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e-mail: [fabio.galbusera@grupposandonato.it](mailto:fabio.galbusera@grupposandonato.it)**Curriculum vitae**

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| 2002       | Master Degree in Biomedical Engineering at Politecnico di Milano, Milan, Italy                              |
| 2003-2004  | Mechanical Designer at Perissinotto S.p.A., Vimodrone, Italy  |
| 2004-2012  | Researcher at the IRCCS Istituto Ortopedico Galeazzi, Milan, Italy  |
| 2012       | PhD (“Dr. Biol. Hum.”) at the Institute of Orthopedic Research and Biomechanics, Ulm University, Ulm        |
| since 2009 | Research Assistant at the Institute of Orthopedic Research and Biomechanics, Ulm University, Ulm            |
| since 2012 | Head of the Laboratory of Biological Structures Mechanics, IRCCS Istituto Ortopedico Galeazzi, Milan, Italy |

**Research fields**

Spine biomechanics and imaging, finite element modeling, numerical analysis

**Grants as PI**

- Italian Ministry of Health, Ricerca Finalizzata 2011-2012, GR-2011-02351464: „Prediction of the risk of spinal deformities after surgical decompression and development of preventive strategies“.
- Italian Ministry of Foreign Affairs and International Cooperation, Italy-China Science and Technology Cooperation 2016-2018, “Numerical prediction of the risk of vertebral fractures in metastatically involved spines”
- German Ministry of Economy and Energy, Central Innovation Programme for SMEs, KF3180101JL3 (2014-2015): „Entwicklung und Validierung eines mechanischen Modells zur Quantifizierung des Lockerungsverhaltens von Pedikelschrauben“.
- German Ministry of Economy and Energy, Central Innovation Programme for SMEs, ZF4145001CR5 (2016-2017): „Entwicklung, Validierung und Erprobung eines neuartigen Softwaretools zur objektiven, präzisen und von der Bildqualität unabhängigen Auswertung von radiologischen Bildern für klinische Studien“.

**H-Index**21 (Scopus; accessed September 22<sup>nd</sup>, 2017)**National Scientific Qualification (Abilitazione Scientifica Nazionale)**

Academic discipline 09/G2, as Associate Professor (“Seconda fascia”), obtained in 2016

## Refereed full papers

1. Haj-Ali R, Massarwa E, Aboudi J, Galbusera F, Wolfram U, Wilke HJ. A new multiscale micromechanical model of vertebral trabecular bones. *Biomech Model Mechanobiol.* 2017 Jun;16(3):933-946.
2. Casaroli G, Villa T, Bassani T, Berger-Roscher N, Wilke HJ, Galbusera F. Numerical Prediction of the Mechanical Failure of the Intervertebral Disc under Complex Loading Conditions. *Materials (Basel).* 2017 Jan 3;10(1). pii: E31.
3. Pozzi G, Albano D, Messina C, Angileri SA, Al-Mnayyis A, Galbusera F, Luzzati A, Perrucchini G, Scotto G, Parafioriti A, Zerbi A, Sconfienza LM. Solid bone tumors of the spine: Diagnostic performance of apparent diffusion coefficient measured using diffusion-weighted MRI using histology as a reference standard. *J Magn Reson Imaging.* doi: 10.1002/jmri.25826 (in press)
4. Volkheimer D, Galbusera F, Liebsch C, Schlegel S, Rohlmann F, Kleiner S, Wilke HJ. Is intervertebral disc degeneration related to segmental instability? An evaluation with two different grading systems based on clinical imaging. *Acta Radiol.* doi: 10.1177/0284185117715284 (in press)
5. Giudici F, Galbusera F, Zagra A, Wilke HJ, Archetti M, Scaramuzza L. Determinants of the biomechanical and radiological outcome of surgical correction of adolescent idiopathic scoliosis surgery: the role of rod properties and patient characteristics. *Eur Spine J.* doi: 10.1007/s00586-017-5148-x (in press)
6. Bassani T, Stucovitz E, Qian Z, Briguglio M, Galbusera F. Validation of the AnyBody full body musculoskeletal model in computing lumbar spine loads at L4L5 level. *J Biomech.* 2017 Jun 14;58:89-96. doi: 10.1016/j.jbiomech.2017.04.025.
7. Casaroli G, Galbusera F, Jonas R, Schlager B, Wilke HJ, Villa T. A novel finite element model of the ovine lumbar intervertebral disc with anisotropic hyperelastic material properties. *PLoS One.* 2017 May 4;12(5):e0177088. doi: 10.1371/journal.pone.0177088. eCollection 2017.
8. Ottardi C, Damonti A, Porazzi E, Foglia E, Ferrario L, Villa T, Aimar E, Brayda-Bruno M, Galbusera F. A comparative analysis of a disposable and a reusable pedicle screw instrument kit for lumbar arthrodesis: integrating HTA and MCDA. *Health Econ Rev.* 2017 Dec;7(1):17. doi: 10.1186/s13561-017-0153-7.
9. Luca A, Ottardi C, Lovi A, Brayda-Bruno M, Villa T, Galbusera F. Anterior support reduces the stresses on the posterior instrumentation after pedicle subtraction osteotomy: a finite-element study. *Eur Spine J.* doi: 10.1007/s00586-017-5084-9. (in press)
10. Luca A, Ottardi C, Sasso M, Prosdocimo L, La Barbera L, Brayda-Bruno M, Galbusera F, Villa T. Instrumentation failure following pedicle subtraction osteotomy: the role of rod material, diameter, and multi-rod constructs. *Eur Spine J.* 2017 Mar;26(3):764-770. doi: 10.1007/s00586-016-4859-8.
11. Costa F, Tosi G, Attuati L, Cardia A, Ortolina A, Grimaldi M, Galbusera F, Fornari M. Radiation exposure in spine surgery using an image-guided system based on intraoperative cone-beam computed tomography: analysis of 107 consecutive cases. *J Neurosurg Spine* 2016; 25(5):654-659.
12. La Barbera L, Galbusera F, Wilke HJ, Villa T. Preclinical evaluation of posterior spine stabilization devices: can we compare in vitro and in vivo loads on the instrumentation? *Eur Spine J Eur Spine J.* 2016 Sep;25(9):2909-18. doi: 10.1007/s00586-016-4622-1.
13. Galbusera F, Lovi A, Bassani T, Brayda-Bruno M. MR Imaging and Radiographic Imaging of Degenerative Spine Disorders and Spine Alignment. *Magn Reson Imaging Clin N Am* 2016; 24(3):515-22
14. La Barbera L, Galbusera F, Wilke HJ, Villa T. Preclinical evaluation of posterior spine stabilization devices: can the current standards represent basic everyday life activities? *Eur Spine J* 2016; 25(9):2909-18
15. Berger-Roscher N, Casaroli G, Rasche V, Villa T, Galbusera F, Wilke HJ. Influence of Complex Loading Conditions on Intervertebral Disc Failure. *Spine (Phila Pa 1976).* 2017 Jan 15;42(2):E78-E85. doi: 10.1097/BRS.0000000000001699.
16. Ottardi C, Galbusera F, Luca A, Prosdocimo L, Sasso M, Brayda-Bruno M, Villa T. Finite element analysis of the lumbar destabilization following pedicle subtraction osteotomy. *Med Eng Phys* 2016; 38(5):506-9.

17. Costa F, Ortolina A, Galbusera F, Cardia A, Sala G, Ronchi F, Uccelli C, Grosso R, Fornari M. Pedicle screw cement augmentation. A mechanical pullout study on different cement augmentation techniques. *Med Eng Phys* 2016; 38(2):181-6.
18. Galbusera F, Bassani T, La Barbera L, Ottardi C, Schlager B, Brayda-Bruno M, Villa T, Wilke HJ. Planning the Surgical Correction of Spinal Deformities: Toward the Identification of the Biomechanical Principles by Means of Numerical Simulation. *Front Bioeng Biotechnol* 2015; 3:178.
19. Zagra A, Scaramuzzo L, Galbusera F, Minoia L, Archetti M, Giudici F. Biomechanical and clinical study of single posterior oblique cage POLIF in the treatment of degenerative diseases of the lumbar spine. *Eur Spine J*; 24 Suppl 7:924-30.
20. Berger-Roscher N, Galbusera F, Rasche V, Wilke HJ. Intervertebral disc lesions: visualisation with ultra-high field MRI at 11.7 T. *Eur Spine J* 2015; 24(11):2488-95.
21. Freutel M, Galbusera F, Ignatius A, Dürselen L. Material properties of individual menisci and their attachments obtained through inverse FE-analysis. *J Biomech* 2015; 48(8):1343-9.
22. Galbusera F, Volkheimer D, Reitmaier S, Berger-Roscher N, Kienle A, Wilke HJ. Pedicle screw loosening: a clinically relevant complication? *Eur Spine J* 2015; 24(5):1005-16.
23. Costa F, Dorelli G, Ortolina A, Cardia A, Attuati L, Tomei M, Milani D, Balzarini L, Galbusera F, Morengi E, Fornari M. Computed tomography-based image-guided system in spinal surgery: state of the art through 10 years of experience. *Neurosurgery* 2015; 11 Suppl 2:59-67;
24. Galbusera F, Freutel M, Dürselen L, D'Aiuto M, Croce D, Villa T, Sansone V, Innocenti B. Material models and properties in the finite element analysis of knee ligaments: a literature review. *Front Bioeng Biotechnol*. 2014 Nov 17;2:54.
25. La Barbera L, Galbusera F, Villa T, Costa F, Wilke HJ. ASTM F1717 standard for the preclinical evaluation of posterior spinal fixators: Can we improve it? *Proc Inst Mech Eng H* 2014; 228(10):1014-26.
26. Luca A, Lovi A, Galbusera F, Brayda-Bruno M. Revision surgery after PSO failure with rod breakage: a comparison of different techniques. *Eur Spine J* 2014; 23 Suppl 6:610-5.
27. Galbusera F, Brayda-Bruno M, Wilke HJ. Is post-contrast MRI a valuable method for the study of the nutrition of the intervertebral disc? *J Biomech* 2014; 47(12):3028-34.
28. Neidlinger-Wilke C, Boldt A, Brochhausen C, Galbusera F, Carstens C, Copf F, Schultheiss M, Lazary A, Brayda-Bruno M, Ignatius A, Wilke HJ. Molecular interactions between human cartilaginous endplates and nucleus pulposus cells: a preliminary investigation. *Spine* 2014; 39(17):1355-64.
29. Galbusera F, Tibiletti M, Brayda-Bruno M, Neidlinger-Wilke C, Wilke HJ. Inverse numerical prediction of the transport properties of vertebral endplates in low back pain patients. *Biomed Tech (Berl)* 2014; 59(5):385-97.
30. Freutel M, Schmidt H, Dürselen L, Ignatius A, Galbusera F. Finite element modeling of soft tissues: material models, tissue interaction and challenges. *Clin Biomech* 2014; 29(4):363-72.
31. Galbusera F, van Rijsbergen M, Ito K, Huyghe JM, Brayda-Bruno M, Wilke HJ. Ageing and degenerative changes of the intervertebral disc and their impact on spinal flexibility. *Eur Spine J* 2014; 23 Suppl 3:S324-32.
32. Galbusera F, Taschieri S, Tsesis I, Francetti L, Del Fabbro M. Finite element simulation of implant placement following extraction of a single tooth. *J Appl Biomater Funct Mater* 2014; 12(2):84-9.
33. Galbusera F, Brayda-Bruno M, Costa F, Wilke HJ. Numerical evaluation of the correlation between the normal variation in the sagittal alignment of the lumbar spine and the spinal loads. *J Orthop Res* 2014; 32(4):537-44.
34. Freutel M, Seitz AM, Galbusera F, Bornstedt A, Rasche V, Knothe Tate ML, Ignatius A, Dürselen L. Medial meniscal displacement and strain in three dimensions under compressive loads: MR assessment. *J Magn Reson Imaging* 2014; 40(5):1181-8.
35. Villa T, La Barbera L, Galbusera F. Comparative analysis of international standards for the fatigue testing of posterior spinal fixation systems. *Spine J* 2014; 14(4):695-704.
36. Galbusera F, Tornese DZ, Anasetti F, Bersini S, Volpi P, La Barbera L, Villa T. Does soccer cleat design influence the rotational interaction with the playing surface? *Sports Biomech* 2013; 12(3):293-301.

37. Tibiletti M, Galbusera F, Ciavarrò C, Brayda-Bruno M. Is the transport of a gadolinium-based contrast agent decreased in a degenerated or aged disc? A post contrast MRI study. *PLoS One* 2013; 8(10):e76697.
38. Brayda-Bruno M, Tibiletti M, Ito K, Fairbank J, Galbusera F, Zerbi A, Roberts S, Wachtel E, Merkher Y, Sivan SS. Advances in the diagnosis of degenerated lumbar discs and their possible clinical application. *Eur Spine J* 2014; 23 Suppl 3:S315-23.
39. Schmidt H, Galbusera F, Rohlmann A, Shirazi-Adl A. What have we learned from finite element model studies of lumbar intervertebral discs in the past four decades? *J Biomech* 2013; 46(14):2342-55.
40. Seitz AM, Galbusera F, Kraiss C, Ignatius A, Dürselen L. Stress-relaxation response of human menisci under confined compression conditions. *J Mech Behav Biomed Mater* 2013; 26:68-80.
41. Neidlinger-Wilke C, Galbusera F, Pratsinis H, Mavrogenatou E, Mietsch A, Kletsas D, Wilke HJ. Mechanical loading of the intervertebral disc: from the macroscopic to the cellular level. *Eur Spine J* 2014; 23 Suppl 3:S333-43.
42. Costa F, Villa T, Anasetti F, Tomei M, Ortolina A, Cardia A, La Barbera L, Fornari M, Galbusera F. Primary stability of pedicle screws depends on the screw positioning and alignment. *Spine J* 2013; 13(12):1934-9.
43. Galbusera F, Wilke HJ, Brayda-Bruno M, Costa F, Fornari M. Influence of sagittal balance on spinal lumbar loads: a numerical approach. *Clin Biomech (Bristol, Avon)* 2013; 28(4):370-7.
44. Schmidt H, Bashkuev M, Galbusera F, Wilke HJ, Shirazi-Adl A. Finite element study of human lumbar disc nucleus replacements. *Comput Methods Biomech Biomed Engin* 2014; 17(16):1762-76.
45. Galbusera F, Bashkuev M, Wilke HJ, Shirazi-Adl A, Schmidt H. Comparison of various contact algorithms for poroelastic tissues. *Comput Methods Biomech Biomed Engin* 2014;17(12):1323-34.
46. Galbusera F, Brayda-Bruno M, Freutel M, Seitz A, Steiner M, Wehrle E, Wilke HJ. What do patients know about their low back pain? An analysis of the quality of information available on the Internet. *Technol Health Care* 2012; 20(6):447-55.
47. Ciavarrò C, Caiani EG, Brayda-Bruno M, Zerbi A, Galbusera F, Vaga S, Lamartina C. Mid-term evaluation of the effects of dynamic neutralization system on lumbar intervertebral discs using quantitative molecular MR imaging. *J Magn Reson Imaging* 2012; 35(5):1145-51.
48. Galbusera F, Mietsch A, Schmidt H, Wilke HJ, Neidlinger-Wilke C. Effect of intervertebral disc degeneration on disc cell viability: a numerical investigation. *Comput Methods Biomech Biomed Engin* 2013; 16(3):328-37.
49. Galbusera F, Schmidt H, Wilke HJ. Lumbar interbody fusion: a parametric investigation of a novel cage design with and without posterior instrumentation. *Eur Spine J* 2012; 21(3):455-62.
50. Galbusera F, Schmidt H, Noailly J, Malandrino A, Lacroix D, Wilke HJ, Shirazi-Adl A. Comparison of four methods to simulate swelling in poroelastic finite element models of intervertebral discs. *J Mech Behav Biomed Mater* 2011; 4(7):1234-41.
51. Costa F, Sassi M, Ortolina A, Cardia A, Assietti R, Zerbi A, Lorenzetti M, Galbusera F, Fornari M. Stand-alone cage for posterior lumbar interbody fusion in the treatment of high-degree degenerative disc disease: design of a new device for an "old" technique. A prospective study on a series of 116 patients. *Eur Spine J* 2011; 20 Suppl 1:S46-56.
52. Galbusera F, Schmidt H, Neidlinger-Wilke C, Wilke HJ. The effect of degenerative morphological changes of the intervertebral disc on the lumbar spine biomechanics: a poroelastic finite element investigation. *Comput Methods Biomech Biomed Engin* 2011; 14(8):729-39.
53. Schmidt H, Galbusera F, Wilke HJ, Shirazi-Adl A. Remedy for fictive negative pressures in biphasic finite element models of the intervertebral disc during unloading. *Comput Methods Biomech Biomed Engin* 2011; 14(3):293-303.
54. Galbusera F, Bellini CM, Anasetti F, Ciavarrò C, Lovi A, Brayda-Bruno M. Rigid and flexible spinal stabilization devices: a biomechanical comparison. *Med Eng Phys* 2011; 33(4):490-6.
55. Anasetti F, Galbusera F, Aziz HN, Bellini CM, Addis A, Villa T, Teli M, Lovi A, Brayda-Bruno M. Spine stability after implantation of an interspinous device: an in vitro and finite element biomechanical study. *J Neurosurg Spine* 2010; 13(5):568-75.
56. Galbusera F, Schmidt H, Neidlinger-Wilke C, Gottschalk A, Wilke HJ. The mechanical response of the lumbar spine to different combinations of disc degenerative changes

- investigated using randomized poroelastic finite element models. *Eur Spine J* 2011; 20(4):563-71.
57. Di Mascio V, Bellini CM, Galbusera F, Raimondi MT, Brayda-Bruno M, Assietti R. Lumbar total disc replacement: a numerical study. *J Appl Biomater Biomech* 2010; 8(2):97-101.
  58. Schmidt H, Shirazi-Adl A, Galbusera F, Wilke HJ. Response analysis of the lumbar spine during regular daily activities - a finite element analysis. *J Biomech* 2010; 43(10):1849-56.
  59. Schmidt H, Galbusera F, Rohlmann A, Zander T, Wilke HJ. Effect of multilevel lumbar disc arthroplasty on spine kinematics and facet joint loads in flexion and extension: a finite element analysis. *Eur Spine J* 2012; 21 Suppl 5:S663-74.
  60. Galbusera F, Anasetti F, Bellini CM, Costa F, Fornari M. The influence of the axial, antero-posterior and lateral positions of the center of rotation of a ball-and-socket disc prosthesis on the cervical spine biomechanics. *Clin Biomech (Bristol, Avon)* 2010; 25(5):397-401.
  61. Bellini CM, Romeo D, Galbusera F, Taschieri S, Raimondi MT, Zampelis A, Francetti L. Comparison of tilted versus nontilted implant-supported prosthetic designs for the restoration of the edentulous mandible: a biomechanical study. *Int J Oral Maxillofac Implants* 2009; 24(3):511-7.
  62. Bellini CM, Romeo D, Galbusera F, Agliardi E, Pietrabissa R, Zampelis A, Francetti L. A finite element analysis of tilted versus nontilted implant configurations in the edentulous maxilla. *Int J Prosthodont* 2009; 22(2):155-7.
  63. Galbusera F, Bellini CM, Costa F, Assietti R, Fornari M. Anterior cervical fusion: a biomechanical comparison of 4 techniques. Laboratory investigation. *J Neurosurg Spine* 2008; 9(5):444-9.
  64. Galbusera F, Bellini CM, Zweig T, Ferguson S, Raimondi MT, Lamartina C, Brayda-Bruno M, Fornari M. Design concepts in lumbar total disc arthroplasty. *Eur Spine J* 2008; 17(12):1635-50.
  65. Galbusera F, Bellini CM, Brayda-Bruno M, Fornari M. Biomechanical studies on cervical total disc arthroplasty: a literature review. *Clin Biomech (Bristol, Avon)* 2008; 23(9):1095-104.
  66. Galbusera F, Bertolazzi L, Balossino R, Dubini G. Combined computational study of mechanical behaviour and drug delivery from a porous, hydroxyapatite-based bone graft. *Biomech Model Mechanobiol* 2009; 8(3):209-16.
  67. Aziz HN, Galbusera F, Bellini CM, Mineo GV, Addis A, Pietrabissa R, Brayda-Bruno M. Porcine models in spinal research: calibration and comparative finite element analysis of various configurations during flexion-extension. *Comp Med* 2008; 58(2):174-9.
  68. Galbusera F, Bellini CM, Aziz HN, Raimondi MT, Brayda-Bruno M, Fornari M. Parametric FE mesh generation: application to the cervical spine. *J Appl Biomater Biomech* 2008; 6(2):95-103.
  69. Galbusera F, Bellini CM, Raimondi MT, Fornari M, Assietti R. Cervical spine biomechanics following implantation of a disc prosthesis. *Med Eng Phys* 2008; 30(9):1127-33.
  70. Galbusera F, Cioffi M, Raimondi MT. An in silico bioreactor for simulating laboratory experiments in tissue engineering. *Biomed Microdevices* 2008; 10(4):547-54.
  71. De Santis A, Carnini F, Costa F, Fornari M, Galbusera F, Gaini SM, Trignani R, Scerrati M, Pasquini U, De Nicola M, Pauri F. 237 ACoA aneurysms clipped or embolized. Outcomes measurement using the De Santis-CESE assessment tool. *J Neurosurg Sci* 2007; 51(4):159-68.
  72. Bellini CM, Galbusera F, Raimondi MT, Mineo GV, Brayda-Bruno M. Biomechanics of the lumbar spine after dynamic stabilization. *J Spinal Disord Tech* 2007; 20(6):423-9.
  73. Galbusera F, Cioffi M, Raimondi MT, Pietrabissa R. Computational modeling of combined cell population dynamics and oxygen transport in engineered tissue subject to interstitial perfusion. *Comput Methods Biomech Biomed Engin* 2007; 10(4):279-87.
  74. Galbusera F, Raimondi MT, Assietti R, Sassi M, Fornari M. Multibody modeling of the cervical spine in the simulation of flexion-extension after disc arthroplasty. *J Appl Biomater Biomech* 2006; 4(2):110-9.
  75. Bellini CM, Galbusera F, Ceroni RG, Raimondi MT. Loss in mechanical contact of cementless acetabular prostheses due to post-operative weight bearing: a biomechanical model. *Med Eng Phys* 2007; 29(2):175-81.

76. Fantigrossi A, Galbusera F, Raimondi MT, Sassi M, Fornari M. Biomechanical analysis of cages for posterior lumbar interbody fusion. *Med Eng Phys* 2007; 29(1):101-9.
77. Galbusera F, Fantigrossi A, Raimondi MT, Sassi M, Fornari M, Assietti R. Biomechanics of the C5-C6 spinal unit before and after placement of a disc prosthesis. *Biomech Model Mechanobiol* 2006; 5(4):253-61.

### Selected conference abstracts

1. Galbusera F, Bassani T, Ottardi C, Costa F, Wilke HJ, Brayda-Bruno M. Patient-specific simulation of spine deformity correction based on biplanar radiographic images. *Computer Methods in Biomechanics and Biomedical Engineering* 2016, Tel Aviv, Israel
2. Ottardi C, Galbusera F, Costa F, Ortolina A, Volkheimer D, Bassani T, Villa T, Wilke HJ. Spinal decompression for the treatment of lumbar stenosis: conventional or minimally invasive techniques? Meeting of the European Society of Biomechanics 2016, Lyon, France
3. Galbusera F, Costa F, Ortolina A, Ottardi C, Volkheimer D, Bassani T, Villa T, Wilke HJ. Minimally invasive laminotomy preserves a higher spine stability with respect to conventional laminotomy in the treatment of spinal stenosis. *German Congress of Orthopaedics and Trauma (DKOU)* 2016, Berlin, Germany
4. Bassani T, Ottardi C, Costa F, Brayda-Bruno M, Wilke HJ, Galbusera F. Prediction of the spine loading in scoliotic subjects by semi-automated 3D reconstruction of biplanar radiographic images. *International Workshop on Spine Loading and Deformation: from Loading to Recovery* 2015, Berlin, Germany (invited)
5. Galbusera F, Brayda-Bruno M, Wilke H-J. Relationship between spinal loads and physiological variations of the lumbar sagittal alignment: a numerical study. Meeting of the International Society for the Study of the Lumbar Spine 2014, Seoul, South Korea
6. Berger-Roscher N, Galbusera F, Rasche V, Wilke H-J. Novel methodology for the det of intervertebral disc lesions using high field MRI @ 11.7 T. Meeting of the International Society for the Study of the Lumbar Spine 2014, Seoul, South Korea
7. Galbusera F, Brayda-Bruno M, Bassani T, Wilke H-j. Wie beeinflusst die sagittale Form der Lendenwirbelsäule die in der Wirbelsäule auftretenden Lasten? Eine numerische Untersuchung. Poster at the Meeting of the German Spine Society (Deutsche Wirbelsäulengesellschaft) 2014, Leipzig, Germany
8. Galbusera F, Tibiletti M, Brayda-Bruno M, Neidlinger-Wilke C, Wilke H-J. A new numerical method based on contrast-enhanced MRI to investigate the transport properties of healthy and degenerated vertebral endplates. Special Poster at the Meeting of the International Society for the Study of the Lumbar Spine 2013, Scottsdale, USA
9. Seitz AM, Galbusera F (presenting), Kraiss C, Ignatius A, Dürselen L. Viscoelastic response of human menisci during stress relaxation under confined compression. Meeting of the European Society of Biomechanics 2013, Patras, Greece
10. Galbusera F, Tibiletti M, Brayda-Bruno M, Neidlinger-Wilke C, Wilke H-J. Inverse prediction of transport properties of the intervertebral disc. 18th International Symposium on Computational Biomechanics (CBU 2013), Ulm, Germany
11. Galbusera F, Tibiletti M, Brayda-Bruno M, Neidlinger-Wilke C, Wilke H-J. Inverse numerische Berechnung der Transporteigenschaften von vertebralem Endplatten und Bandscheiben bei Patienten mit Kreuzschmerzen. Meeting of the German Biomechanics Society (Deutsche Gesellschaft für Biomechanik) 2013, Ulm, Germany
12. Tibiletti M, Galbusera F, Ciavarrò C, Urban J, Brayda-Bruno M. Transport of a MRI contrast agent in ageing and degenerated intervertebral discs. *Eurospine* 2013, Liverpool, UK
13. Brayda-Bruno M, Wilke H-J, van Rijsbergen M, Ito K, Huyghe JM, Galbusera F. Biomechanics of disc degeneration. *Spine Sciences - State-of-the-Art Forum* 2013, Geneva, Switzerland
14. Galbusera F, Tibiletti M, Brayda-Bruno M, Neidlinger-Wilke C, Mietsch A, Wilke H-J. Inverse finite element determination of patient-specific diffusion properties of the intervertebral disc. *Computer Methods in Biomechanics and Biomedical Engineering* 2012, Berlin, Germany
15. Galbusera F, Mietsch A, Schmidt H, Neidlinger-Wilke C, Wilke H-J. A numerical model of cell viability in degenerated lumbar intervertebral discs. Poster at the *Spineweek* 2012, Amsterdam, The Netherlands

16. Galbusera F, Tibiletti M, Brayda-Bruno M, Neidlinger-Wilke C, Wilke H-J. Diffusionseigenschaften gesunder und degenerativer Wirbelkörperdeck und bodenplatten: MRT-basierende numerische Untersuchungen. Special Poster at the Meeting of the German Spine Society (Deutsche Wirbelsäulengesellschaft) 2012, Stuttgart, Germany
17. Galbusera F, Schmidt H, Rohlmann A, Zander T, Wilke H-J. Multisegmentale Implantationen der SB-Charité-Bandscheiben-prothese führen zu Instabilitäten, hohen Facettenbelastungen und Schädigungen des Prothesenkerns. Meeting of the German Biomechanics Society (Deutsche Gesellschaft für Biomechanik) 2011, Murnau, Germany
18. Galbusera F, Schmidt H, Wilke H-J. Finite-Elemente-Untersuchungen an einem neuen Bandscheiben-Cage mit und ohne posteriorer Stabilisierung. Poster at the Meeting of the German Spine Society (Deutsche Wirbelsäulengesellschaft) 2011, Hamburg, Germany
19. Galbusera F, Schmidt H, Wilke H-J. A novel cage design for lumbar interbody fusion: a biomechanical preclinical investigation. E-poster at Eurospine 2011, Milan, Italy
20. Brayda-Bruno M, Lovi A, Balsano M, Galbusera F. Implicazioni cliniche e di strategia nella gestione delle deformità vertebrali dell'utilizzo di barre di diverse leghe metalliche. Meeting of the Italian Spine Surgery Society (GIS) 2011, Vicenza, Italy

## Books and book chapters

1. "Biomechanics of the spine", edited by Galbusera F and Wilke HJ. In preparation. To be printed by Elsevier (Oxford, UK) in 2018.
2. Alini M, Grad S, Wilke HJ, Galbusera F, Colombini A. "Biology, mechanics, and genetics of the disc: state of the art". In "AOSpine Master Series, Volume 8: Back Pain", 2016. Edited by Vialle LR, Wang JC and Lamartina C, Thieme, Stuttgart, Germany
3. Noailly J, Malandrino A, Galbusera F. "Computational modelling of spinal implants". In "Computational Modelling of Biomechanics and Biotribology in the Musculoskeletal System - Biomaterials and Tissues", 2014. Edited by Jin Z, University of Leeds, UK