



1. Nombre: **Ulrich Raff Biggemann**
2. Carácter del vínculo: **Regular**
3. Grado máximo: **Doctor en Física**
4. Institución y país que otorgó el grado: **University of Basle, Suiza.**
5. Año de graduación: **1972**
6. Año en que se integró al programa: **1998**
7. Dedicación estimada (horas/semana promedio anual): **12 horas semanales.**
8. Área principal de investigación: **Instrumentación y procesamiento de imágenes en radiología, tomografía y medicina nuclear, Computadores en medicina, Redes neuronales artificiales.**
9. Número de tesis dirigidas desde el año 2000:

Magíster:	Dirigidas: <b>7</b>	En desarrollo: <b>3</b>
Doctorado:	Dirigidas: <b>7</b>	En desarrollo: <b>1</b>
Postdoctorado:	Dirigidas: <b>0</b>	En desarrollo: <b>0</b>
10. Proyectos de investigación desde el año 2000 (indique título del proyecto, fuente de financiamiento, duración y año de adjudicación).

### Principales Proyectos Finalizados

1. **Investigador Principal Proyecto DICYT, “Magnetic resonance imaging of eurodegeneration in progressive supranuclear palsy (PSP)” 2008-2010.**
2. **Investigador Principal Proyecto DICYT, “Clinical implementation of MR imaging techniques using fast IR sequences to evaluate neurodegeneration in idiopathic parkinson disease and parkinsonism”. 2005-2008.**

3. **Investigador Principal Proyecto FONDECYT, “Generalized universal behaviour of finite-sized high correlated systems” 2002-2005.**
11. Lista de publicaciones indexadas (indique índice: ISI, Scielo, etc.) y otros productos desde el año 2000.

#### Publicaciones ISI

1. **R. Salinas, U. Raff, L.A. Henriquez, Temperature tracking in porous media burners. Measurement & Control, 2012.**
2. **G. Palma, U. Raff, A novel application of a Fourier integral representation of bound states in Quantum Mechanics. American Journal of Physics (AJP), 2011.**
3. **G. Rojas, U. Raff, P. Gonzalez, R. Jaimovich, J.C. Quintana, Semi-automated assessment of left ventricular mass using transaxial Tc-99m Sestamibi SPECT imaging. CMIG, 2008.**
4. **Hutchinson M., Raff U. Detection of Parkinson’s Disease by MRI: Spin-Lattice Distribution Imaging Mov. Dis.23: 2008, 1991-1997.**
5. **Hutchinson M., Raff U. On false Negatives in MRI studies of Parkinson Disease – Letter to the Editor. Mov. Disorders, 2007.**
6. **Rojas, G., Raff ,U. González, P. Jaimovich,R. Automated detection of left ventricular borders and calculation of myocardial mass using non-reoriented Tc-99m Sestamibi SPECT images. Alasbimn Journal 9(35): January 2007.**
7. **G. Rojas; P González; R Jaimovich; U Raff. Métodos de reconstrucción de imágenes SPECT miocárdicas: una evaluación. Alasbimn Journal 8(31): January 2006.**
8. **G. Rojas, U. Raff, P. Chaná, C. Juri, I. Huete, N. Lafont, M. Hutchinson. Use of Turbo GRAPPA Inversion Recovery (IR) Imaging in Parkinson’s Disease. Magnetom Flash (Siemens Medical Magnetom Flash) 32, 2006:52-56.**
9. **U. Raff, M. Hutchinson, G.M. Rojas, I. Huete, Inversion Recovery MRI in idiopathic Parkinson’s disease is a very sensitive tool to assess neurodegeneration in the Substantia Nigra. Acad. Radiol. 13, 2006:721-727.**
10. **Rojas G., Raff U., Quintana J.C., I. Huete, Hutchinson M., Data image fusion in Neuroradiology: some techniques and potential use in MR I of Parkinson disease. (Computerized Medical Imaging and Graphics, CMIG 31:17-27, 2007, electronic version December 2006).**
11. **Palma G., Raff U., The one dimensional hydrogen atom revisited Can. J. Phys. 84; 2006:787-800.**

12. Martin Porrman, Palma G., Raff U. Porrman M. Quantum Mechanical Problems revisited: A Novel Method of the Fourier transform. J. Phys A: Math and Gen, Dec 2006.
13. Salinas R., Raff U., Farfán, Automated Estimation of Rock Fragment Distributions using Computer Vision and its application in Mining. IEE Proceedings VISIP, 152:1-8, 2005.
14. Hutchinson M, Raff U, Lebedev S. MRI is a sensitive marker for Parkinson's Disease: Segmented inversion recovery ratio images. NeuroImage 20:1899-1902, 2003.
15. Palma G and Raff U., The one dimensional harmonic oscillator in presence of a dipole-like interaction. AJP 71:247-249, 2003.
16. Palma G., Oyarzún R., Raff U., Generalization of the concept electrostatic potential for infinite charge distributions. AJP 71:813-815, 2003.
17. Salinas R., Raff U., Coronado H., Computer aided quality assurance of low enriched uranium fuel plates in non-power nuclear reactors. Measurement and Control 36:305-308, 2003.
18. Raff U., Rojas G., Huete I., Hutchinson M., Computer Assessment of Neurodegeneration in Parkinson Disease using Data Fusion Techniques with MR images. Acad. Radiology, 10:1036-1044, 2003.
19. Palma G. and Raff U., Addendum to: The one dimensional harmonic oscillator in presence of a dipole-like interaction. AJP 71:956, 2003.
20. R. Salinas, U. Raff, H. Coronado, Luis Olivares, Control de Calidad de Placas Combustibles mediante Procesamiento Digital de Imágenes. Nucleotécnica, 2003 CCHEN.
21. U. Raff, Culclasure TF, Clark C, Overturf L and Groves BM. Automated left ventricular relationships (pV-loops) using disposable angiographic tip transducer pigtail catheters. Int. J. of Cardiac Imaging 16:13-21, 2000.
22. Quantitation of T2 Lesion Load in Multiple Sclerosis: A Novel Semi-automated MR Segmentation Technique. U. Raff, G. Rojas, M. Hutchinson, J.H. Simon, Acad. Radiology 7:237-247, 2000.
23. Hutchinson M, Raff U., Structural Changes of the Substantia Nigra in Parkinson's Disease as revealed by MRI Imaging, AJNR, Am J Neuroradiol 21:697-701, 2000.
24. U. Raff, Culclasure TF, Clark C, Overturf L and Groves BM. Automated left ventricular relationships (pV-loops) using disposable angiographic tip

**transducer pigtail catheters. Int. J. of Cardiac Imaging 16:13-21, 2000.**

**25. Quantitation of T2 Lesion Load in Multiple Sclerosis: A Novel Semi-automated MR Segmentation Technique. U. Raff, G. Rojas, M. Hutchinson, J.H. Simon, Acad. Radiology 7:237-247, 2000.**

Reuniones Científicas Internacionales: 1

Reuniones Científicas Nacionales: 12