

1. Datos de Contacto:

Nombre: Sergio Uribe

Cargo académico: Profesor Asociado

Departamento o División: Radiología

Nombre de su laboratorio: Centro de Imágenes Biomédicas

Ubicación del Laboratorio: Centro Médico San Joaquín

Mail: suribe@med.puc.cl

Anexos:8468-8472-3886

2. Líneas de Investigación:

Medical Imaging, translating new imaging methodology into clinical applications, magnetic resonance imaging, cardiovascular imaging, image processing, modeling of physiology and hemodynamic processes. 3D printing and rapid prototyping.

3. Proyectos de Investigación:

Fondequip EQM150033 (USD330) Resonador Magnético preclínico. Investigador principal. 2015-2017.

Fondef IDeA 150411003 (USD\$220K) Radiología Cuantitativa: Reportes Cuantitativos de Grasa Abdominal Total. Principal Investigator. 2015-2017

PIA. Anillo 151102002 (USD \$650K) Tecnologías de Imágenes por Resonancia Magnética para Enfermedades Asociadas a la Vejez: Cerebro, Corazón y Vasos. Investigador Titular. 2015-2018.

Fondecyt 1141036 (USD \$400k), Non-invasive 3D full-field Quantification of Cardiovascular 4D flow MR images. Principal Investigator. 2014-2017

Fondecyt 1130146. (USD \$400k)Effect of Cholecystectomy on Serum Triglyceride and Hepatic Fat Levels in Women and the Development of Nonalcoholic Fatty Liver Disease in Mice. Flavio Nervi, Sergio Uribe et al. Co-Investigator. 2014-2017

Fondecyt 1130379. (USD \$180k). Development of contrast-free magnetic resonance angiography and tissue perfusion techniques. Marcelo Andía, Sergio Uribe et al. Co-Investigator. 2013-2015

Fondecyt 1130887.(USD \$120k) Topologically flexible prior shape knowledge for Level Set segmentations. Cristián Tejos, Sergio Uribe et al. Co-Investigator. 2013-2016

Education Scholar Grant (USD \$70k), Radiological Society of North America (RSNA). Latin American MR E-learning platform. Principal Investigator. 2012-2014

Multidisciplinary Project (USD \$20k). Quantitative imaging biomarkers from cardiovascular magnetic resonance images. Principal Investigator. 2011-2012

Fondecyt 11100427, Conicyt (USD \$150k). Improvements for Magnetic Resonance Non-Contrast Enhanced Angiography and Flow Imaging Techniques. Principal Investigator. 2010-2013.

Anillo ACT79, Conicyt (USD \$900k). Biomedical Imaging in obesity: from cellular mechanisms to clinical applications. Associate. 2010-2013.

Fondecyt 1100864, Conicyt (USD \$160). Evaluation and improvement of the geometric accuracy of rapid prototyping. Co-Investigator

4. Publicaciones:

1. Arboleda C, Aguirre-Reyes D, García MP, Tejos C, Muñoz L, Miquel JF, Irrarrazaval P, Andia ME, Uribe S Total liver fat quantification using three-dimensional respiratory self-navigated MRI sequence. *Magn Reson Med*. 2015 Nov 20. doi: 10.1002/mrm.26028. [Epub ahead of print]
2. Sotelo J, Urbina J, Valverde I, Tejos C, Irrarrazaval P, Hurtado DE, Uribe S Quantification of wall shear stress using a finite-element method in multidimensional phase-contrast MR data of the thoracic aorta. *J Biomech*. 2015 Jul 16;48(10):1817-27. doi: 10.1016/j.jbiomech.2015.04.038. Epub 2015 May 27.
3. Aguirre-Reyes DF, Sotelo JA, Arab JP, Arrese M, Tejos R, Irrarrazaval P, Tejos C, Uribe SA, Andia ME. Intrahepatic portal vein blood volume estimated by non-contrast magnetic resonance imaging for the assessment of portal hypertension. *Magn Reson Imaging*. 2015 Oct;33(8):970-7. doi: 10.1016/j.mri.2015.06.016. Epub 2015 Jun 25.
4. Sensitivity analysis of geometric errors in additive manufacturing medical models. Pinto JM, Arrieta C, Andia ME, Uribe S, Ramos-Grez J, Vargas A, Irrarrazaval P, Tejos C. *Med Eng Phys*. 2015 Mar;37(3):328-34. doi: 10.1016/j.medengphys.2015.01.009. Epub 2015 Jan 31.
5. Valverde I, Gomez G, Coserria JF, Suarez-Mejias C, Uribe S, Sotelo J, Velasco MN, Santos De Soto J, Hosseinpour AR, Gomez-Cia T. 3D printed models for planning endovascular stenting in transverse aortic arch hypoplasia. *Catheter Cardiovasc Interv*. 2015 Jan 2. doi: 10.1002/ccd.25810.
6. Valverde I, Gomez G2, Gonzalez A3, Suarez-Mejias C2, Adsuar A3, Coserria JF1, Uribe S4, Gomez-Cia T2, Hosseinpour AR. Three-dimensional patient-specific cardiac model for surgical planning in Nikaidoh procedure. *Cardiol Young*. 2015 Apr;25(4):698-704. doi: 10.1017/S1047951114000742. Epub 2014 May 9
7. Jorge A. Delgado, Pedro Abad, Simon Rascovsky, Victor Calvo, Gabriel Castrillon, Gerald Greil, and Sergio Uribe,. Assessment of Cardiac Volumes Using an Isotropic Whole Heart Dual Cardiac Phase Sequence in Pediatric Patients. *J Magn Reson Imaging*. 2013 May 30. doi: 10.1002/jmri.24203. [Epub ahead of print]
8. Chabert S, Galindo C. Tejos C, Uribe S, Multiple Echo Multi-Shot (MEMS) Diffusion Sequence. *Journal of Magnetic Resonance imaging* 2013. J

- Magn Reson Imaging. 2013 Oct 17. doi: 10.1002/jmri.24244. [Epub ahead of print]
9. Carlos Milovic, Carolina Oses, Manuel Villalon, Sergio Uribe, Carlos Lizama, Claudia Prieto, Marcelo E Andia, Pablo Irrarrazaval and Cristian Tejos. Calcium (Ca²⁺) waves data calibration and analysis using image processing techniques. *BMC Bioinformatics*. 2013 May 16;14:162
 10. Bächler P, Valverde I, Pinochet N, Nordmeyer S, Kuehne T, Crelier G, Tejos C, Irrarrazaval P, Beerbaum P, Uribe S. Caval Blood Flow Distribution in Patients with Fontan Circulation: Quantification by Using Particle Traces from 4D Flow MR Imaging. *Radiology*. 2013 Apr;267(1):67-75.
 11. Bächler P, Pinochet N, Sotelo J, Crelier G, Irrarrazaval P, Tejos C, Uribe S. Assessment of normal flow patterns in the pulmonary circulation by using 4D magnetic resonance velocity mapping. *Magn Reson Imaging*. *Magn Reson Imaging*. 2013 Feb;31(2):178-88, Epub 2012 Aug 13.
 12. Uribe S, Bächler P, Valverde I, Crelier GR, Beerbaum P, Tejos C, Irrarrazaval P. Hemodynamic Assessment in Patients with One-and-a-Half Ventricle Repair Revealed by Four-Dimensional Flow Magnetic Resonance Imaging. *Pediatr Cardiol*. 2013 Feb;34(2):447-51, Epub 2012 Mar 25
 13. Meneses L, Fava M, Diaz P, Andía M, Tejos C, Irrarrazabal P, Uribe S. Embolization of Incompetent Pelvic Veins for the Treatment of Recurrent Varicose Veins in Lower Limbs and Pelvic Congestion Syndrome. *Cardiovasc Intervent Radiol*. 2013 Feb;36(1):128-32
 14. Miquel ME, Blackall JM, Uribe S, Hawkes DJ, Schaeffter T. Patient-specific respiratory models using dynamic 3D MRI: Preliminary volunteer results. *Phys Med*. 2013 Mar;29(2):214-20
 15. Serrano García C, Barrera F, Labbé P, Liberona J, Arrese M, Irrarrazaval P, Tejos C, Uribe S. Quantification of visceral adipose tissue using magnetic resonance imaging compared with anthropometry, in type 2 diabetic patients]. *Rev Med Chil*. 2012 Dec;140(12):1535-43.
 16. Makowski MR, Wiethoff AJ, Jansen CH, Uribe S, Parish V, Schuster A, Botnar RM, Bell A, Kiesewetter C, Razavi R, Schaeffter T, Greil GF. Single breath-hold assessment of cardiac function using an accelerated 3D single breath-hold acquisition technique - comparison of an intravascular and extravascular contrast agent. *J Cardiovasc Magn Reson*. 2012 Jul 31;14:53.
 17. Valverde I, Nordmeyer S, Uribe S, Greil G, Berger F, Kuehne T, Beerbaum P. Systemic-to-pulmonary collateral flow in patients with palliated univentricular heart physiology: measurement using cardiovascular magnetic resonance 4D velocity acquisition. *J Cardiovasc Magn Reson*. 2012 Apr 27;14(1):25.
 18. Bächler P, Valverde I, Uribe S. Quantification of caval flow contribution to the lungs in vivo after total cavopulmonary connection with 4-dimensional flow magnetic resonance imaging. *J Thorac Cardiovasc Surg*. 2012 Mar;143(3):742-3.
 19. Sergio Uribe, Lina Cadavid, Tarique Hussain, Rodrigo Parra, Gonzalo Urcelay, Felipe Heusser, Marcelo Andía, Cristian Tejos, and Pablo Irrarrazaval. Cardiac Magnetic Resonance findings in a Pediatric

- Population with Isolated Left ventricular Non-compaction. *J Cardiovasc Magn Reson*. 2012 Jan 31;14:9.
20. Hussain T, Lossnitzer D, Bellsham-Revell H, Valverde I, Beerbaum P, Razavi R, Bell AJ, Schaeffter T, Botnar RM, Uribe SA, Greil GF. Three-dimensional Dual-Phase Whole-Heart MR Imaging: Clinical Implications for Congenital Heart Disease. *Radiology*. 2012 May;263(2):547-54.
 21. Honorato JL, Parot V, Tejos C, Uribe S, Irarrazaval P. Chemical species separation with simultaneous estimation of field map and T2* using a k-space formulation. *Magn Reson Med*. 2012 Aug;68(2):400-8.
 22. Clough RE, Hussain T, Uribe S, Greil GF, Razavi R, Taylor PR, Schaeffter T, Waltham M A new method for quantification of false lumen thrombosis in aortic dissection using magnetic resonance imaging and a blood pool contrast agent. *J Vasc Surg*. 2011 Nov;54(5):1251-8.
 23. Uribe S, Hussain T, Valverde I, Tejos C, Irarrazaval P, Fava M, Beerbaum P, Botnar RM, Razavi R, Schaeffter T, Greil GF. Coronary MR Angiography in children with CHD During Systole and Diastole Using a Dual Cardiac Phase Whole Heart Scan. *Radiology*. 2011 Jul;260(1):232-40.
 24. Makowski MR, Wiethoff AJ, Uribe S, Parish V, Botnar RM, Bell A, Kiesewetter C, Beerbaum P, Jansen CH, Razavi R, Schaeffter T, Greil GF. Congenital Heart Disease: Cardiovascular MR Imaging by Using an Intravascular Blood Pool Contrast Agent. *Radiology*. 2011 Sep;260(3):680-8. Epub 2011 May 25.
 25. José L. Winter, Pablo Castro, Luis Meneses, Mónica Chalhub, Hugo Verdejo, Douglas Greig, Luigi Gabrielli, Mario Chiong, Roberto Concepción, Rosemerie Mellado, Claudia Hernández, Sergio Uribe, Sergio Lavandero. Determinaciones de niveles de creatina y lípidos mediante espectroscopia por resonancia magnética en miocardio de pacientes con insuficiencia cardiaca no isquémica. *Rev Med Chile* 2010; 138: 1475-1479
 26. Uribe S, Tejos C, Razavi R, Tejos C. A New Respiratory Gating Technique for Whole Heart Cine Imaging: Integration of a Navigator Slice in SSFP Sequences. *J Magn Reson Imaging*. 2011 Jul;34(1):211-9
 27. Ramirez L, Prieto C, Sing-Long C, Uribe S, Bactchelor P, Tejos C, Irarrazaval P. TRIO a Technique for Reconstruction using Intensity Order: application to undersampled MRI, *IEEE Trans Med Imaging*. 2011 Aug;30(8):1566-76
 28. Cristobal Arrieta, Sergio Uribe, Jorge Ramos-Grez, Alex Vargas, Pablo Irarrazaval, Vicente Parot, Cristian Tejos, (2012) "Quantitative assessments of geometric errors for rapid prototyping in medical applications", *Rapid Prototyping Journal*, Vol. 18 Iss: 6, pp.431 – 442.
 29. Parot V, Sing-Long C, Uribe S, Lizama C, Tejos C, Irarrazaval P. Application of the FrFt to MRI. *Magn Reson Med*. 2012 Jul;68(1):17-29
 30. L Meneses Q, S. Uribe, C. Tejos, M. E Andía, M. Fava, P. Irarrazaval. Using MR Phase contrast velocity mapping for diagnosing of pelvic congestion syndrome. *Phlebology*. 2011 Jun;26(4):157-61.
 31. Groves AM, Chiesa G, Durighel G, Goldring ST, Fitzpatrick JA, Uribe S, Razavi R, Hajnal JV, Edwards AD. Functional cardiac MRI in preterm and term newborns. *Arch Dis Child Fetal Neonatal Ed*. 2011 Mar;96(2):F86-91.

32. Prieto C, Uribe S, Razavi R, Schaeffter T. 3D Undersampled Golden-Radial Phase Encoding for DCE-MRA using Inherently Regularized Iterative SENSE. Magn Reson Med. 2010 Aug;64(2):514-26.
33. Odille F, Uribe S, Batchelor P, Prieto C, Schaeffter S, Atkinson D. Model-based reconstruction for cardiac cine MRI without ECG or breath holding. Magn Reson Med. 2010 May; 63(5):1247-57.
34. Parish V, Hussain M, Greil G, Beerbaum P, Razavi R, Schaeffter T, Uribe S*. Single breath-hold assessment of ventricular volumes using 32-channel coil technology and an extracellular contrast agent. J Magn Reson Imaging. 2010 Apr;31(4):838-44.

5. Libros y patentes:

Book Chapter: 4D flow imaging. Book Title: Imaging of the Cardiovascular System, Thorax, and Abdomen). Editorial Taylor & Francis. In Press.

sería ideal si se pudiera colocar en algún lugar la página del centro de imágenes que es donde desarrollo principalmente mis temas de investigación: <http://www.mri.cl/>.

También quizás sería bueno incluir un link a un sitio como pubmed o de google scholar de cada investigador.