# Guy Della Valle

List of Publications by Year
in descending order

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|---|---|---|---|
| 101 papers | 4,616 citations | 76196<br>40 h-index | 110170<br>64 g-index |
| 102 all docs | 102 docs citations | 102 times ranked | 3118 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Influence of amylose content on starch films and foams. Carbohydrate Polymers, 1995, 27, 261-270. | 5.1 | 291 |
| 2 | A global computer software for polymer flows in corotating twin screw extruders. Polymer Engineering and Science, 1998, 38, 1781-1792. | 1.5 | 199 |
| 3 | Fast X-ray tomography analysis of bubble growth and foam setting during breadmaking. Journal of Cereal Science, 2006, 43, 393-397. | 1.8 | 162 |
| 4 | Contribution of Major Ingredients during Baking of Biscuit Dough Systems. Journal of Cereal Science, 2000, 31, 241-252. | 1.8 | 135 |
| 5 | Shear and extensional properties of bread doughs affected by their minor components. Journal of Cereal Science, 2005, 42, 45-57. | 1.8 | 125 |
| 6 | Raw and extruded fibre from pea hulls. Part I: Composition and physico-chemical properties. Carbohydrate Polymers, 1993, 20, 17-23. | 5.1 | 124 |
| 7 | Influence of extrusion-cooking on the physico-chemical properties of wheat bran. Journal of Cereal Science, 1990, 11, 249-259. | 1.8 | 122 |
| 8 | Influence of amylose content on the viscous behavior of low hydrated molten starches. Journal of Rheology, 1996, 40, 347-362. | 1.3 | 121 |
| 9 | Physicochemical Behaviors of Sugars, Lipids, and Gluten in Short Dough and Biscuit. Journal of Agricultural and Food Chemistry, 2000, 48, 1322-1326. | 2.4 | 111 |
| 10 | Structure and mechanical behaviour of corn flour and starchâ€“zein based materials in the glassy state. Carbohydrate Polymers, 2005, 59, 109-119. | 5.1 | 99 |
| 11 | The extrusion behaviour of potato starch. Carbohydrate Polymers, 1995, 28, 255-264. | 5.1 | 98 |
| 12 | Structural and Chemical Modifications of Short Dough During Baking. Journal of Cereal Science, 2002, 35, 1-10. | 1.8 | 98 |
| 13 | Effect of wheat dietary fibres on bread dough development and rheological properties. Journal of Cereal Science, 2010, 52, 200-206. | 1.8 | 97 |
| 14 | How can technology help to deliver more of grain in cereal foods for a healthy diet?. Journal of Cereal Science, 2014, 59, 327-336. | 1.8 | 97 |
| 15 | A specific slit die rheometer for extruded starchy products. Design, validation and application to maize starch. Rheologica Acta, 1993, 32, 465-476. | 1.1 | 75 |
| 16 | Granulometry of bread crumb grain: Contributions of 2D and 3D image analysis at different scale. Food Research International, 2007, 40, 1087-1097. | 2.9 | 75 |
| 17 | Relationship of extrusion variables with pressure and temperature during twin screw extrusion cooking of starch. Journal of Food Engineering, 1987, 6, 423-444. | 2.7 | 74 |
| 18 | In-line determination of plasticized wheat starch viscoelastic behavior: impact of processing. Carbohydrate Polymers, 2003, 53, 169-182. | 5.1 | 69 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Relating cellular structure of open solid food foams to their Youngâ€™s modulus: Finite element calculation. International Journal of Solids and Structures, 2008, 45, 2881-2896. | 1.3 | 66 |
| 20 | Relationships between texture, mechanical properties and structure of cornflakes. Food Research International, 2007, 40, 493-503. | 2.9 | 63 |
| 21 | Mechanical modelling of cereal solid foods. Trends in Food Science and Technology, 2011, 22, 142-153. | 7.8 | 62 |
| 22 | Multi-scale structural changes of starch and proteins during pea flour extrusion. Food Research International, 2018, 108, 203-215. | 2.9 | 61 |
| 23 | Mechanical properties of bread crumbs from tomography based Finite Element simulations. Journal of Materials Science, 2005, 40, 5867-5873. | 1.7 | 59 |
| 24 | Mechanical behaviour of corn flour and starchâ€“zein based materials in the glassy state: A matrixâ€“particle interpretation. Carbohydrate Polymers, 2006, 65, 346-356. | 5.1 | 58 |
| 25 | Kinetics of bubble growth in wheat flour dough during proofing studied by computed X-ray micro-tomography. Journal of Cereal Science, 2012, 56, 676-683. | 1.8 | 58 |
| 26 | Physical assessment of bread destructuration during chewing. Food Research International, 2013, 50, 308-317. | 2.9 | 58 |
| 27 | Microscopical Study of the Destructuring of Waxy Maize and Smooth Pea Starches by Shear and Heat at Low Hydration. Journal of Cereal Science, 2001, 33, 289-300. | 1.8 | 57 |
| 28 | French Bread Loaf Volume Variations and Digital Image Analysis of Crumb Grain Changes Induced by the Minor Components of Wheat Flour. Cereal Chemistry, 2005, 82, 20-27. | 1.1 | 56 |
| 29 | PHYSICAL AND SENSORY EVALUATION OF CORNFLAKES CRISPNESS. Journal of Texture Studies, 2005, 36, 93-118. | 1.1 | 54 |
| 30 | Extrusion, structure and mechanical properties of complex starchy foams. Journal of Food Engineering, 2010, 98, 19-27. | 2.7 | 54 |
| 31 | Rheological properties of wheat flour dough and French bread enriched with wheat bran. Journal of Cereal Science, 2015, 65, 167-174. | 1.8 | 54 |
| 32 | Material extrusion of plant biopolymers: Opportunities & challenges for 3D printing. Additive Manufacturing, 2018, 21, 220-233. | 1.7 | 54 |
| 33 | Relationships between processing conditions and starch and protein modifications during extrusion-cooking of pea flour. Journal of the Science of Food and Agriculture, 1994, 64, 509-517. | 1.7 | 53 |
| 34 | An instrumented pilot scale oven for the study of French bread baking. Journal of Food Engineering, 2005, 69, 97-106. | 2.7 | 53 |
| 35 | Computer simulation of starchy products' transformation by twin-screw extrusion. Journal of Food Engineering, 1993, 19, 1-31. | 2.7 | 52 |
| 36 | Structural modifications of low hydrated pea starch subjected to high thermomechanical processing. Carbohydrate Polymers, 2000, 43, 171-181. | 5.1 | 48 |

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| 37 | Glass transition temperatures of a ready to eat breakfast cereal formulation and its main components determined by DSC and DMTA. Carbohydrate Polymers, 2009, 76, 528-534. | 5.1 | 47 |
| 38 | A Basic Model for a Twin-Screw Extruder. Journal of Food Science, 1989, 54, 1047-1056. | 1.5 | 45 |
| 39 | Porosity and stability of bread dough during proofing determined by video image analysis for different compositions and mixing conditions. Food Research International, 2010, 43, 1999-2005. | 2.9 | 45 |
| 40 | Dough/crumb transition during French bread baking. Journal of Cereal Science, 2010, 52, 161-169. | 1.8 | 44 |
| 41 | Theoretical Computation of the Isothermal Flow Through the Reverse Screw Element of a Twin Screw Extrusion Cooker. Journal of Food Science, 1988, 53, 616-625. | 1.5 | 41 |
| 42 | Modeling of starchy melts expansion by extrusion. Trends in Food Science and Technology, 2016, 48, 13-26. | 7.8 | 41 |
| 43 | Growth and setting of gas bubbles in a viscoelastic matrix imaged by X-ray microtomography: the evolution of cellular structures in fermenting wheat flour dough. Soft Matter, 2015, 11, 3373-3384. | 1.2 | 40 |
| 44 | Effect of Flour Minor Components on Bubble Growth in Bread Dough during Proofing Assessed by Magnetic Resonance Imaging. Journal of Agricultural and Food Chemistry, 2005, 53, 3986-3994. | 2.4 | 39 |
| 45 | The role of mechanical properties of brittle airy foods on the masticatory performance. Journal of Food Engineering, 2010, 101, 85-91. | 2.7 | 39 |
| 46 | Viscous Properties of Thermoplastic Starches from Different Botanical Origin. International Polymer Processing, 2007, 22, 471-479. | 0.3 | 35 |
| 47 | Morphology and mechanical behaviour of pea-based starch-protein composites obtained by extrusion. Carbohydrate Polymers, 2019, 223, 115086. | 5.1 | 35 |
| 48 | Relationships of oral comfort perception and bolus properties in the elderly with salivary flow rate and oral health status for two soft cereal foods. Food Research International, 2019, 118, 13-21. | 2.9 | 34 |
| 49 | Destructuration mechanisms of bread enriched with fibers during mastication. Food Research International, 2016, 80, 1-11. | 2.9 | 33 |
| 50 | Basic knowledge models for the design of bread texture. Trends in Food Science and Technology, 2014, 36, 5-14. | 7.8 | 31 |
| 51 | Energetical and rheological approaches of wheat flour dough mixing with a spiral mixer. Journal of Food Engineering, 2012, 110, 60-70. | 2.7 | 30 |
| 52 | How does temperature govern mechanisms of starch changes during extrusion?. Carbohydrate Polymers, 2018, 184, 57-65. | 5.1 | 30 |
| 53 | Processing & rheological properties of wheat flour dough and bread containing high levels of soluble dietary fibres blends. Food Research International, 2017, 97, 123-132. | 2.9 | 29 |
| 54 | Energy Balance of Low Hydrated Starches Transition Under Shear. Journal of Food Science, 2002, 67, 1426-1437. | 1.5 | 28 |

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| 55 | Dynamic magnetic resonance microscopy of flour dough fermentation. Magnetic Resonance Imaging, 2004, 22, 395-401. | 1.0 | 28 |
| 56 | Relationship between thermomechanical properties and baking expansion of sour cassava starch (Polvilho azedo). Journal of the Science of Food and Agriculture, 2001, 81, 429-435. | 1.7 | 27 |
| 57 | Simulation of bread making process using a direct 3D numerical method at microscale: Analysis of foaming phase during proofing. Journal of Food Engineering, 2008, 85, 259-267. | 2.7 | 27 |
| 58 | Application of the Discrete Element Method to crack propagation and crack branching in a vitreous dense biopolymer material. International Journal of Solids and Structures, 2012, 49, 1893-1899. | 1.3 | 27 |
| 59 | Rheological and microstructural characterization of batters and sponge cakes fortified with pea proteins. Food Hydrocolloids, 2020, 101, 105553. | 5.6 | 27 |
| 60 | Evaluation of starch-PE multilayers: Processing and properties. Polymer Engineering and Science, 2005, 45, 217-224. | 1.5 | 26 |
| 61 | Qualitative modelling of a multi-step process: The case of French breadmaking. Expert Systems With Applications, 2009, 36, 1020-1038. | 4.4 | 26 |
| 62 | Thermal Characterization and Phase Behavior of a Ready-to-Eat Breakfast Cereal Formulation and its Starchy Components. Food Biophysics, 2009, 4, 291-303. | 1.4 | 25 |
| 63 | Shear and elongational viscosities of a complex starchy formulation for extrusion cooking. Food Research International, 2010, 43, 2093-2100. | 2.9 | 25 |
| 64 | The effect of organic wheat flour by-products on sourdough performances assessed by a multi-criteria approach. Food Research International, 2018, 106, 974-981. | 2.9 | 25 |
| 65 | Elongational properties and proofing behaviour of wheat flour dough. Journal of Food Engineering, 2016, 168, 129-136. | 2.7 | 24 |
| 66 | Fragmentation of two soft cereal products during oral processing in the elderly: Impact of product properties and oral health status. Food Hydrocolloids, 2019, 91, 153-165. | 5.6 | 24 |
| 67 | Foaming and rheological properties of the liquid phase extracted fromÂwheat flour dough. Food Hydrocolloids, 2015, 43, 114-124. | 5.6 | 23 |
| 68 | Thermomechanical characterization of an amylose-free starch extracted from cassava (Manihot) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2[illegible] | 5.1 | 22 |
| 69 | Kinetics of crust formation during conventional French bread baking. Journal of Cereal Science, 2012, 56, 440-444. | 1.8 | 21 |
| 70 | A new method for dynamic modelling of bread dough kneading based on artificial neural network. Food Control, 2012, 26, 512-524. | 2.8 | 20 |
| 71 | Determining the Cellular Structure of Two Cereal Food Foams by X-ray Micro-Tomography. Food Biophysics, 2014, 9, 219. | 1.4 | 20 |
| 72 | Influence of ionic plasticizers on the processing and viscosity of starch melts. Carbohydrate Polymers, 2020, 230, 115591. | 5.1 | 20 |

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| 73 | The virtual food system: Innovative models and experiential feedback in technologies for winemaking, the cereals chain, food packaging and eco-designed starter production. Innovative Food Science and Emerging Technologies, 2018, 46, 54-64. | 2.7 | 19 |
| 74 | Permeability and Expanded Structure of Baked Products Crumbs. Food Biophysics, 2008, 3, 344-351. | 1.4 | 18 |
| 75 | Modelling Wheat Flour Dough Proofing Behaviour: Effects of Mixing Conditions on Porosity and Stability. Food and Bioprocess Technology, 2013, 6, 2150-2164. | 2.6 | 18 |
| 76 | Role of the bolus degree of structure on the protein digestibility during in vitro digestion of a pea proteinâ€fortified sponge cake chewed by elderly. Journal of Texture Studies, 2019, 51, 134-143. | 1.1 | 17 |
| 77 | Finite element modelling of crack propagation in carbohydrate extruded starch with open void structure. Carbohydrate Polymers, 2011, 83, 1696-1706. | 5.1 | 16 |
| 78 | Experimental investigation and discrete simulation of fragmentation in expanded breakfast cereals. Food Research International, 2014, 55, 28-36. | 2.9 | 16 |
| 79 | Validation and use for product optimization of a phenomenological model of starch foods expansion by extrusion. Journal of Food Engineering, 2019, 246, 160-178. | 2.7 | 16 |
| 80 | Predicting the quality of wheat flour dough at mixing using an expert system. Food Research International, 2014, 64, 772-782. | 2.9 | 15 |
| 81 | Viscous sintering kinetics of biopolymer filaments extruded for 3D printing. Polymer Testing, 2019, 77, 105873. | 2.3 | 15 |
| 82 | Flow and foam properties of extruded maize flour and its biopolymer blends expanded by microwave. Food Research International, 2015, 76, 567-575. | 2.9 | 14 |
| 83 | Oral processing and comfort perception of soft cereal foods fortified with pulse proteins in the elderly with different oral health status. Food and Function, 2020, 11, 4535-4547. | 2.1 | 14 |
| 84 | BULK MECHANICAL BEHAVIOR OF COMMERCIAL PARTICLE FOOD FOAMS. Journal of Texture Studies, 2008, 39, 405-425. | 1.1 | 13 |
| 85 | Generation of Anisotropic Cellular Solid Model and Related Elasticity Parameters: Finite Element Simulation. Journal of Cellular Plastics, 2009, 45, 119-136. | 1.2 | 13 |
| 86 | How cracks propagate in a vitreous dense biopolymer material. Engineering Fracture Mechanics, 2011, 78, 1328-1340. | 2.0 | 13 |
| 87 | Preliminary analysis of mastication dynamics and fragmentation during chewing of brittle cereal foods. Food Research International, 2013, 54, 1455-1462. | 2.9 | 13 |
| 88 | Rheology and structural changes of plasticized zeins in the molten state. Rheologica Acta, 2017, 56, 941-953. | 1.1 | 12 |
| 89 | Simulation of bread making process using a direct 3D numerical method at microscale: analysis of baking step. International Journal of Material Forming, 2012, 5, 11-24. | 0.9 | 11 |
| 90 | Estimation of energy saving thanks to a reduced-model-based approach: Example of bread baking by jet impingement. Energy, 2013, 53, 74-82. | 4.5 | 9 |

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| 91 | Impact of protein reinforcement on the deformation of soft cereal foods under chewing conditions studied by X-ray tomography and finite element modelling. Journal of Food Engineering, 2020, 286, 110108. | 2.7 | 9 |
| 92 | Rheological properties of artificial boluses of cereal foods enriched with legume proteins. Food Hydrocolloids, 2022, 122, 107096. | 5.6 | 8 |
| 93 | Linear viscoelastic properties of extruded amorphous potato starch as a function of temperature and moisture content. Rheologica Acta, 2016, 55, 597-611. | 1.1 | 7 |
| 94 | Artificial Oral Processing of Extruded Pea Flour Snacks. Food Engineering Reviews, 2021, 13, 247-261. | 3.1 | 7 |
| 95 | A digital learning tool based on models and simulators for food engineering (MESTRAL). Journal of Food Engineering, 2021, 293, 110375. | 2.7 | 6 |
| 96 | Assessment of French bread texture by a multi-indentation test. Journal of Food Engineering, 2014, 122, 92-98. | 2.7 | 5 |
| 97 | Cellular structure and rheological properties of shaped fermented wheat flour dough. Journal of Cereal Science, 2017, 73, 91-98. | 1.8 | 5 |
| 98 | Extrusion Simulation for the Design of Cereal and Legume Foods. Foods, 2022, 11, 1780. | 1.9 | 4 |
| 99 | Impact de lâ€™incorporation en protÃ©ines de lÃ©gumineuses (pois et fÃ¨ve) dans des produits cÃ©rÃ©aliers (brioche et gÃ©noise) Ã destination de personnes Ã¢gÃ©es sur la transformation orale et la digestibilitÃ© in vitro des protÃ©ines. Cahiers De Nutrition Et De Dietetique, 2020, 55, 317-324. | 0.2 | 2 |
| 100 | Guiding the formulation of soft cereal foods for the elderly population through food oral processing: Challenges and opportunities. Advances in Food and Nutrition Research, 2022, , . | 1.5 | 0 |
| 101 | Variations of the viscous properties of a sponge cake artificial bolus with some physiological parameters. Food and Function, 2022, 13, 3198-3205. | 2.1 | 0 |