

**Escuela de Pregrado – Facultad de Ciencias – Universidad de Chile**



Nombres:

**GONZALO JAVIER**

Apellidos:

**GUTIÉRREZ GALLARDO**

Título Profesional o Grado Académico (incluya el año de obtención):

**LICENCIATURA EN CIENCIAS C/M EN FÍSICA, UNIVERSIDAD DE CHILE  
1987.**

Estudios de Postgrado o Especialización (institución donde lo obtuvo y año de obtención):

**DOCTOR EN CIENCIAS MENCIÓN FÍSICA, PONTIFICIA UNIVERSIDAD  
CATÓLICA DE CHILE 1997.**

Actividad Actual e Institución en la cual trabaja:

**PROFESOR ASOCIADO DE LA UNIVERSIDAD DE CHILE.  
DEPARTAMENTO DE FÍSICA, FACULTAD DE CIENCIAS. SOCIO ACTIVO  
DE LA SOCIEDAD CHILENA DE FÍSICA.**

Reseña de su actividad laboral actual:

**Área de Investigación:** Física de la Materia Condensada. Simulaciones en Materia Condensada.

After finishing my high school education at Liceo Coeducacional de Quilpué, I entered Universidad de Chile where I obtained the undergraduate degree “Licenciado en Física” in the Facultad de Ciencias, Universidad de Chile in 1985. In 1991 I began postgraduate studies at P. Universidad Católica de Chile, obtaining a Master’s degree in 1993 and a PhD in Physics in 1997, supported by a Conicyt fellowship. My PhD thesis, entitled “Amorphous solids and solid state amorphization: a Molecular Dynamics Study”, was conducted at PUC in Santiago and Louisiana State University in Baton Rouge under professors Miguel Kiwi (PUC) and Priya Vashishta (LSU). After that, I spent two years at the Condensed Matter Theory Group (Borje Johansson group) at Uppsala University in Sweden, as a Postdoctoral Fellow supported by the Faculty of Science and Technology of Uppsala University. Later, I returned to Chile, where I

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worked at Universidad de Santiago (USACH) as an Associate Researcher. In 2004 I moved to the Department of Physics in the Facultad de Ciencias, Universidad de Chile, where now I am an Associate Professor.

### PUBLICACIONES INDEXADAS:

Amigo, N., Loyola, C., Davis, S., Gutiérrez, G.

Hypervelocity impact of copper nano-projectiles on copper

(2013) Computational Materials Science, 68, pp. 245-254. Article in Press.

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Conjugate variables in continuous maximum-entropy inference

(2012) Physical Review E - Statistical, Nonlinear, and Soft Matter Physics, 86 (5), art. no.

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Davis, S., Gutiérrez, G.

Structural, elastic, vibrational and electronic properties of amorphous Al<sub>2</sub>O<sub>3</sub> from ab initio calculations

(2011) Journal of Physics Condensed Matter, 23 (49), art. no. 495401, . Cited 3 times.

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[82455220814&partnerID=40&md5=ff2890c305eb2a48d53e2dbf66220df9](http://www.scopus.com/inward/record.url?eid=2-s2.0-82455220814&partnerID=40&md5=ff2890c305eb2a48d53e2dbf66220df9)

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Orellana, W., Gutiérrez, G.

First-principles calculations of the thermal stability of Ti<sub>3</sub>SiC<sub>2</sub>(0001) surfaces

(2011) Surface Science, 605 (23-24), pp. 2087-2091. Cited 1 time.

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Múltiples alturas de equilibrio en capilares cónicos

(2010) Revista Mexicana de Física, 56 (6), pp. 475-481.

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Loyola, C., Davis, S., Peralta, J., Gutiérrez, G.

Onset of failure in argon by the effect of a shockwave: A molecular dynamics study

(2010) Computational Materials Science, 49 (3), pp. 582-587.

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Solving delay differential equations through RBF collocation  
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Bernal, F., Gutierrez, G., Kindelan, M.  
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(2009) Engineering Analysis with Boundary Elements, 33 (2), pp. 200-208. Cited 9 times.  
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Singh, A.K., Menéndez-Proupin, E., Gutiérrez, G., Akahama, Y., Kawamura, H.  
Nonhydrostatic compression of bismuth to 222 GPa: Some constraints on elasticity of the bcc-phase  
(2006) *Journal of Physics and Chemistry of Solids*, 67 (9-10), pp. 2192-2196. Cited 2 times.  
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Orellana, W., Gutiérrez, G., Menéndez-Proupin, E., Rogan, J., García, G., Manoun, B., Saxena, S.  
Ab initio study of  $\text{Ti}_3\text{Si}_0.5\text{Ge}_0.5\text{C}_2$  under pressure  
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Dynamic properties of a classical anisotropic Heisenberg chain under external magnetic field  
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Menéndez-Proupin, E., Gutiérrez, G., Palmero, E., Peña, J.L.  
Electronic structure of crystalline binary and ternary Cd-Te-O compounds

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Gutiérrez, G., Rogan, J.

Structure of liquid GeO<sub>2</sub> from a computer simulation model

(2004) Physical Review E - Statistical, Nonlinear, and Soft Matter Physics, 69 (3 1), art. no. 031201, pp. 031201-1-031201-8. Cited 31 times.

[http://www.scopus.com/inward/record.url?eid=2-s2.0-](http://www.scopus.com/inward/record.url?eid=2-s2.0-37649031037&partnerID=40&md5=8cf8a775c3d8578081893b818995077a)

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SOURCE: Scopus

Gutiérrez, G.

Atomistic simulation of densified amorphous alumina

(2002) Revista Mexicana de Fisica, 48 (SUPPL.3), pp. 60-62. Cited 10 times.

[http://www.scopus.com/inward/record.url?eid=2-s2.0-](http://www.scopus.com/inward/record.url?eid=2-s2.0-0038238873&partnerID=40&md5=8b59a364b3f7fc850886732379bc40e8)

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Gutiérrez, G., Johansson, B.

Molecular dynamics study of structural properties of amorphous Al<sub>2</sub>O<sub>3</sub>

(2002) Physical Review B - Condensed Matter and Materials Physics, 65 (10), art. no. 104202, pp. 1042021-1042029. Cited 122 times.

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Gutiérrez, G., Taga, A., Johansson, B.

Theoretical structure determination of  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>

(2002) Physical Review B - Condensed Matter and Materials Physics, 65 (1), art. no. 012101, pp. 121011-121014. Cited 92 times.

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Belonoshko, A.B., Gutierrez, G., Ahuja, R., Johansson, B.

Molecular dynamics simulation of the structure of yttria Y<sub>2</sub>O<sub>3</sub> phases using pairwise interactions

(2001) Physical Review B - Condensed Matter and Materials Physics, 64 (18), art. no. 184103, pp. 1841031-1841038. Cited 17 times.

[http://www.scopus.com/inward/record.url?eid=2-s2.0-](http://www.scopus.com/inward/record.url?eid=2-s2.0-4243749726&partnerID=40&md5=63e0777ae9948500c28ca3d3bb5c739d)

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Gutiérrez, G., Belonoshko, A.B., Ahuja, R., Johansson, B.

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Parveen Fazal, S., Sen, K.D., Gutierrez, G., Fuentealba, P.  
Shannon entropy of 1-normalized electron density  
(2000) Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical  
Chemistry, 39 (1-3), pp. 48-49. Cited 2 times.  
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Rino, Jose Pedro, Gutierrez, Gonzalo, Ebbsjo, Ingvar, Kalia, Rajiv K., Vashishta, Priya  
Distribution of rings and intermediate range correlations in silica glass under pressure - a  
molecular dynamics study  
(1996) Materials Research Society Symposium - Proceedings, 408, pp. 333-338. Cited 4 times.  
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Amorphization in the vicinity of a grain boundary: A molecular-dynamics approach  
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### PROYECTOS DE INVESTIGACIÓN:

Investigador Responsable. 1120603 Mechanical properties of bulk metallic glasses: a computer simulation study. 2012

Investigador Responsable. 7060212 Study of properties of materials by computer simulation: from atomic to nanoscopic regime. Estudio de las propiedades de materiales mediante simulación computacional: de lo atómico a lo nanoscópico. 2006

Investigador Responsable. 7050162 Study of properties of materials by computer simulation: from atomic to nanoscopic regime. Estudio de las propiedades de materiales mediante simulación computacional: de lo atómico a lo nanoscópico. 2005

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Investigador Responsable. 7040189 Study of properties of materials by computer simulation: from atomic to nanoscopic regime. Estudio de las propiedades de materiales mediante simulación computacional: de lo atómico a lo nanoscópico. 2004

Investigador Responsable. 1030063 Study of properties of materials by computer simulation: from atomic to nanoscopic regime. Estudio de las propiedades de materiales mediante simulación computacional: de lo atómico a lo nanoscópico. 2003

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Coinvestigador. 1020035 Spin structure and magnetic behaviour at the interface of exchange biased films. 2002

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Actualización, mayo 2014