

CURRICULUM VITAE

Datos personales

Nombre: *de la Cruz, Francisco*
Nacido: *Mayo 1, 1938*
Ciudadano: *Argentino*
Estado Civil: *Casado*
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-EDUCACIÓN Y RECONOCIMIENTOS

- 1961 Licenciado en Física - Instituto Balseiro (Universidad Nacional de Cuyo)
- 1968 Doctor en Física - Instituto Balseiro (Universidad Nacional de Cuyo)
- 1979 "Teófilo Isnardi" Premio Academia Nacional de Ciencias.
- 1986 "Chevalier Palms Academic " Gobierno de Francia.
- 1988 "Dr. Ricardo Gans" Premio Fundación Gans y Universidad Nacional de La Plata
- 1991 Miembro Correspondiente de la Academia Nacional de Ciencias.
"TWAS 1991 Award in Physics" Otorgado por Third World Academy of Sciences.
- 1992 "Premio al Merito en Ciencias" Consejo Municipal de Bariloche.
- 1993 "Diploma al Mérito" Fundación Konex (Argentina).
"Premio Konex de Platino" Fundación Konex (Argentina).
- 1995 Fellow of the American Physical Society
- 1997 Miembro elegido de la Third World Academy of Sciences
- 2002 Elegido como Foreign Associated Member of the National Academy of Sciences of the United States of America.
Premio "Educar Juntos 2002" otorgado por el Arzobispado de Buenos Aires
- 2003 Proclamado "Ciudadano Ilustre" por el Concejo Municipal de San Carlos de Bariloche (RN) Argentina
Miembro correspondiente de la Academia de Ciencias Exactas, Físicas y Naturales (Buenos Aires-Argentina)
"Diploma al Mérito" Fundación Konex (Argentina).
- 2004 "Premio a la Investigación Científica 2004 (Física)" otorgado por la Fundación Bunge y Born
Fellow of the Institute of Physics (London)
- 2005 Miembro de la Academia Argentina de Ciencias del Ambiente (Argentina)
- 2010 Premio Houssay Trayectoria Física, Matemática, Ciencia de la Computación. Ministerio de Ciencia, Tecnología e Innovación Productiva de la Rep. Argentina
- 2013 Abrikozov Prize in Vortex Physics, 14th International Workshop on Vortex Matter in Superconductivity, Nanjing, Jiansu, PR of China

-ACTIVIDAD PROFESIONAL

- 1958-1961 Beca de la Comisión Nacional de Energía Atómica para estudiar Licenciatura en Física en el Instituto Balseiro
- 1962-1969 Investigador CNEA
- 1968-1971 Associate Researcher, Brown University, Providence, R.I., U.S.A.

- 1971- 2008 Investigador CNEA
- 1972 Visiting Researcher, Brown University, Providence, R.I.,U.S.A. (three months).
- 1976 Visiting Researcher at Max Planck Institut, Stuttgart, Germany.
- 1980 Organizador del "Workshop on Condensed Matter", Instituto Balseiro, Bariloche, Argentina.
- 1981-2005 Member of the International Committee, International Conference on Low Temperature Physics
Miembro del jurado de Coca-Cola "Premio en Física".
- 1984 Profesor visitante, Universidad de Grenoble, Investigador en el CNRS-CRTB, Grenoble, Francia (Mayo-Agosto).
Miembro del Comité Asesor en Física del CONICET (Consejo Nacional de Investigaciones Científicas of Argentina).
- 1986 Member of the Organizing Committee, "5th International Conference On Phonon Scattering in Condensed Matter", Urbana, Ill., U.S.A..
- 1988-2003 Member of the Advisory Committee of the "M2S-High Tc Conference".
Member of the International Committee, "Latin American Conference on High Temperature Superconductivity", Rio de Janeiro, Brazil.
- 1989 Consultant for PNUD for Physics Project of Chile (CHI/88/001).
Editor of Modern Physics Letters B (World Scientific)
- 1990 Member of the International Committee "International Conference on Transport Properties of Superconductors", Rio de Janeiro, Brazil.
Member of the International Committee "6th International Workshop on Critical Currents", Cambridge,(UK).
- 1992 Coordinator of the Superconductivity Collaboration Program of the London Area and the Low Temperature Group at the Centro Atómico Bariloche.
Visita al Imperial College, London, U.K..
- 1993 Director Organizador del "Workshop on High Tc Superconductors and Related Materials" (Advanced Activities), Bariloche, Argentina. (Enero).
Participación en el "20th International Conference on Low Temperature Physics", Eugene, Oregon, U.S.A. Conferencia Invitada (August).
- 1994 Miembro del "International Committee", "7th International Workshop on Critical Currents", Vienna, Austria (January).
Profesor visitante de la "Universidad Autónoma de Barcelona- Facultad de Ciencias", Bellaterra, España (Junio-October).
Miembro del "International Committee", "4th M2S-High Tc Conference", Grenoble , France (July 1994).
- 1996 Noviembre 1996 a Abril 1997 "Gerente de Evaluación y Acreditaciones del CONICET"
- 1997 Mayo 1997-2001 Director de la Agencia Nacional de Promoción Científica y Técnica (SECYT-Ministerio de Cultura y Educación)
- 2000 Editor del New Journal of Physics
- 2005 Editor de Proceedings of the National Academy of Sciences hasta el presente (2014).
Editor de Solid State Communications
- 2008-2014 Miembro Fundador: Colegio Académico Universidad de San Martin

-ACTIVIDAD EN ENSEÑANZA”

1964-1969 Ayudante de Cátedra, Instituto Balseiro

1972-1978 Profesor Asociado, Instituto Balseiro

1979-hasta Julio 1999: Profesor, Instituto Balseiro.

1976 Profesor Invitado, Max Planck Institut, Stuttgart, Alemania, y en el Centre de Recherche sur les Tres Basses Temperatures, Grenoble, France.

1981 Curso sobre “Superconductivity and Disordered Systems”, INTEC, Santa Fé, Argentina. (Julio)

Curso “Quantum Magnetometers Applications”, Campinas University Brazil.(Nov)

1982 Curso “Disordered Systems”, “Solid State Physics Meeting”, Bariloche (Julio)
Organizador del “Curso de Física del Estado Sólido”, para Profesores Universitarios, Instituto Balseiro, CRUN-SUBCYT.

1983 Curso “Superconductivity” en la Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina.

Curso sobre “Thermodynamics” in the “Solid State Physics Course”, for University Teachers, Instituto Balseiro, subencionado por CRUN-SUBCYT. (Oct)

1986/87/88/90/92/94 to 2004 Professor at the “Solid State Physics School” sponsored by TWAS, Fundación Antorchas,CNEA and Instituto Balseiro.

1989/1990 Professor at the “Experimental Workshop on High Temperature Superconductors”. ICTP, Trieste, Italy.

1990 Researcher Consultant of the Superconductivity Laboratory of the ICTP, Trieste, Italy.

1990 Director Organizer of the “Workshop on High Tc Superconductors and Related Materials” (Advanced Activities), Trieste, Italy.

1992 Lecture on “Magnetic Response of the High Temperature Superconductors” University of Leuven, Belgium. (Sept)

1993 Director Organizer of the “Workshop on High Tc Superconductors and Related Materials” (Advanced Activities), Bariloche, Argentina. (Jan)

1994 Profesor Invitado en la "Universidad Autónoma de Barcelona- Facultad de Ciencias", Bellaterra, Spain

1999 Director Organizador del “Workshop on High Tc Superconductors and Related Materials” (Advanced Activities), Bariloche, Argentina. (Octubre)

2004 Director Organizador del PASI ON MEMS, Bariloche 21-30 de junio de 2004

2005 Profesor Invitado en el ICMB-Universidad Autonoma de Barcelona (España) Enero-Mayo 2005

-DIRECTOR DE TESIS

1. -Fenómenos de transporte en indio: resultados experimentales a bajas temperaturas. Oscar J. Bressan (Doctorado) (Instituto Balseiro 14/11/75)

2. -Propiedades magneticas de la superconductividad de superficie. Javier Luzuriaga (Doctorado) (Instituto Balseiro13/08/79)

3. -Estudio del desorden mediante la longitud de penetración superconductor. Roberto Arce (Doctorado) (Instituto Balseiro 31/12/82)

4. -Propiedades normales y superconductoras de sistemas amorfos metálicos. Pablo D. Esquinazi (Doctorado) (Instituto Balseiro 6/04/83)

5. -Un sistema granular de percolacion controlable. Ricardo G. Steinmann (Doctorado) (UBA, 1985)
6. -Movimiento colectivo de los vórtices. Efectos de la dimensionalidad del sistema; estudio de la estabilidad de defectos en la red de vórtices. Victor L.P. Frank (Doctorado) (Instituto Balseiro 12/12/85)
7. -Efectos de tamaño en superconductores inhomogeneos. Julio J. Guimpel (Doctorado) (Instituto Balseiro 23/12/87)
8. -Propiedades de transporte del sistema $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ -y y su relación con propiedades superconductoras. Eduardo J. Osquiguil (Doctorado) (Instituto Balseiro 6/09/89)
9. -Estructuras de flujo magnético en superconductores de alta Tc. Leonardo Civalé (Doctorado) (Instituto Balseiro 6/09/89)
10. -Efecto de la dimensionalidad y fluctuaciones en el diagrama de fases de superconductores de alta Tc. Hugo F. Safar (Doctorado) (Instituto Balseiro 17/12/91)
11. -Anisotropía estructural y su rol en el diagrama de fases de los óxidos superconductores Carlos A. Duran (Doctorado) (Instituto Balseiro 16/05/92)
12. -Efecto del cloro en las propiedades de transporte eléctrico del superconductor de alta Tc: $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4-x-y}\text{Cl}_y$. Carlos E. Acha (Doctorado) (UBA 07/93)
13. -Granularidad en el superconductor LaSrCuO policristalino. Pablo E. Levy (Doctorado) (UBA 12/93)
14. -Diagramas de fases de superconductores laminares, estructuras de vórtices en monocristales de $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$. Hernán Pastoriza (Doctorado) (Instituto Balseiro 02/94)
15. -Procesos disipativos en el superconductor granular $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ -y: contribución de las barreras y los granos. Ricardo Decca (Doctorado) (Instituto Balseiro 25/03/94)
16. -Coherencia de fase y mecanismos de disipación en superconductores de alta temperatura crítica. Daniel López (Doctorado) (Instituto Balseiro 02/95)
17. -Estructura de la red de vórtices en el superconductor 2H-NbSe_2 . Cristian Bolle (Doctorado) (Instituto Balseiro 10/95)
18. -Vórtices en superconductores laminares de alta temperatura crítica. M.F. Goffman (Doctorado) (Instituto Balseiro 12/12/97)
19. -Coherencia de fase en el sistema de vórtices del YBCO: efecto del desorden y la anisotropía. E. Fernández Righi (Doctorado) (Instituto Balseiro 4/6/98)
20. -Transiciones de Fase en la Red de Vórtices de los Superconductores de Alta Temperatura Crítica. Santiago Grigera (Doctorado) (Instituto Balseiro 19/7/99)
21. -Transición de Fase Líquido-Sólido de vórtices de primer orden con y sin cambio de simetría. Mariela A. Menghini (Doctorado) (Instituto Balseiro 14/3/03)
22. -Microscopic Observation of Structural Transformations in Vortex Matter (Doctorado) (Instituto Balseiro 12/2003).

Director de 30 Tesis de Maestría

-CONFERENCIAS INVITADAS PRESENTADAS EN CONGRESOS CIENTIFICOS

1. **International Workshop on Condensed Matter Physics, Bariloche, Argentina (1980).** SUPERCONDUCTIVITY AND THE EVOLUTION OF THE AMORPHOUS STATE OF $\text{La}(1-x)\text{Cu}(x)$. En colaboración con el grupo del Laboratorio de Bajas Temperaturas, Centro Atómico Bariloche.
2. **5th Int. Conf. on Phonon Scattering in Condensed Matter, Stuttgart, Germany (1983)** HEAT TREATMENT EFFECTS ON THE PHONON-ELECTRON CONTRIBUTION TO THERMAL CONDUCTION IN AMORPHOUS $\text{Zr}_{70}\text{Cu}_{30}$. P. Esquinazi y F. de la Cruz..
3. **Seventeenth Int. Conference on Low Temperature, Karlsruhe, Germany. (1984).** HYBRIDIZATION EFFECTS BETWEEN d AND s BANDS IN AMORPHOUS MATERIALS. F. de la Cruz, M.E. de la Cruz, L. Civale y R. Arce.
4. **Int. Workshop on Glasses and Crystalline Defect Systems, Bad Honnef, Germany (1984)** TRANSPORT AND SUPERCONDUCTING PROPERTIES OF METALLIC GLASSES.
5. **Simposio Latinoamericano de Física dos Sistemas , Niteroi, Brazil (1984)** STRUCTURAL RELAXATION: LOW TEMPERATURE PROPERTIES .
6. **VI Low Temperature Physics Winter Meeting, Oaxtepec, Mexico, (1985).** SUPERCONDUCTIVITY IN METALLIC GLASSES.
7. **IX SLAFES, Mar del Plata, Argentina, (1985)** COLLECTIVE TWO-DIMENSIONAL PINNING IN THE SUPERCONDUCTING AMORPHOUS $\text{Zr}_{70}\text{Cu}_{30}$, E. Martinez, V.L.P. Frank, E.J. Osquiguil y F. de la Cruz.
8. **New Directions in Low Temperature Physics, Los Alamos, NM, (1986)**
9. **IX Winter Meeting on Low Temperature Physics, High Tc Superconductors, Tequesquitengo, Mor, Mexico, (1988)** MACROSCOPIC VIEW OF THE HIGH Tc SUPERCONDUCTIVITY. F. de la Cruz, L. Civale, E. Osquiguil, H. Safar, R. Decca, D.A. Esparza, C.A. D'Ovidio.
10. **Latin-American Conference on High Temperature Superconductivity, Rio de Janeiro, Brazil, (1988).** CONSEQUENCES OF A VERY SHORT COHERENCE LENGTH IN HIGH Tc SUPERCONDUCTORS. F. de la Cruz, L. Civale y H. Safar.
11. **Conf. on "Oxygen disorder effects in High Tc Superconductors" ICTP, Trieste, Italy (1989)** SUPERCONDUCTING PHASE DIAGRAM OF A HIGH Tc CERAMIC. L. Civale, H. Safar y F. de la Cruz.
12. **Int. Conf. on Materials and Mechanisms of High Tc SC, Stanford, USA, (1989)** MAGNETIC FLUX CREEP IN INTERCONNECTED SUPERCONDUCTORS. L. Civale, H. Safar, F. de la Cruz.
13. **March Meeting. Am. Phys. Society (1990)** ON THE PHASE DIAGRAM OF HIGH Tc SUPERCONDUCTORS. F. de la Cruz.
14. **Coral Gables Workshop on Electronic Structure and Mechanisms for High Temperature Superconductors, Miami, U.S.A (1991)** MAGNETIC FLUX IN HIGH Tc SUPERCONDUCTORS: THERMAL EFFECTS. F. de la Cruz y C. Duran.

15. **XV Encontro Nacional de Física da Matéria Condensada", Caxambu, Brasil (1992)**
16. **LXXVII Reunión de la Asociación Física Argentina, Buenos Aires (1992)**
17. **TWAS Fourth General Conference, Kuwait. (1992)**
18. **20th International Conference on Low Temperature Physics, Eugene, Oregon, USA(1993) FLUX CREEP IN YBa₂Cu₃O₇ SINGLE CRYSTALS NEAR T_c. H. Pastoriza, H. Safar, E. Fernandez Righi y F. de la Cruz.**
19. **Workshop on the Statics and Dynamics of Vortices in Superconductors, Eugene, Oregon, (1993)**
20. **Adriatico Research Conference on Vortex Fluctuations in Superconductors, Trieste, Italia (1993).**
21. **4th Int. Conf. on Materials and Mechanisms for Superconductivity, High Temperature SC, Grenoble, France(1994) LONG RANGE CORRELATIONS OF THE VORTEX STRUCTURE IN YBCO SINGLE CRYSTALS. D. Lopez, G. Nieva, F. de la Cruz.**
22. **APS March Meeting, San Jose, California, USA (1995) VORTEX PHASE DIAGRAMS: FROM BSCCO TO YBCO.**
23. **Int. Workshop on Vortex Dynamics. Lake Forest College, Chicago, USA.(1995) SUPERCONDUCTING COHERENCE IN THE C DIRECTION IN THE MIXED STATE OF HTS : THE INFLUENCE OF DISORDER.**
24. **10th Anniversary HTS Workshop. Houston, Tx, USA(1996) COMPARATIVE STUDY OF VORTEX CORRELATION IN TWINNED AND ANTWINNED YBCO SINGLE CRYSTALS. F. de la Cruz, D. López, E. F. Righi, G. Nieva-**
25. **International Workshop on Vortex Matter in High-Temperature Superconductors. Monte Verità, Ascona, Switzerland, June 1997 "VORTEX-LATTICE MELTING AND LAYER DECOUPLING IN YBa₂Cu₃O_{7-δ} " E. F. Righi, S. A. Grigera, G. Nieva, D. López, y F. de la Cruz.**
26. **International Workshop on Vortex Matter in High-Temperature Superconductors Stanford University, Cal. USA, June 1999 "MAGNETIC VORTEX PINNING INDUCED BY BITTER DECORATION"**
27. **International Conference on Solid State Spectroscopy, Schwabisch Gmund, Germany, September 1999 "SUPERFICIAL PERIODIC PINNING INDUCED BY BITTER DECORATION FOR THREE DIMENSIONAL STATIC AND DYNAMIC VORTEX STRUCTURES""Y. Fasano, J. Herbsommer y F. de la Cruz .**
28. **EUCASS 99, Sitges, Spain, September 1999 "SUPERFICIAL PERIODIC PINNING INDUCED BY BITTER DECORATION" Y. Fasano, J. Herbsommer y F. de la Cruz.**
29. **SLAFES, Cartagena, Colombia, November 1999 "PERFECT SURFACE, 2D, PINNING (MAGNETIC DOTS), OF 3D ELASTIC STRUCTURES (VORTEX LATTICES), F. de la Cruz, M. Menghini y Y. Fasano**
30. **6th Int. Conf. on Materials and Mechanisms for Superconductivity, High Temperature SC, Houston , Texas (Feb.2000) "STATIC AND DYNAMIC PROPERTIES OF VORTEX STRUCTURES UNDER THE INFLUENCE OF**

- WEAK PERIODIC PINNING POTENTIALS” F.de la Cruz, M. Menghini y Y. Fasano.
31. **March Meeting 2000 de la American Physical Society, Minneapolis, USA(March 2000).** “NUCLEATION AND PROPAGATION OF ELASTIC VORTEX STRUCTURES” F. de la Cruz, Y. Fasano y M. Menghini .
 32. **Israel Science Foundation Workshop on Vortex Dynamics, Ramat-gan, Israel (May 2001).** “VORTEX SOFTENING IN A FREE FORCE CONFIGURATION AT THE PEAK EFFECT” F. de la Cruz
 33. **86a Reunión Nacional de Física, AFA, Rosario (Sept. 2001)** “RESPUESTA DE ESTRUCTURAS ELASTICAS A POTENCIALES PERIODICOS Y DESORDENADOS” F. de la Cruz
 34. **3r. Taller de Mesoscópicos, Choroní, Venezuela (dic.2001)** “INTERACCION DE REDES ELASTICAS TRIDIMENSIONALES CON REDES MESOSCOPICAS ARTIFICIALES” F. de la Cruz
 35. **I Workshop on Materials, Mechanisms an Applications of Superconductivity, Recife, Brasil(Dic. 2001)** “EXPERIMENTAL DETECTION OF ELASTIC PROPERTIES OF VORTEX STRUCTURES” F. de la Cruz
 36. “3-D VORTEX LATTICE IN A SUBSTRATE WITH 2-D PINNING POTENTIALS INDUCED BY ELECTRON LITHOGRAPHY” F. de la Cruz
 37. **7th Int. Conf. on Materials and Mechanisms for Superconductivity, High Temperature SC, M2S-RIO (Rio de Janeiro, May 2003)** “IMAGING THE INTERFACE BETWEEN VORTEX LATTICES WITH DIFFERENT SYMMETRIES”
 38. **17th Int. Symposium on Superconductivity ISTE (Nigata, Japan, Nov. 2004)** “ROLE OF COLUMNAR DEFECTS ON THE TOPOLOGY OF THE VORTEX SOLID”
 39. **2nd SCENET WG Meeting, WG 1c: High Critical Current Superconductors for Applications together with WG 1b: Materials for Power Applications and New Materials.-Sub-topic “Current Percolation in Granular Superconductors” 21 – 24 April 2005-Rust, Austria** “REAL SPACE VORTEX CONFIGURATION IN BSCCO(2212) FOLLOWING ION IRRADIATION”
 40. **Foro Estratégico para el Desarrollo Nacional 23 Agosto 2006 – Buenos Aires Argentina** “CONFERENCIA Y PARTICIPACION EN MESA REDONDA”

Regular Participation in the annual meetings of the Asociacion Física Argentina.

PUBLICATIONS

1. THERMAL CONDUCTIVITY OF POLYCRYSTALLINE ZINC BELOW 1K-J.M. Cotignola, F. de la Cruz, M.E. de la Cruz and R.P. Platzek. **Rev. Sci. Instrum.** **38**, 87(1967).
2. LONGITUDINAL MAGNETOMORPHIC EFFECT IN INDIUM FILMS-F. de la Cruz, M.E. de la Cruz and J.M. Cotignola. **Phys. Rev.** **163**, 575 (1967).

3. THERMAL AND ELECTRICAL CONDUCTIVITIES OF VERY-HIGH-PURITY INDIUM -M.E. de la Cruz, F. de la Cruz, J. M. Cotignola, O. J. Bressan and C. A. Luengo. **Phys. Rev.****176**, 871(1968).
4. MEDICIONES DE CONDUCTIVIDAD TÉRMICA Y ELÉCTRICA DE In DE ALTA PUREZA-M. E. De la Cruz, J. M. Cotignola, F. de la Cruz, O. J. Bressan, C. A. Luengo. **Revista Mexicana de Fisica** **17**, 90 (1968).
5. EFECTO MAGNETOMÓRFICO TÉRMICO LONGITUDINAL EN MUESTRAS DE In-J. M. Cotignola, F. de la Cruz, M. E. de la Cruz and O. J. Bressan. **Revista Mexicana de Fisica** **17**, 91(1968).
6. SENSITIVE HOT WIRE LEVEL DETECTOR FOR CRYOGENIC LIQUIDS- F. de la Cruz and O. J. Bressan. **Rev. Sci. Instrum.****40**, 483(1969).
7. VARIATION OF THE RATIO H_{c3}/H_{c2} IN THE IMMEDIATE VICINITY OF T_c - F. de la Cruz, M. D. Maloney and M. Cardona. **Phys. Rev.** **187**, 766 (1969).
8. ANOMALOUS BEHAVIOR OF THE RATIO H_{c3}/H_{c2} near T_c FOR Sn-In AND In-Bi alloy SYSTEMS- M. D. Maloney, F. de la Cruz and M. Cardona. **Phys. Rev.****B2**, 2512 (1970).
9. SUPERCOOLING AND SUPERHEATING IN Al AND Zn-F. de la Cruz, M. D. Maloney and M. Cardona. **Physica** **55**, 749(1971).
10. SUPERCONDUCTIVE SUPERCOOLING AND SUPERHEATING OF SMALL CADMIUM SPHERES: SIZE EFFECTS-F. de la Cruz, M. D. Maloney and M. Cardona. **Phys. Rev.****B** **3**, 3802(1971).
11. GINZBURG-LANDAU PARAMETER AND SURFACE SUPERCONDUCTIVITY IN Al THIN FILMS-M. D. Maloney and F. de la Cruz. **Solid State Commun.** **9**, 1647(1971)
12. FLUCTUATION INDUCED DIAMAGNETISM IN ALUMINUM-H.L Kaufman and F. de la Cruz. **Solid State Commun.** **9**, 1729.
13. SUPERCONDUCTING PARAMETERS AND SIZE EFFECTS OF ALUMINUM FILMS AND FOILS -M. D. Maloney, F. de la Cruz and M. Cardona. **Phys. Rev. B** **5**, 3558(1972).
14. SURFACE-TEMPERATURE DETERMINATION IN THE KAPITZA PROBLEM-Ridner, E. Martinez and F.de la Cruz. **Phys. Rev. Lett.** **35**, 855(1975).
15. T5 LAW AND MATTHIESSEN'S RULE-O. J. Bressan, A. Ridner and F. de la Cruz. **J. Phys. F: Metal Phys.** **5**, 481(1975).
16. LOW ANGLE ELECTRON SCATTERING IN THERMAL RESISTIVITY-O. J. Bressan, A. E. Ridner and F. de la Cruz. **J. Phys. F: Metal Phys** **5**, 1902(1975).
17. SUPERCONDUCTING INTERMEDIATE STATE IN CADMIUM-M.E. de la Cruz, E. J-P. Godfrin, F. de la Cruz and C. de Allende. **Solid State Commun.** **18**, 747(1976).
18. ELECTRICAL RESISTANCE OF EPITAXIAL CRYSTALLINE FILMS ON SN_x F. de la Cruz and H. J. Stolz. **Solid State Commun.** **20**, 241(1976).
19. REVERSIBLE MAGNETIZATION OF SURFACE SUPERCONDUCTIVITY-J. Luzuriaga and F. de la Cruz. **Solid State Commun.** **25**, 605(1978).
20. TEMPERATURE DEPENDENCE OF THE SUPERCONDUCTING GIANT-VORTEX STATE. THEORY AND EXPERIMENT-F. de la Cruz, H. J. Fink and J. Luzuriaga. **Phys. Rev. B** **20**, 1947(1979).

21. SURFACE SUPERCONDUCTIVITY AND KAPITZA RESISTANCE-A.Ridner, F. de la Cruz and E. N. Martinez. **Proceedings of the III International Conference on Phonon Scattering in Condensed Matter**, p-199. Edited by H. J. Maris, Plenum Publ. Corp., U.S.A.(1980)
22. PRODUCTION OF RIBBON QUENCHED SAMPLES USING AN ARC FURNACE-H. Tutzauer, P. Esquinazi, M.E. de la Cruz and F. de la Cruz. **Rev. Sci.Instr.** **51**, 546(1980).
23. PHASE DIAGRAM AND SUPERCONDUCTIVE PROPERTIES OF SPLAT-COOLED $\text{Cu}_x \text{La}_{1-x}$. J. Favaron, M.E. de la Cruz, P. Esquinazi and F. de la Cruz. **Phys. Rev.** **B21**, 2804(1980).
24. SUPERCONDUCTING PENETRATION DEPTH IN AMORPHOUS METALS-R. Arce, F. de la Cruz and P. Esquinazi. **Solid State Commun.** **38**, 1253(1981).
25. HEAT TREATMENT EFFECTS IN $\text{La}_{70}\text{Cu}_{30}$ AMORPHOUS SYSTEM-P. Esquinazi, M. E. de la Cruz and F. de la Cruz. **Phys. B** **108**, 1215(1981).
26. SUPERCONDUCTING PENETRATION DEPTH IN AMORPHOUS $\text{La}_{70}\text{Cu}_{30}$ -R. Arce, F. de la Cruz and P. Esquinazi. **Phys. B** **108**, 1253(1981).
27. MODEL RELATING SUPERCONDUCTIVE PENETRATION DEPTH AND METALLURGICAL PHASE SEPARATION IN AMORPHOUS $\text{La}_{70}\text{Cu}_{30}$.R. Arce, F. de la Cruz and H. Fink. **Solid State Commun.** **42**, 575(1982).
28. HEAT TREATMENT EFFECTS IN AMORPHOUS METALS: $\text{Zr}_{70}\text{Cu}_{30}$ AND $\text{La}_{70}\text{Cu}_{30}$ P. Esquinazi, M.E. de la Cruz, A. Ridner and F. de la Cruz. **Solid State Commun.** **44**, 941(1982).
29. ELECTRICAL RESISTIVITY OF AMORPHOUS $\text{Zr}_{70}\text{Cu}_{30}$ AND THE KONDO LIKE MODEL-J. Guimpel and F. de la Cruz. **Solid State Commun.** **44**, 1045(1982).
30. PHONON THERMAL CONDUCTIVITY LIMITED BY ELECTRON SCATTERING IN AMORPHOUS $\text{Zr}_{70}\text{Cu}_{30}$.P. Esquinazi and F. de la Cruz. **Phys. Rev. B** **27**, 3069(1983).
31. SUPERCONDUCTING BEHAVIOUR OF AMORPHOUS $\text{Zr}_{70}\text{Cu}_{30}$.R. Arce, F. de la Cruz and J. Guimpel. **Solid State Commun.** **47**, 885(1983).
32. CRITICAL TEMPERATURE AND DENSITY OF STATES IN AMORPHOUS $\text{Zr}_{70} \text{Cu}_{30}$. L. Civale, F. de la Cruz and J. Luzuriaga. **Solid State Commun.****48**, 389.
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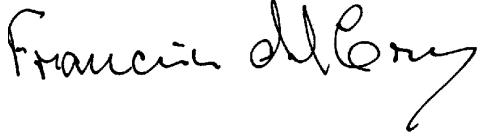
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San Carlos de Bariloche, Septiembre 2014

A handwritten signature in black ink, appearing to read "Francisco de la Cruz". The signature is written in a cursive style with a long, sweeping tail on the final letter.

Francisco de la Cruz