

## CURRICULUM VITAE

### **Ikaros Bigi** **Professor of Physics** **University of Notre Dame**

**BORN:** August 22, 1947 in München, FR Germany

**Citizenship:** German

**Married,** three lovely children

#### **Education**

- 1967           Abitur diploma, Gymnasium Fridericianum, Erlangen, FR Germany.
- 1973           M.A., Max-Planck-Institut fuer Physik, Universitaet München, FR Germany.
- 1977           Ph.D., Theoretical Physics, Max-Planck-Institut fuer Physik, Universitaet München, FR Germany.
- 1984           Habilitation, Physics, RWTH Aachen, FR Germany.

#### **Positions Held**

- 1973-1974:    Research Associate at SLAC, Stanford, California.
- 1975-1981:    Research Associate at the Max-Planck-Institut f. Physik, München, FR Germany (on leave of absence 1978-1981).
- 1978-1980:    Senior Research Fellow at CERN, Geneva, Switzerland.
- 1980-1988:    Wissenschaftlicher Mitarbeiter (roughly comparable to Assistant Professor), RWTH Aachen (=Aachen University), FR Germany (on leave of absence 1984 and 1985-1988).
- 1983:           Visiting Professor at the University of California, Los Angeles, California.
- 1984:           Visiting Research Associate at Fermilab, Batavia, Illinois.
- 1984:           Visiting Professor at the University of Oregon, Eugene, Oregon.
- Spring 1985:  Visiting Research Scientist at TRIUMF, Vancouver, B.C., Canada.

- 1985-1988 Visiting Professor at the Stanford Linear Accelerator Center on leave on absence from Aachen University.
- 1988-1991: Associate Professor of Physics at the University of Notre Dame, Notre Dame, Indiana
- 1993/1994: On Sabbatical Leave of Absence from Notre Dame at CERN, Geneva, Switzerland.
- Spring 2002: Mercator Professor at the Institute for Theoretical Particle Physics, Univ. of Karlsruhe, Germany
- Present: Grace-Rupley II Professor of Physics at the University of Notre Dame, Notre Dame, Indiana

### **Other Professional Experience**

Reviewer of Research Grants for DOE, NSF, the Canadian Research Council, the Israel Science Foundation, INFN in Italy and the Soros Foundation

Referee for Phys. Rev. D, Phys. Rev. Lett., Nucl. Phys. B, Phys. Lett. B, Europ. J. Phys. C, PDG

### **Teaching and Lecturing 1980-1988**

- 1980-1983: Taught courses at RWTH Aachen both on the undergraduate and graduate level, for physics majors as well as for students majoring in engineering, mathematics, chemistry and biology.
- 1982: Convenor at the XXI International Conference on High Energy Physics, Paris, France.
- 1982: Discussion Leader at the CERN Summer School on High Energy Physics, Great Britain.
- 1984: Taught a graduate course in particle physics at the University of Oregon, Eugene.
- 1984-1985: Taught graduate and undergraduate courses at RWTH Aachen.
- June 1984: Discussion Leader at the CERN Summer School on High Energy Physics, Norway.
- June 1987: Lecture series given at the Charm Physics Symposium, Beijing, P.R. China.
- July 1987: Lecture series given at TASI-87 (Theoretical Advanced Study Institute), Santa Fe, New Mexico.

April 1988: Lecture series given at the SIN Spring School on Heavy Flavour Physics, Zuz, Switzerland.

July 1988: Lecture series given at the SLAC Summer Institute, Stanford, California.

### **International Conferences in 1989**

- 1) Invited Speaker at the Spring Meeting of the American Physical Society, Baltimore, May 1-4, 1989.
- 2) Invited Plenary Speaker at the Tau-Charm Factory Workshop, SLAC, Stanford, May 23-27, 1989.
- 3) Invited Review Speaker at the 1989 International Symposium on Heavy Quark Physics, Cornell University, June 13-17, 1989.
- 4) Invited Plenary Speaker at the Workshop on B-Factories and Related Physics Issues, Blois, France, June 26-July, 1989.
- 5) Invited Plenary Speaker at the Workshop on CP and Fixed-Target B-Physics at the Ultra High Energies of UNK, Dubna, USSR, July 4-8, 1989.
- 6) Invited Speaker at the Workshop on Physics at Fermilab in the 1990's, Breckenridge, Colorado, August 15 - 24, 1989.
- 7) Invited Plenary Speaker at the Beijing Workshop on Weak Interactions and CP Violation, Beijing, PR China, August 22-26, 1989.
- 8) Invited Plenary Speaker at the 1989 EPS Conference on High Energy and Particle Physics, Madrid, Spain, September 6-13, 1989.
- 9) Invited Plenary Speaker at the Workshop on a 20 TeV Fixed Target B Physics Facility, FNAL, November 17-18, 1989.

### **Invited Seminars and Colloquia in 1989**

- 1) High Energy Physics Seminar "Beyond the Rough and Tumble in B Decays," Cornell University, Ithaca, February 3, 1989.
- 2) "Wine and Cheese" Seminar "Quo vadis, Fascinum?," Fermilab, Batavia, April 14, 1989.
- 3) Theoretical Physics Seminar "Flavour Mixing, Rare Decays, CP Violation and the Columbus Paradigm," University of Toronto, October 6, 1989.

**International Conferences in 1990**

- 1) Invited Speaker at the Workshop on Testing CPT and Studying CP Violation at a f Factory, UCLA, Los Angeles, April 20-27, 1990.
- 2) Invited Speaker at the Santa Barbara Workshop on “Weak Decays of Heavy Quarks,” ITP, Santa Barbara, May 21-23, 1990.
- 3) Invited Speaker at the Meeting on Future B Physics, Leningrad, USSR, May 1990.
- 4) Invited Speaker at the BNL Summer Study on CP Violation, Brookhaven National Lab., June 1990.
- 5) Invited Speaker and Participant at the ITP Program “Lattice Gauge Theory: The Standard Theory and Beyond,” Santa Barbara, August 1990.

**Invited Lectures and Colloquia in 1990**

- 1) High Energy Physics Seminar, University of Chicago, March 5, 1990.
- 2) High Energy Physics Seminar, University of Michigan, Ann Arbor, October 1990.

**International Conferences in 1991**

- 1) Invited Speaker at the TRIUMF - IPP International Workshop on B Factories, Vancouver, B.C., February 14 - 15, 1991.
- 2) Invited Plenary Speaker at the Rencontres De La Vallee D’Aoste, La Thuile, Italy, March 1991.
- 3) Invited Speaker at the Rencontres de Moriond, France, March 1991.
- 4) Invited Speaker and Participant at the Summer Program of the Aspen Center of Physics, August 1991.

**Invited Lectures & Colloquia in 1991**

- 1) HEP Seminar to the OPAL collaboration, CERN, February 28, 1991.
- 2) High Energy Physics Seminar “CP Violation in B Decays - Searches & Their Interpretations,” University of Virginia, Charlottesville, VA, May 1, 1991.
- 3) Departmental Colloquium “The Breakdown of Microscopic Time Reversal Invariance & The Cathedral Builders’ Paradigm,” Physics Dept., University of Virginia, Charlottesville, VA, May 3, 1991.
- 4) High Energy Physics Seminar “CP Violation in B Decays (& Elsewhere) - The Low Road To New Physics,” University of Texas at Austin, October 14, 1991.

**International Conferences & Schools in 1992**

- 1) Invited Review Speaker at the Rencontres De Moriond, France, March 1992.
- 2) Invited Speaker at the XXVI International Conference on High Energy Physics, Dallas, Texas, August 1992.
- 3) Teaching a course at the 1992 CERN Summer School for High Energy Physics, Monschau, FR Germany, September 1992.
- 4) Convenor and Speaker at the APS-DPF'92 Meeting, Fermilab, November 1992.

**Invited Lectures & Colloquia in 1992**

- 1) HEP Seminar to the OPAL Collaboration, CERN, Switzerland, March 1992.
- 2) High Energy Physics Seminar at Indiana University, Bloomington, April 27, 1992.
- 3) High Energy Physics Seminar, Princeton University, October 21, 1992.

**International Conferences in 1993**

- 1) Convenor & Speaker at the SSC Physics Symposium, University of Wisconsin, Madison, March 29-31.
- 2) Speaker at the SUSY93 Conference, Northeastern University, Boston, March 29 - April 1.
- 3) Convenor & Speaker at the Third Workshop on the Tau-Charm Factory, Marbella, Spain, June 1 - 6.
- 4) Convenor & Speaker at the Snowmass Workshop on B Physics, Snowmass, Colorado, June/July.
- 5) Speaker at the Advanced Study Conference on Heavy Flavours, Pavia, Italy, September 3-7.

**Invited Lectures & Colloquia in 1993**

- 1) HEP Seminar at Cornell University, March 19.
- 2) HEP Seminar at the University of Colorado, April 26.
- 3) HEP Seminar at CERN, Geneva, Switzerland, September. 23.
- 4) HEP Seminar at the University of Geneva, Switzerland, October. 22.
- 5) LAL-LPTHE-IPN Seminar at Orsay, France, November 4.
- 6) Theory Seminars at CERN, Geneva, Switzerland, December 6 & 7.

**International Conferences & Schools in 1994**

- 1) Lecture Series given at the XXII ITEP Winter School of Physics, Moscow, Russia, February 22 - March 2.
- 2) Invited Talk delivered at the VIII Rencontres de Physique de la Vallee d'Aoste, La Thuile, Italy, March 1994.
- 3) Theory Summary Lecture presented at 'Beauty 94,' the 2<sup>nd</sup> International Workshop on B Physics at Hadron Machines, Le Mont St. Michel, France, April 1994.
- 4) Invited Talk given at the International Conference on CP Violation held at the TECHNION, Haifa, Israel, June 1994
- 5) Invited Talk delivered at 'QCD 94,' Montpellier, France, July 1994.
- 6) Invited Lecture presented at the SLAC Workshop on Tau-Charm Factories in the Era of Beauty Factories, Stanford, August 1994.
- 7) Invited Talk given at 'HQ94,' the International Workshop on Heavy Quarks at Fixed Target, Charlottesville, Virginia, October 1994
- 8) Invited Lecture delivered at the International Workshop on B Physics, Nagoya, Japan, October 1994

**Invited Lectures & Colloquia in 1994**

- 1) HEP Seminar at the University of Bonn, Germany, May 19
- 2) HEP Seminar at the University of Freiburg, Germany, May 20
- 3) HEP Seminar at the University of Munich, Germany, May 25
- 4) HEP Seminar at the Paul-Scherrer-Institute of the ETH Zurich, Switzerland, May 27
- 5) HEP Seminar at CERN, Geneva, Switzerland, May 30
- 6) HEP Seminar at the University of Padova, Italy, May 31
- 7) HEP Seminar at CERN, Geneva, Switzerland, June 3
- 8) HEP Seminar at the RWTH Aachen, Germany, June 21
- 9) HEP Seminar at DESY, Hamburg, Germany, June 22
- 10) HEP Seminar at KEK, Tsukuba City, Japan, October 24

- 11) HEP Seminar at the Yukawa Institute, Kyoto University, October 25

#### **International Conferences & Schools in 1995**

- 1) Invited Lecture given at the 'Cracow Epiphany Conference on Heavy Quarks (in honour of the 60<sup>th</sup> birthday of Kacper Zalewski),' Jagellonian University, Cracow, Poland, January 5-7.
- 2) Two Invited Lectures at 'LISHEP95,' LAFEX International School on High Energy Physics, Rio de Janeiro, Brazil, February 20-22.
- 3) Invited Plenary Speaker at the 'Spring Meeting of the German Physical Society,' Karlsruhe, Germany, March 13-16.
- 4) Series of six lectures at the 'Taiwan Spring School on High Energy Physics,' Taiwan, March 22-25.
- 5) Invited Lecture at the 6<sup>th</sup> International Symposium on Heavy Flavour Physics, Pisa, Italy, June 6 - 10.
- 6) Invited Lecture at the Workshop on the tau-charm Factory, Argonne Nat. Lab., June 21 - 23.
- 7) Series of six lectures at the 'Trieste Summer School on High Energy Physics,' Trieste, Italy, July 2-8.
- 8) Invited Participant at the INT Program 'Physics Beyond the Standard Model at Low and Intermediate Energies,' Institute for Nuclear Theory, Univ. of Washington, Seattle, July 30 - August 20.
- 9) Invited Talk at the DESY Theory Workshop 1995, Hamburg, Germany, September 27 - 29.
- 10) Invited Talk at the Annual UK Theory Meeting, Rutherford Lab, Didcot, UK, December 18 - 20.
- 11) Invited Lecture at the 'Technion Workshop on Heavy Flavours,' Haifa, Israel, December 26 - 29.

**Invited Lectures & Colloquia in 1995**

- 1) HEP Seminar at the Academia Sinica, Taipei, Taiwan, March 20.
- 2) Physics Colloquium at National Taiwan University, Taipei, Taiwan, March 21.
- 3) Physics Colloquium at Chung-Hsin University, Taichung, Taiwan, March 27.
- 4) HEP Seminar at the University of Pennsylvania, Philadelphia, April 24.
- 5) HEP Seminar at the Physics Dept., Oxford University, Oxford, UK, May 9.
- 6) HEP Seminar at the Rutherford Appleton Lab, Didcot, England, May 11.
- 7) HEP Seminar at the Physics Dept., Harvard University, September 8.
- 8) HEP Seminar at Cornell University, November 17.

**International Conferences & Schools in 1996**

- 1) Convenor and Speaker at the Beijing Tau-Charm Factory Workshop '96, Beijing, February 5 - 10.
- 2) Invited Lecture at the 'Second Workshop on Continuous Advances in QCD,' TPI, University of Minnesota, Minneapolis, March 29 - 31.
- 3) Series of Lectures on 'CP Violation & Heavy Flavour Physics' at the Third Vietnam School of Particle Physics, Hanoi, Vietnam, September 4 - 18.
- 4) Invited Lecture at the 'Third Workshop on Heavy Quarks at Fixed Target,' Rheinfels Castle, St. Goar, Germany, October 3 - 6.

**Invited Lectures & Colloquia in 1996**

- 1) Physics Colloquium and HEP Seminar at Vanderbilt University, Nashville, April 17 & 18.
- 2) HEP Seminar at the University of Florida, Gainesville, Spring '96.
- 3) Physics Colloquium at the Illinois Institute of Technology, Chicago, May 1.
- 4) HEP Seminar at Ohio State University, Columbus, November 6.
- 5) HEP Seminar at Argonne National Lab, November 18.

**International Conferences & Schools in 1997**

- 1) Series of Lectures on 'CP Violation' at the 25<sup>th</sup> ITEP Winter School of Physics, Snegiri, Russia, February 18 - 28.
- 2) Convenor at the Second BABAR Physics Workshop at Princeton, March 17 - 20.
- 3) Series of Lectures on 'CP Violation' at 'Frontiers in Contemporary Physics,' Vanderbilt University, Nashville, May 11 - 16.
- 4) Convenor at the Third BABAR Physics Workshop at Orsay, France, June 16 - 19.
- 5) Convenor at the XVI International Workshop on Weak Interactions and Neutrinos, Capri, Italy, June 22 - 28.
- 6) Invited Lecturer at the Symposium 'Twenty Beautiful Years of Bottom Physics,' Illinois Institute of Technology, Chicago, June 29 - July 2.
- 7) Director of and Lecturer at the course 'Heavy Quark Physics' at the International School of Physics 'Enrico Fermi,' Varenna, Italy, July 8 - 18.
- 8) Convenor at the Europhysics Conference HEP97, Jerusalem, August 1997.
- 9) Invited Speaker at the 'IVth International Workshop on Heavy Quark Physics,' Rostock, Germany, September 20 - 22.
- 10) Invited Speaker at the 'Belle Atami Workshop on B Physics,' Atami, Japan, November 7 - 9.

**Invited Lectures & Colloquia in 1997**

- 1) HEP Seminar at the Physics Depart., Technical University, Munich, Germany, January 8.
- 2) HEP Seminar at Lawrence Livermore National Lab, March 10.
- 3) HEP Seminar at Lawrence Berkeley National Lab, March 13.
- 4) HEP Seminar at the Physics Depart., Michigan State University, April 8.
- 5) HEP Seminar at the University of Hamburg, Germany, June 23.
- 6) Physics Colloquium at Wayne State University, Detroit, October 16.
- 7) HEP Seminar at the Physics Depart., Nagoya University, Nagoya, Japan, October 17.

**International Conferences & Schools in 1998**

- 1) Series of Lectures on “B Meson Physics and CP Violation” at the first APCTP Hadron Physics Winter School, Seoul, Korea, February 23 - 27, 1998.
- 2) Invited Speaker at Thinkshop 1998, Fermilab, October 17, 1998.

**Invited Lectures & Colloquia in 1998**

- 1) HEP Seminar at CERN, Geneva, Switzerland, July 28.
- 2) Physics Colloquium at Superkamiokande Lab., Japan, November 6.

**International Conferences & Schools in 1999**

- 1) Invited Lecturer at the Sapporo Winterschool, Niseko, Japan, March 3 - 9, 1999.
- 2) Invited Speaker at KAON '99, the Chicago Conference on Kaon Physics, Chicago, June 21 - 26, 1999.
- 3) Invited Speaker at the Workshop on Extracting  $V_{cb}$  and  $V_{ub}$ , CERN, Geneva, Switzerland, May 28 - June 2, 1999.
- 4) Invited Speaker at the Third International Conference on B Physics and CP Violation, Taipei, Taiwan, December 3 - 7, 1999.

**Invited Lectures & Colloquia in 1999**

- 1) Physics Colloquium at Temple University, Philadelphia, March 29.
- 2) HEP Seminar at the University of Pennsylvania, Philadelphia, March 30.
- 3) HEP Seminar at Michigan State University, East Lansing, April 13.
- 4) HEP Seminar at Cornell University, Ithaca, May 17.
- 5) HEP Seminar at Syracuse University, Syracuse, May 18.
- 6) Theory Seminar at CERN, Geneva, Switzerland, May 31.
- 7) Physics Seminar at KEK, Japan, October 20.

**International Conferences & Schools in 2000**

- 1) Invited Talk at “NuFact'00,” Monterey, California, May 22 - 26.
- 2) Convenor and Speaker at the “Beyond  $10^{34}$   $e^+e^-$  Workshop, Physics at a Second Generation B Factory,” Sleeping Bear Dunes, Michigan, June 16 - 18.
- 3) Invited Plenary Speaker at the “XXXth ICHEP2000,” Osaka, Japan, July 27 - August 2.

- 4) Invited Speaker at “LEAP 2000,” San Servolo, Venice, Italy, August 20 - 26.
- 5) Opening Lecturer at “Cpconf 2000, International Conference on CP Violation,” Ferrara, Italy, September 18 - 22.
- 6) Member of the International Advisory Board for “HQ2K,” Rio de Janeiro, October
- 7) Summary Speaker at “HQ2K -- 5<sup>th</sup> Workshop on Heavy Quarks at Fixed Target,” Rio de Janeiro, Brazil, October 9 - 12.

#### **Invited Lectures & Colloquia in 2000**

- 1) HEP Seminar at CERN, Geneva, Switzerland, January 10.
- 2) Lecture Series on ‘CP Violation,’ Troisieme Cycle de la Physique en Suisse Romande, University of Lausanne, Switzerland, June.
- 3) Physics Colloquium at Universita Roma III, Rome, Italy, November 7.
- 4) Physics Colloquium at LNF, Frascati, Italy, November 9.
- 5) Physics Colloquium at Northwestern University, Evanston, November 29.

#### **International Conferences & Schools in 2001**

- 1) Invited Plenary Speaker at “BCP4 -- The 4<sup>th</sup> International Workshop on B physics & CP Violation,” Ise, Japan, February 19 - 23.
- 2) Invited Plenary Speaker at “KAON2001 -- International Conference on CP Violation,” Pisa, Italy, June 12 - 19.
- 3) Speaker at the “Aspen Workshop on Heavy Flavour Dynamics,” Aspen, August 30.
- 4) Concluding Talk at the “Workshop on CP Violation,” Ann Arbor, November 17.

#### **Invited Lectures & Colloquia in 2001**

- 1) HEP Seminar at the Physics Dept., University of Barcelona, Spain, January 8.
- 2) HEP Seminar at the Physics Dept., Technical University of Munich, FR Germany, January 10.
- 3) Physics Colloquium at UTEV, Fermilab, March 15.
- 4) Physics Colloquium at Iowa State University, Ames, April 23.
- 5) HEP Seminar at Brookhaven National Lab, Long Island, May 9.

- 6) Two lectures on Heavy Flavour Dynamics at the University of Milano, Italy, June.

#### **International Conferences & Schools in 2002**

- 1) Convenor & Speaker at the “Workshop on the Unitarity Triangle,” CERN, Geneva, Switzerland, February 13 - 16.
- 2) Invited Speaker at “Meson 2002,” Jagellonian University, Cracow, Poland, May 24 - 27.
- 3) Member of the International Advisory Board for “HQ&L 2002,” Vietri, Italy.
- 4) Summary Talk at “Heavy Quarks & Leptons 2002,” Vietri, Italy, May 28 - June 1.
- 5) Invited Speaker at “Matter-Antimatter Asymmetry,” Blois, France, June 19.
- 6) Invited Speaker at “Beauty 2002,” Santiago de Compostela, Spain, June 20.
- 7) Co-Chairperson of “Time and Matter – an International Colloquium on the Science of Time,” Venice, Italy, August.
- 8) Member of the Program Committee of “Frontier Science 2002 – Charm, Beauty and CP,” Frascati, Italy, October.

#### **Invited Lectures & Colloquia in 2002**

- 1) Physics Colloquium at the Institut. f. Nuclear Physics, Research Center Jülich, FR Germany, January 15.
- 2) HEP Seminar, SLAC, Stanford, January 30.
- 3) HEP Seminar, Enrico Fermi Institute, Univ. of Chicago, February 25.
- 4) Series of six lectures on Heavy Flavour Dynamics & CP Violation, Univ. of Karlsruhe, Germany, May - July.
- 5) Particle Physics Colloquium, Univ. of Karlsruhe, Germany, June 21.
- 6) Particle Physics Colloquium, Univ. of Würzburg, Germany, June 28.
- 7) Particle Physics Colloquium, DESY-Zeuthen, Germany, July 10.
- 8) Theory Seminar, DESY-Zeuthen, Germany, July 11.
- 9) HEP Seminar at KEK, High Energy Accelerator Research Organization, Tsukuba City, Japan, November 5.
- 10) HEP Seminar at the Physics Dept. of Nagoya University, Nagoya, Japan, November 7.

**International Conferences & Schools in 2003**

- 1) Invited Speaker at the Workshop on the CKM Triangle, Durham, UK, April 5 - 9.
- 2) Invited Speaker at the Ringberg Phenomenology Workshop on Heavy Flavours, Ringberg Castle, Germany, April 27 - May 2.
- 3) Invited Speaker at the SLAC Workshop on a 'Super-B' Factory, SLAC, Stanford University, May 8 - 10.

**Invited Lectures & Colloquia in 2004**

- 1) 2 Invited Talk at the "CLEO-c and BESIII Joint Workshop on Charm, QCD and Tau Physics,' Beijing, China, January 13-15
- 2) Invited Speaker at the 'Aspen Winter Meeting,' Aspen, Colorado, February 1-7
- 3) Invited Speaker at the 'XXXIX Rencontres de Moriond: Electroweak Interactions and Unified Theories,' La Thuile, Val d'Aoste, Italy, March 21-28
- 4) Invited Lecturer at the LNF Spring School, Frascati, Italy, May 17-21
- 5) High Energy Physics Colloquium, University of Dortmund, Germany, May 25
- 6) High Energy Physics Colloquium, University of Siegen, Germany, May 26
- 7) High Energy Physics Seminar, LAL, Orsay, France, July 2
- 8) High Energy Physics Colloquium at LNF Frascati, Italy, July 9
- 9) Invited Lecturer at 'VietNam 2004,' the 5<sup>th</sup> Rencontres du Fietnam on Particle Physics and Astrophysics, Hanoi, Vietnam, August 5-11
- 10) 2 Invited Lectures at FPCP04 in Daegu, Korea, October 6 & 8
- 11) Invited Talk at the V(xb) Workshop, Nagoya University, Japan, October 14
- 12) High Energy Physics Colloquium at Michigan State University, East Lansing, October 27
- 13) 2 Talks at the D0 Heavy Flavour Workshop, IU Bloomington, December 3 & 4
- 14) High Energy Physics Colloquium at SLAC, Stanford University, December 9
- 15) Invited Talk at the V(ub)/SF Workshop, SLAC, Stanford University, December 11.

**Invited Lectures & Colloquia in 2005**

- 1) Invited Lecture at 'Exotic States: Challenges for QCD' in Bad Honnef, Germany, January 17-21
- 2) Invited Lecture "The Snake biting its Tail – Fundamental Physics and the Universe" at 'McMullin Fest,' Notre Dame, April 2005.

- 3) Invited Lecture “On the Theoretical Treatment of Semileptonic B Decays” at ‘WIN05 – 20<sup>th</sup> International Workshop on Weak Interactions and Neutrinos,’ Delphi, Greece, June 2005.
- 4) from Quarks to Leptons,’ Varenna, Italy, July 2005
- 5) Series of four lectures at the International Summer School on High Energy Physics, Beijing, PR China.
- 6) Invited Plenary Lecture “Hadronization – the Unsung Hero rather than the Alleged Villain in the Tale of CP Violation” given at ‘Hadron 05 – XI International Conference on Hadron Spectroscopy,’ Rio de Janeiro, Brazil, August 2005.
- 7) Invited Plenary Lecture”Exploring CP Violation – at the Beginning of an Exciting Journey” at ICFP2005 – 3<sup>rd</sup> International Conference on Flavor Physics,’ Jungli, Taiwan, Oct. 2005.
- 8) Two Invited Plenary Lectures “Charm Dynamics as a Window onto New Physics” and “On the Magic of T odd Moments,” respectively, at ‘Flavour in the Era of the LHC – A Workshop on the Interplay of Flavour and Collider Physics,’ CERN, Geneva, Switzerland, Nov. 2005.
- 9) Four ‘Orsay Lectures’ “The Tale of a Theory” at LAL, Universite Paris-Sud, Orsay, France, May 2005
- 10) HEP Seminar “Hadronization – the Hero rather than the Villain in the Tale of CP Violation,” LNF Frascati, Frascati, Italy, July 2005
- 11) HEP Seminar “Who Needs Hadronic Collider Experiments for B Physics?” at CBPF, Rio de Janeiro, Brazil, August 2005
- 12) HEP Colloquium “The Beauty of the Brown Muck – News from the Heavy Quark Expansion” at National Taiwan University, Taipeh, Taiwan, Oct. 2005.
- 13) Theory Seminar “Lessons on QCD’s Nonperturbative Dynamics – News from the Heavy Quark Expansion” at LPT, Universite Paris-Sud, Orsay, France, Nov. 2005.

#### **International Conferences & Schools in 2006**

- 1) Three Invited Lectures at ‘DIF06,’ Frascati, Italy, Feb. 28 – March 3.
- 2) Invited Talk given (by phone) at the ‘Second Workshop on the Super B-Factory,’ Frascati, Italy, March 17.
- 3) Convenor of Roundtable Discussion on the plans for a Superflavour Factory, CERN, Switzerland, May 16.
- 4) Invited Plenary Lecture given at ‘Charm 2006 – International Workshop on Tau-Charm Physics,’ Beijing, China, June 5.
- 5) Invited Plenary Lecture given at ‘Workshop on PRC-US Cooperation in High Energy Physics,’ Beijing, China, June 15.
- 6) Series of three double lectures given at the European School of High Energy Physics,

Aronsberg, Sweden, June 23 – 29.

- 7) Invited Talk given (by phone) at ‘Superflavour Factory Workshop,’ SLAC, USA, June 16.
- 8) Invited Plenary Lecture given at ‘Physics at LHC,’ Cracow, Poland, July 7.
- 9) Convenor of Working Group 3 at ‘Flavour in the Era of the LHC Workshop,’ CERN, Switzerland, Oct. 9 – 11.
- 10) Invited Lecture at ‘SuperB 2006 Workshop,’ Monte Porzio Catone, Italy, Nov. 14,
- 11) Invited Lecture at the ‘Symposium on Precision Calculations for Hadron and Lepton Colliders,’ Karlsruhe, Germany, Nov. 23.
- 12) Roundtable participant and speaker at ‘CKM 2006 – 4<sup>th</sup> International Workshop on the CKM Unitarity,’ Nagoya, Japan, Dec. 15.

### **Seminars & Colloquia in 2006**

- 1) HEP Theory Seminar given at SLAC, Stanford, March 17.
- 2) HEP Seminar given at Tohoku University, Sendai, Japan, March 22.
- 3) HEP Seminar given at the Theoretical Physics Institute of the Chinese Academy of Science, Beijing, June 8.

### **International Conferences & Workshops in 2007**

- 1) Given a Working Group Report at ‘Flavour in the Era of the LHC Workshop’, CERN, Switzerland, March 2007.
- 2) Invited talk at the ‘Internal BaBar Workshop on D Oscillations’, SLAC, Stanford, May 2007.
- 3) Invited talk (by phone) at the ‘SuperB V Workshop’, Paris, France, May 2007.
- 4) Invited talk (by video conference) at the Joint meeting LHCb/theory at CERN, June 2007.
- 5) Invited talk at MENU07, Juelich, Germany, Sept. 10 - 14, 2007.
- 6) Concluding talk at the ‘ARGUS Fest’, DESY, Hamburg, Nov. 9, 2007.

### **Seminars & Colloquia in 2007**

- 1) HEP Theory Seminar given at the Technical University, Munich, Germany, June 27.

- 2) HEP Seminar given at LAL, Orsay, France, July 16.
- 3) Physics Colloquium at the University of Innsbruck, Austria, June 2007.

### **International Conferences, Schools & Schools in 2008**

- 1) Convenor at the SuperB Workshop VI, Valencia, Spain, Jan. 7 – 15.
- 2) Four lectures at the INFN Ph.D. program in HEP, Pisa, Italy, May 12 – 23.
- 3) Convenor and speaker at the CERN Theory Institute on Flavour Dynamics, CERN, Switzerland, May 26 – June 13.
- 4) Invited speaker at the Second Workshop on Heavy Flavour Physics, Capri, Italy, June 16 – 18.
- 5) Invited speaker at the Workshop on the Origin of P, CP and T Violation, Trieste, Italy, July 2–5.
- 6) Lecturer at the Summer Institute on Flavour Physics, Kavli Institute, Beijing, China, July 10 – 31.
- 7) Lecturer at the Summer Institute on Flavour Neutrino Physics, Kavli Institute, Beijing, China, Sept. 1 – 19.
- 8) Invited speaker at the meeting of the Brazilian Physics Society/DPF, Rio de Janeiro, Sept. 22 – 26.

### **Awards and Honors**

- 1967-1974: Scholarship awarded by the “Stiftung Maximilianeum”
- 1970-1971: Fellowship Student at Brasenose College, Oxford University, United Kingdom.
- 1968-1976: Scholarship awarded by the “Studienstiftung des Deutschen Volkes”.
- 1973: Fellowship Student at Collegio Ghislieri, Pavia, Italy.
- 1973/1974: Research Scholarship to SLAC awarded by the “Studienstiftung d.Deutschen Volkes”.

- 1982: Research Grant for the project “Study of the Interplay of Strong and Weak Forces in the Decays of Charmed Hadrons” awarded by the Deutsche Forschungsgemeinschaft (German Research Association) -- included travel to SLAC, Stanford, California.
- 1985: Research Fellowship for one year awarded by the Max-Kade Foundation.
- 1985 Heisenberg Fellowship for five years awarded by the Deutsche Forschungsgemeinschaft (German Research Association).
- 1989: Principal Investigator, NSF Grant No. PHY-8909929 covering a period of three years including a Postdoc position.
- 1992: Principal Investigator, NSF Grant No. PHY-9213313 covering a period of four years including a Postdoc position.
- 1992: Principal Investigator (mit Dr. J. M. Frere) of a NATO research project on Heavy Flavour Physics.
- 1993: Principal Investigator in the US-Japanese Collaboration Project ‘B Physics’.
- 1996: Principal Investigator, NSF Grant No. PHY96-05080 covering a period of five years including a Postdoc position.
- 2001: Principal Investigator, NSF Grant No. INT-0089550 for a U.S.-Japan Cooperative Science proposal covering a period of three years.
- 2001: Principal Investigator, NSF Grant No. PHY-0087419 covering a period of three years including a Postdoc position.
- 2002: Mercator Visiting Professorship at the University of Karlsruhe, Germany, awarded by the Deutsche Forschungsgemeinschaft (German Research Association).
- 2004: Elected Fellow of the American Physical Society (for correctly predicting large CP violation in B meson decays)
- 2004: Winner of the J.J. Sakurai Prize in Theoretical Particle Physics “for pioneering theoretical insights that pointed the way to the very fruitful experimental study of CP violation in B decays, and for continuing contributions to CP and heavy flavor physics”
- 2004: Appointed to Lepton Collider Program Advisory Committee, KEK (Linear Collider Program Committee), Tsukuba City, Japan.
- 2004: Member of the IAC for the ‘International Workshop on Heavy Quarks & Leptons 2004,’ San Juan, Puerto Rico, June 1-5

- 2004: Member of the IAC for ‘DAΦNE2004: Physics at Meson Factories,’ Frascati, Italy, June 7-11
- 2005: Appointed to the “Zéme echelon de la 1ére classed u corps des Professeurs’ by the Laboratoire de l’Accélérateur Linéaire, Orsay (France) to deliver the ‘2005 Orsay Lectures,’ May 30, June 1 and 3, 2005.
- 2005: Elected Fellow of the American Physical Society
- 2006: Member of the IAC for ‘DIF06,’ Frascati, Italy, Feb. 28 – March 3, 2006, for ‘Charm 2006 – International Workshop on Tau-Charm Physics,’ Beijing, China, June 5 – 7, 2006, for ‘Heavy Quarks & Leptons 2006,’ Munich, Germany, Oct. 16 – 20, 2006 and for ‘CKM 2006 – 4<sup>th</sup> International Workshop on the CKM Unitarity,’ Nagoya, Japan, Dec. 12 – 16, 2006.
- 2006: Appointed to the Program Advisory Committee for the BELLE program, KEK, Tsukuba City, Japan.
- 2007: Member of ‘Time and Matter 2007 – An International Colloquium on the Science of Time,’ Bled, Croatia, August 26 – 31, 2007.
- 2007: Member, Program Advisory Committee for the Belle and KEKB program at KEK, Tsukuba, Japan.
- 2007: Member, International Advisory Committee for “Charm07,” held at Cornell University, August 2007.

### **Administrative Activities on University Level**

Membership in

- Faculty Senate
- Academic Council
- Academic and Faculty Affairs Committee of the Board of Trustees and
- College Council
- Provost Advisory Committee
- University Committee on International Studies.

### **Other Activities**

- Advisor to Physics Majors
- Soccer coach in the Michiana Soccer Association, the Catholic School leagues, for the Junior Irish Soccer Club and for Notre Dame’s Siegfried Hall

### List of Publications

1. "Light Cone Algebra of a selfinteracting Quark Field," I.I. Bigi, H.P. Duerr and N.J. Winter, Phys. Lett. 45B, 384 (1973).
2. "Lagrange Theory for Spinor Fields of Subcanonical Dimension  $\frac{1}{2}$ ," I.I. Bigi, H.P. Duerr and N.J. Winter, Nuov. Cim. 22A, 420 (1974).
3. "Direct Coupling of Hadrons to Leptons," I.I. Bigi and J.D. Bjorken, Phys. Rev. D10, 2697 (1974).
4. "A Simple Method for Establishing the Existence of New Stable Particles in  $e^+e^-$  Annihilation," I.I. Bigi and L. Stodolsky, Phys. Lett. 62B, 210 (1976).
5. "Transfer of Polarization from the Initial to the Final State in Deep Inelastic Lepton Scattering," I.I. Bigi, Nuov. Cim. 41A, 43 (1977).
6. "Some Quantitative Estimates about Final-State Polarization in Deep Inelastic Lepton-Nucleon Scattering," I.I. Bigi, Nuov. Cim. 41A, 581 (1977).
7. "Multi-Jet Dynamics in Lepton-Induced Reactions and Calorimetry as a Tool for Analysis," I.I. Bigi, Phys. Lett. 79B, 262 (1978).
8. "Angular Energy Flow in Perturbative QCD," I.I. Bigi and T.F. Walsh, Phys. Lett. 82B, 267 (1979).
9. "Some Comments on Hadronic  $\Upsilon$  ( $4s$ ) Decays," I.I. Bigi and S. Nussinov, Phys. Lett. 82B, 281 (1979).
10. "Angular Energy Flow Beyond Lowest Order," I.I. Bigi, Phys. Lett. 86B, 57 (1979).
11. "Experimental Tests for the Equality of Gluon-Gluon and Quark-Gluon Coupling on Resonance in  $e^+e^-$  Annihilation," I.I. Bigi, Phys. Lett. 86B, 355 (1979).
12. "The Decay of Heavy Quarkonia States and the Triple-Gluon Vertex," I.I. Bigi, Nucl. Phys. B164, 239 (1980).
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17. "Weak Decays of Heavy Vector Mesons: Toponium and Open Top," I.I. Bigi and H. Krasemann, Z. Physik C7, 127 (1981).
18. "Towards a Quantitative Description of Hadronic Weak Decays: Evolution Equations for Heavy Flavour Mesons," I.I. Bigi, Nucl. Phys. B177, 395 (1981).
19. "Finding out about B Mesons and  $B^0 - \bar{B}^0$  Mixing on the  $\Upsilon(4S)$  Resonance," I.I. Bigi and Seiji Ono, Nucl. Phys. B189, 229 (1981).
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21. "Notes on the Observability of CP Violation in B Decays," I.I. Bigi and A.I. Sanda, Nucl. Phys. B193, 85 (1981).
22. "Remark on Baryonic Decays of B Mesons," I.I. Bigi, Phys. Lett. 106B, 510 (1981).
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