

CURRICULUM VITAE

Dr. Shihua Zhao

PEER-REVIEWED JOURNAL ARTICLE

Prof. Zhao has published more than 400 scientific papers, among which more than 100 were published in SCI-cited journals, with the highest Impact Factor 24.3 in CIRCULATION. The representative papers were as follows:

1. Wang Y, Li C, Shi L, Chen X, Cui C, Huang J, Chen B, Hall DD, Pan Z, Lu M, Hong J, **Song LS***, **Zhao S***. Integrin β 1D Deficiency-Mediated RyR2 Dysfunction Contributes to Catecholamine-Sensitive Ventricular Tachycardia in ARVC. *Circulation*. 2020 Mar 3. DOI: 10.1161/CIRCULATIONAHA.119.043504. [Epub ahead of print]
2. Yang K, Yang T, Wang HY, **Zhao SH***. Cardiac paraganglioma: an unusual case diagnosed with multimodality imaging. *Eur Heart J*. 2020;41(9):1061. DOI: 10.1093/eurheartj/ehaa085
3. Xu J, Zhuang B, Sirajuddin A, Li S, Huang J, Yin G, Song L, Jiang Y, **Zhao S**, **Lu M***. MRI T1 Mapping in Hypertrophic Cardiomyopathy: Evaluation in Patients Without Late Gadolinium Enhancement and Hemodynamic Obstruction. *Radiology*. 2020;294(2):275-286. DOI: 10.1148/radiol.2019190651
4. He J, Xu J, Li G, Zhou D, Li S, Zhuang B, Chen X, Duan X, Li L, Fan X, Huang J, Yin G, Jiang Y, Wang Y, **Zhao S***, **Lu M***. Arrhythmogenic Left Ventricular Cardiomyopathy: A Clinical and CMR Study. *Sci Rep*. 2020;10(1):533. DOI: 10.1038/s41598-019-57203-2
5. Chen Z, Cui C, Yin G, Jiang Y, Wu W, Lei J, Guo S, Zhang Z, Arlene S, Arai AE, **Zhao S***, **Lu M***. Aortic regurgitation is common in hypertrophic cardiomyopathy: An echocardiography and cardiovascular magnetic resonance study. *Eur J Radiol*. 2020;124:108836. DOI: 10.1016/j.ejrad.2020.108836
6. Zhuang B, Li S, Xu J, Zhou D, Yin G, **Zhao S***, **Lu M***. Age- and Sex-Specific Reference Values for Atrial and Ventricular Structures in the Validated Normal Chinese Population: A Comprehensive Measurement by Cardiac MRI. *J Magn Reson Imaging*. 2020 Apr 3. DOI: 10.1002/jmri.27160. [Epub ahead of print]
7. Yang Y, Yin G, Jiang Y, Song L, **Zhao S***, **Lu M***. Quantification of left atrial function in patients with non-obstructive hypertrophic cardiomyopathy by cardiovascular magnetic

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- resonance feature tracking imaging: a feasibility and reproducibility study. *J Cardiovasc Magn Reson.* 2020;22(1):1. DOI: 10.1186/s12968-019-0589-5
8. Li L, Chen X, Yin G, Yan W, Cui C, Cheng H, Lu M, **Zhao S***. Early detection of left atrial dysfunction assessed by CMR feature tracking in hypertensive patients. *Eur Radiol.* 2020;30(2):702-711. DOI: 10.1007/s00330-019-06397-0
 9. Zhuang B, Wang S, **Zhao S***, **Lu M***. Computed tomography angiography-derived fractional flow reserve (CT-FFR) for the detection of myocardial ischemia with invasive fractional flow reserve as reference: systematic review and meta-analysis. *Eur Radiol.* 2020;30(2), 712-725. DOI: 10.1007/s00330-019-06470-8
 10. Cui C, Yin G, Lu M, Chen X, Cheng S, Li L, Yan W, Song Y, Prasad S, Zhang Y, **Zhao S***. Retrospective Electrocardiography-Gated Real-Time Cardiac Cine MRI at 3T: Comparison with Conventional Segmented Cine MRI. *Korean J Radiol.* 2019;20(1):114-125. DOI: 10.3348/kjr.2018.0243
 11. Chen X, Li L, Cheng H, Song Y, Ji K, Chen L, Han T, Lu M, **Zhao S***. Early Left Ventricular Involvement Detected by Cardiovascular Magnetic Resonance Feature Tracking in Arrhythmogenic Right Ventricular Cardiomyopathy: The Effects of Left Ventricular Late Gadolinium Enhancement and Right Ventricular Dysfunction. *J Am Heart Assoc.* 2019;8(17):e012989. DOI: 10.1161/JAHA.119.012989
 12. Yang K, Yu SQ, **Lu MJ***, **Zhao SH***. Comparison of diagnostic accuracy of stress myocardial perfusion imaging for detecting hemodynamically significant coronary artery disease between cardiac magnetic resonance and nuclear medical imaging: A meta-analysis. *Int J Cardiol.* 2019;293:278-285. DOI: 10.1161/JAHA.119.012989
 13. Yang K, **Zhao SH***. Giant Pseudoaneurysm Caused by Ruptured Coronary Artery Aneurysm Presenting as a Right Paracardial Mass. *Circ Cardiovasc Imaging.* 2019;12(4):e008788. DOI: 10.1161/CIRCIMAGING.118.008788
 14. Cheng S, Fang M, Cui C, Chen X, Yin G, Prasad SK, **Dong D***, Tian J, **Zhao S***. LGE-CMR-derived texture features reflect poor prognosis in hypertrophic cardiomyopathy patients with systolic dysfunction: preliminary results. *Eur Radiol.* 2018; 28(11):4615-4624. DOI: 10.1007/s00330-018-5391-5

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15. Zhuang B, Sirajuddin A, Wang S, **Arai A***, **Zhao S***, **Lu M***. Prognostic value of T1 mapping and extracellular volume fraction in cardiovascular disease: a systematic review and meta-analysis. *Heart Fail Rev.* 2018;23(5):723-731. DOI: 10.1007/s10741-018-9718-8
16. Cui C, Wang S, **Lu M***, Duan X, Wang H, Jia L, Tang Y, Sirajuddin A, Prasad SK, Kellman P, Arai AE, **Zhao S***. Detection of Recent Myocardial Infarction Using Native T1 Mapping in a Swine Model: A Validation Study. *Sci Rep.* 2018; 8(1):7391. DOI: 10.1038/s41598-018-25693-1
17. Fan H, Li S, **Lu M***, Yin G, Yang X, Lan T, Dai L, Chen X, Li J, Zhang Y, Sirajuddin A, Kellman P, Arai AE, **Zhao S***. Myocardial late gadolinium enhancement: a head-to-head comparison of motion-corrected balanced steady-state free precession with segmented turbo fast low angle shot. *Clin Radiol.* 2018; 73(6):593.e1-593.e9. DOI: 10.1016/j.crad.2018.02.002
18. **Lu M***, Wang S, Sirajuddin A, **Arai AE***, **Zhao S***. Dynamic stress computed tomography myocardial perfusion for detecting myocardial ischemia: A systematic review and meta-analysis. *Int J Cardiol.* 2018; 258:325-331. DOI: 10.1016/j.crad.2018.02.002
19. Wang L, Lu MJ, Feng L, Wang J, Fang W, He ZX, **Dou KF***, **Zhao SH***, **Yang MF***. Relationship of myocardial hibernation, scar, and angiographic collateral flow in ischemic cardiomyopathy with coronary chronic total occlusion. *J Nucl Cardiol.* 2018; 26(5):1720-1730. DOI: 10.1007/s12350-018-1241-8
20. Wu B, **Lu M***, Zhang Y, Song B, Ling J, Huang J, Yin G, Lan T, Dai L, Song L, Jiang Y, Wang H, He Z, Lee J, Yong HS, Patel MB, **Zhao S***. CMR assessment of the left ventricle apical morphology in subjects with unexplainable giant T-wave inversion and without apical wall thickness ≥ 15 mm. *Eur Heart J Cardiovasc Imaging.* 2017; 18(2):186-194. DOI: 10.1093/ehjci/jew045
21. Cheng S, Choe YH, Ota H, Cui C, Yin G, Lu M, Li L, Chen X, Prasad SK, **Zhao S***. CMR assessment and clinical outcomes of hypertrophic cardiomyopathy with or without ventricular remodeling in the end-stage phase. *Int J Cardiovasc Imaging.* 2017; 34(4):597-605. DOI: 10.1007/s10554-017-1263-3
22. Cheng S, Wang H, Lu M, Cui C, Li L, Yin G, **Zhao S***. The value of CMR for determination of heart failure etiology: An unusual case with histology validation, *Int J Cardiol.* 2017, 226:38-

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23. Chen X, Lu M, Ma N, Yin G, Cui C, **Zhao S***. Dynamic Tracking of Injected Mesenchymal Stem Cells after Myocardial Infarction in Rats: A Serial 7T MRI Study. *Stem Cells Int.* 2016; 2016:4656539. DOI: 10.1155/2016/4656539
24. **Lu M***, Du H, Gao Z, Song L, Cheng H, Zhang Y, Yin G, Chen X, Ling J, Jiang Y, Wang H, Li J, Huang J, He Z, **Zhao S***. Predictors of Outcome After Alcohol Septal Ablation for Hypertrophic Obstructive Cardiomyopathy: An Echocardiography and Cardiovascular Magnetic Resonance Imaging Study. *Circ Cardiovasc Interv.* 2016; 9(3):e002675. DOI: 10.1161/CIRCINTERVENTIONS.115.002675
25. Wang L, Ma X, Xiang L, Lu M, Yan C, **Zhao S***, **Fang W***. The characterization and prognostic significance of right ventricular glucose metabolism in non-ischemic dilated cardiomyopathy. *J Nucl Cardiol.* 2016; 23(4):758-767. DOI: 10.1161/CIRCINTERVENTIONS.115.002675
26. Yang Y, Xu Z, Jiang S, **Zhao S**, Zhang G, Jin J, Hu H, Yang K, **Zheng H***, **Zhou XL***. Simultaneous Transcatheter Closure of Multiple Atrial Septal Defects Using Dual Amplatzer Septal Occluder Devices. *Am J Med Sci.* 2016; 352 (3):245-51. DOI: 10.1016/j.amjms.2016.05.029
27. Nguyen C, Lu M, Fan Z, Bi X, Kellman P, **Zhao S***, **Li D***. Contrast-free detection of myocardial fibrosis in hypertrophic cardiomyopathy patients with diffusion-weighted cardiovascular magnetic resonance. *J Cardiovasc Magn Reson.* 2015; 17:107. DOI: 10.1186/s12968-015-0214-1
28. Ma N, Cheng H, Lu M, Liu Q, Chen X, Yin G, Zhu H, Zhang L, Meng X, Tang Y, **Zhao S***. Magnetic Resonance Imaging with Superparamagnetic Iron Oxide Fails to Track the Long-term Fate of Mesenchymal Stem Cells Transplanted into Heart. *Sci Rep.* 2015; 5:9058. DOI: 10.1038/srep09058
29. Cheng H, Lu M, Hou C, Chen X, Li L, Wang J, Yin G, Chen X, Xiangli W, Cui C, Chu J, Zhang S, Prasad SK, **Pu J***, **Zhao S***. Comparison of cardiovascular magnetic resonance characteristics and clinical consequences in children and adolescents with isolated left ventricular non-compaction with and without late gadolinium enhancement. *J Cardiovasc*

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 31. Huang J, **Zhao S**, Chen Z, Zhang S, **Lu M***. Contribution of Electrocardiogram in the Differentiation of Cardiac Amyloidosis and Nonobstructive Hypertrophic Cardiomyopathy. *Int Heart J.* 2015; 56(5):522-526. DOI: 10.1536/ihj.15-005
 32. Chen X, **Zhao S***, Zhao T, Lu M, Yin G, Jiang S, Prasad S. T-wave inversions related to left ventricular basal hypertrophy and myocardial fibrosis in non-apical hypertrophic cardiomyopathy: A cardiovascular magnetic resonance imaging study. *Eur J Radiol.* 2014; 83(2):297-302. DOI: 10.1016/j.ejrad.2013.10.025
 33. Lu M, Wu W, **Zhang G***, So A, Zhao T, Xu Z, Zheng H, Xiangli W, Tian L, Liu S, Jiang S, **Zhao S***. Transcatheter occlusion of azygos/hemiazygos vein in patients with systemic venous collateral development after the bidirectional Glenn procedure. *Cardiology* 2014; 128:293-300. DOI: 10.1159/000362157
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 35. Chen X, Zhao T, Lu M, Yin G, Xiangli W, Jiang S, Prasad S, **Zhao S***. The relationship between electrocardiographic changes and CMR features in asymptomatic or mildly symptomatic patients with hypertrophic cardiomyopathy. *Int J Cardiovasc Imaging.* 2014; 30 :55-63. DOI: 10.1007/s10554-014-0416-x
 36. Lu M, **Zhao S***, An J. Reply: in the footsteps of Virchow. *JACC Cardiovasc Imaging* 2014; 7(4): 433. DOI: 10.1016/j.jcmg.2013.10.017
 37. Lu M, **Zhao S***, Jiang S, Yin G, Wang C, Zhang Y, Liu Q, Cheng H, Ma N, Zhao T, Chen X, Huang J, Zou Y, Song L, He Z, An J, Renate J, Xue H, Shah S. Fat deposition in dilated

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39. Wan J, **Zhao S***, Cheng H, Lu M, Jiang S, Yin G, Gao X, Yang Y. Varied distributions of late gadolinium enhancement found among patients meeting cardiovascular magnetic resonance criteria for isolated left ventricular non-compaction. *J Cardiovasc Magn Reson*. 2013; **15**:20. DOI: 10.1186/1532-429X-15-20
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42. Zhao T, **Lu M***, So A, Wu W, Wang C, Xu Z, Jiang S, Tian L, Liu S, **Zhao S***. Transcatheter closure of coronary artery fistulae: initial human experience with the Amplatzer Duct Occluder II. *J Interv Cardiol* 2013;**26**(4): 359-365. DOI: 10.1111/joic.12039
43. Chen X, Lu M, Yin G, Zhao T, Shao X, Zhao R, Tang Y, An J, Jiang S, **Zhao S***. Three-dimensional phase-sensitive inversion-recovery Turbo FLASH sequence for the assessment of left ventricular myocardial scar in swine. *PLoS One*. 2013; **8**(10):e78305. DOI: 10.1371/journal.pone.0078305
44. Lu M, **Zhao S***, Yin G, Jiang S, Zhao T, Chen X, Tian L, Zhang Y, Wei Y, Liu Q, He Z, Xue H, An J, Shah S. T1 mapping for detection of left ventricular myocardial fibrosis in hypertrophic cardiomyopathy: a preliminary study. *Eur J Radiol*. 2013; **82**(5):e225-231. DOI: 10.1016/j.ejrad.2012.12.014
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47. **Hu S***, Liu S, Zheng Z, Yuan X, Li L, Lu M, Shen R, Duan F, Zhang X, Li J, Liu X, Song Y, Wang W, **Zhao S**, He Z, Zhang H, Yang K, Feng W, Wang X. Isolated coronary artery bypass graft combined with bone marrow mononuclear cells delivered through a graft vessel for patients with previous myocardial infarction and chronic heart failure: a single-center, randomized, double-blind, placebo-controlled clinical trial. *J Am Coll Cardiol*, 2011, 57(24): 2409-2415. DOI: 10.1016/j.jacc.2011.01.037
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50. Cheng H, **Zhao S***, Jiang S, Lu M, Yan C, Ling J, Zhang Y, Liu Q, Ma N, Yin G, Jerecic R, He Z. The relative atrial volume ratio and late gadolinium enhancement provide additive information to differentiate constrictive pericarditis from restrictive cardiomyopathy. *J Cardiovasc Magn Reson*. 2011; 13:15. DOI: 10.1186/1532-429X-13-15
51. **Chaowu Y***, Xin S, **Shihua Z**, Jianrong L, Hao W. Complete transposition of the atrioventricular valves associated with left ventricular apical hypoplasia. *Circulation*, 2011, 124(21): e538-539. DOI: 10.1161/CIRCULATIONAHA.111.043620
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55. **Yang YJ***, Qian HY, Huang J, Geng YJ, Gao RL, Dou KF, Yang GS, Li JJ, Shen R, He ZX, Lu MJ, **Zhao SH**. Atorvastatin treatment improves survival and effects of implanted mesenchymal stem cells in post-infarct swine hearts. Eur Heart J, 2008, 29(12): 1578-1590. DOI: 10.1093/eurheartj/ehn167
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