Materials and Pavement Design, 2017, 18, 849-864.	4.0	23
58	Comparison of the 3-dim linear viscoelastic behavior of asphalt mixes determined with tension-compression and dynamic tests. Construction and Building Materials, 2018, 174, 529-536.	7.2	23
59	Anisotropy of bituminous mixture in the linear viscoelastic domain. Mechanics of Time-Dependent Materials, 2016, 20, 281-297.	4.4	22
60	Complex modulus and fatigue resistance of bituminous mixtures containing hydrated lime. Construction and Building Materials, 2017, 139, 24-33.	7.2	22
61	Viscoelastic Behaviour Characterization of a Gap-graded Asphalt Mixture with SBS Polymer Modified Bitumen. Materials Research, 2015, 18, 373-381.	1.3	21
62	Comparison of rheological parameters of asphalt binders obtained from bending beam rheometer and dynamic shear rheometer at low temperatures. Road Materials and Pavement Design, 2015, 16, 211-227.	4.0	21
63	3D Analysis and Modelling of Thermal Stress Restrained Specimen Test (TSRST) on Asphalt Mixes with RAP and Roofing Shingles. Construction and Building Materials, 2016, 120, 393-402.	7.2	21
64	Nonlinearity of bituminous mixtures. Mechanics of Time-Dependent Materials, 2018, 22, 29-49.	4.4	21
65	Ã‰valuation de la rÃ©sistance Ã la fatigue des enrobÃ©s bitumineux fondÃ©e sur l'Ã©volution de l'endommagement du matÃ©riau en cours d'essai : aspects fondamentaux et application Ã l'enrobÃ© Ã matrice de pierre. Canadian Journal of Civil Engineering, 2003, 30, 902-913.	1.3	19
66	Analysis and modeling of 3D complex modulus tests on hot and warm bituminous mixtures. Mechanics of Time-Dependent Materials, 2015, 19, 167-186.	4.4	17
67	Effect of Fatigue Cyclic Loading on the Linear Viscoelastic Properties of Bituminous Mixtures. Journal of Materials in Civil Engineering, 2015, 27, .	2.9	16
68	Effect of hydrated lime on linear viscoelastic properties of asphalt mixtures with glass aggregates subjected to freeze-thaw cycles. Construction and Building Materials, 2018, 184, 58-67.	7.2	16
69	3D Linear viscoelastic behaviour of bituminous mixtures containing high content of multi-recycled RAP. Road Materials and Pavement Design, 2019, 20, 1709-1721.	4.0	15
70	Comparison of different blending combinations of virgin and RAP-extracted binder: Rheological simulations and statistical analysis. Construction and Building Materials, 2019, 197, 454-463.	7.2	15
71	Softening and local self-heating of bituminous mixtures during cyclic loading. Road Materials and Pavement Design, 2017, 18, 164-177.	4.0	14
72	Effect of timeâ€“temperature, strain level and cyclic loading on the complex Poissonâ€™s ratio of asphalt mixtures. Construction and Building Materials, 2021, 294, 123564.	7.2	14

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73	Ability of the classical fatigue criterion to be associated with macro-crack growth. Materials and Structures/Materiaux Et Constructions, 2015, 48, 2383-2395.	3.1	13
74	Crack propagation characterisation of bituminous mixtures using a four-point bending notched specimen test. Road Materials and Pavement Design, 2016, 17, 70-86.	4.0	13
75	3D complex modulus tests on bituminous mixture with sinusoidal loadings in tension and/or compression. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	3.1	13
76	Nonlinearity of bituminous materials for small amplitude cyclic loadings. Road Materials and Pavement Design, 2019, 20, 1571-1585.	4.0	13
77	Linear viscoelastic (LVE) properties of asphalt mixtures with different glass aggregates and hydrated lime content. International Journal of Pavement Engineering, 2020, 21, 1170-1179.	4.4	13
78	Comportement mÃ©canique des enrobÃ©s bitumineux et modÃ©lisation de la contrainte maximale. Materials and Structures/Materiaux Et Constructions, 1994, 27, 539-547.	3.1	12
79	Creep tests on bituminous mixtures and modelling. Road Materials and Pavement Design, 2012, 13, 832-849.	4.0	12
80	Influence of loading amplitude on viscoelastic properties of bitumen, mastic and bituminous mixtures. Road Materials and Pavement Design, 2019, 20, S780-S796.	4.0	12
81	Cyclic triaxial tests on bituminous mixtures. Road Materials and Pavement Design, 2015, 16, 46-69.	4.0	11
82	Quantification of different effects occurring during fatigue tests on bituminous mixtures. Fatigue and Fracture of Engineering Materials and Structures, 2017, 40, 2169-2182.	3.4	11
83	Numerical simulation of falling/heavy weight deflectometer test considering linear viscoelastic behaviour in bituminous layers and inertia effects. Road Materials and Pavement Design, 2019, 20, S64-S78.	4.0	11
84	Mechanical Testing of Bituminous Mixtures. RILEM State-of-the-Art Reports, 2013, , 143-256.	0.7	11
85	Link between different bottom-up fatigueâ€™s law coefficients of mechanical-empirical pavement design software. Construction and Building Materials, 2019, 216, 552-563.	7.2	10
86	Elastoplastic model with loading memory surfaces (LMS) for monotonic and cyclic behaviour of geomaterials. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1477-1502.	3.3	9
87	Three-Dimensional Linear Viscoelastic Properties of Two Bituminous Mixtures Made with the Same Binder. Journal of Materials in Civil Engineering, 2018, 30, .	2.9	9
88	Relations between Linear ViscoElastic Behaviour of Bituminous Mixtures Containing Reclaimed Asphalt Pavement and Colloidal Structure of Corresponding Binder Blends. Procedia Engineering, 2016, 143, 138-145.	1.2	8
89	Characterization of Asphalt Mixes Behaviour from Dynamic Tests and Comparison with Conventional Cyclic Tensionâ€“Compression Tests. Applied Sciences (Switzerland), 2018, 8, 2117.	2.5	8
90	Linear Viscoelastic Behaviour of Geogrids Interface within Bituminous Mixtures. KSCE Journal of Civil Engineering, 2018, 22, 2082-2088.	1.9	8

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91	Linear viscoelastic behavior of asphalt mixes from dynamic frequency response functions. International Journal for Numerical and Analytical Methods in Geomechanics, 2020, 44, 1019-1031.	3.3	8
92	Crack propagation analysis in bituminous mixtures reinforced by different types of geogrids using digital image correlation. Construction and Building Materials, 2021, 303, 124522.	7.2	8
93	Time-Dependent Behaviour and Static Liquefaction Phenomenon of Sand. Geotechnical and Geological Engineering, 2009, 27, 181-191.	1.7	7
94	Multi Modal Dynamic Linear Viscoelastic Back Analysis for Asphalt Mixes. Journal of Nondestructive Evaluation, 2018, 37, 1.	2.4	7
95	Influence of hydrated lime on linear viscoelastic properties of bituminous mastics. Mechanics of Time-Dependent Materials, 2020, 24, 25-40.	4.4	7
96	Time-temperature superposition principle for bituminous mixtures. Revue EuropÃ©enne De GÃ©nie Civil, 2009, 13, 1095-1107.	0.0	7
97	Statistical Analysis of Influence of Mix Design Parameters on Mechanical Properties of Mixes with Reclaimed Asphalt Pavement. Transportation Research Record, 2014, 2445, 29-38.	1.9	6
98	Tridimensional linear viscoelastic properties of bituminous mixtures produced with crumb rubber added by dry process. Road Materials and Pavement Design, 2021, 22, 2086-2096.	4.0	6
99	Behaviour of binder blends: experimental results and modelling from LVE properties of pure binder, RAP binder and rejuvenator. Road Materials and Pavement Design, 2021, 22, S197-S213.	4.0	6
100	Effect of Vehicle Speed on the Millau Viaduct Response. Journal of Testing and Evaluation, 2012, 40, 20120127.	0.7	6
101	Assessment of Existing Micro-mechanical Models for Asphalt Mastics Considering Viscoelastic Effects. Road Materials and Pavement Design, 2008, 9, 31-57.	4.0	6
102	Thermomechanical and Mechanical Behaviour of Asphalt Mixtures at Cold Temperature. Road Materials and Pavement Design, 2004, 5, 45-72.	4.0	5
103	Linear Viscoelastic Behaviour and Anisotropy of Bituminous Mixture Compacted with a French Wheel Compactor. , 2010, , .		5
104	Prediction of LVE Behavior of Mixtures Containing RAP from Properties of Base Constituents. Transportation Research Procedia, 2016, 14, 3552-3561.	1.5	5
105	Evaluation of the effect of the loading frequency on WÃ¶hlerâ€™s curve parameters of a high modulus asphalt concrete (HMAC). Road Materials and Pavement Design, 2022, 23, 2151-2166.	4.0	5
106	Thermo-rheological modelling of cement-bitumen treated materials in the small strain domain. Transportation Geotechnics, 2021, 31, 100647.	4.5	5
107	Calculation of viscous energy dissipation in asphalt pavements. Baltic Journal of Road and Bridge Engineering, 2014, 9, 123-130.	0.8	5
108	Rheological properties, 2S2P1D modelling and SHStS transformation of 12 Brazilian bitumens and mixtures. Road Materials and Pavement Design, 0, , 1-18.	4.0	5

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109	Correspondances entre les coefficients des modÃ¨les de fatigue dans les mÃ©thodes mÃ©canistiques-empiriques de dimensionnement de chaussÃ©es souples. Canadian Journal of Civil Engineering, 2011, 38, 1287-1299.	1.3	4
110	Comparison of the moisture damage of bituminous binder coupled with glass and limestone substrate using pull-off test. Canadian Journal of Civil Engineering, 2019, 46, 188-194.	1.3	4
111	Precision of modal analysis to characterise the complex modulus of asphalt concrete. Road Materials and Pavement Design, 2019, 20, S217-S232.	4.0	4
112	Effect of Binder Characteristics on Fatigue of Asphalt Pavement Using an Intrinsic Damage Approach. Road Materials and Pavement Design, 2005, 6, 147-174.	4.0	4
113	Deterioration of HMA Partially Saturated with Water or Brine Subjected to Freeze-Thaw Cycles. RILEM Bookseries, 2016, , 705-717.	0.4	3
114	Fatigue and Thermal Cracking of Hot and Warm Bituminous Mixtures with Different RAP Contents. Sustainability, 2020, 12, 9812.	3.2	3
115	Experimental Investigation of the Mechanical Behaviour of Interfaces Between Pavement Layers. , 2018, , 344-352.		3
116	Anisotropic Behavior of Bituminous Mixtures in Road Pavement Structures. Journal of Testing and Evaluation, 2020, 48, 20180828.	0.7	3
117	Stiffness of Bituminous Mixtures Using Ultrasonic Wave Propagation. Road Materials and Pavement Design, 2009, 10, 789-814.	4.0	3
118	Fatigue behaviour of dry or partially saturated hot mix asphalt (HMA). Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1100-1114.	3.4	2
119	Visco-Elasto-Plastic Characterization in the Small Strain Domain of Cement Bitumenâ€“Treated Materials Produced at Low Temperatures. Journal of Materials in Civil Engineering, 2021, 33, 04021039.	2.9	2
120	Influence of Crumb Rubber Added by Dry Process on Linear Viscoelastic Properties and Tensile Strength of Bituminous Mixtures. Lecture Notes in Civil Engineering, 2020, , 174-182.	0.4	2
121	Bituminous Interlayers Thermomechanical Behaviour under Small Shear Strain Loading Cycles with 2T3C Apparatus: Hollow Cylinder and Digital Image Correlation. , 0, , .		2
122	Modelling of permanent strain of asphalt concrete using the ESSO model. Road Materials and Pavement Design, 2013, 14, 864-887.	4.0	1
123	Linear Viscoelastic Domain for Bituminous Mixtures. , 2014, , .		1
124	Dynamic testing of asphalt mixes. E3S Web of Conferences, 2019, 92, 04004.	0.5	1
125	Validation of the Time-Temperature Superposition Principle (TTSP) in the Non-linear Domain for Bituminous Mixtures with Reclaimed Asphalt Pavement (40% RAP). RILEM Bookseries, 2022, , 1925-1931.	0.4	1
126	Influence of Air Void Content and Loading Frequency on Fatigue Test Results of Bituminous Mixtures. Journal of Transportation Engineering Part B: Pavements, 2021, 147, 04021059.	1.5	1

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127	Visco-Plastic Behavior of Bituminous Mixtures: Experiments and Modeling. RILEM Bookseries, 2016, , 47-52.	0.4	1
128	Properties at Low Temperatures of Asphalt Mixes Containing High Content of Multi-recycled RAP. Journal of Testing and Evaluation, 2022, 50, 20210209.	0.7	1
129	Linear viscoelastic behaviours of bituminous mixtures and fiberglass geogrids interfaces. Geotextiles and Geomembranes, 2022, 50, 961-969.	4.6	1
130	Tridimensional linear viscoelastic behavior of bituminous materials. , 2015, , 59-95.		0
131	Thermomechanical Coupling in Bituminous Mixtures Considered as Bonded Granular Media. , 2017, , .		0
132	Influence of Linear Viscoelastic Behaviour of Pavement Layers Interface for Heavy Weight Deflectometer Test. RILEM Bookseries, 2022, , 1087-1094.	0.4	0
133	Effects of Water Saturation and Freeze-Thaw Cycles on Fatigue Behavior of Bituminous Mixtures. RILEM Bookseries, 2022, , 671-677.	0.4	0
134	Modifying Surface Properties of Model and Pavement Aggregates with Silanes. RILEM Bookseries, 2019, , 90-95.	0.4	0
135	Diffusion Phenomenon between Two Different Bitumens from Mechanical Analysis. Journal of Materials in Civil Engineering, 2022, 34, .	2.9	0
136	Tension Behavior of Bituminous Mixture Samples Reinforced by Fiberglass Geogrids in Different Directions. Lecture Notes in Civil Engineering, 2022, , 521-531.	0.4	0