

CURRICULUM VITAE– Abolhassan Jawahery

Education:

Ph.D.	Tufts University	June 1981	Physics
M.S.	Tufts University	December 1977	Physics
B.S.	Tehran University, Iran	June 1976	Physics

Employment Background:

Gus T. Zorn Professor, Dept of Physics, Univ. of Maryland, 2005-present
Professor, Dept. of Physics, Univ. of Maryland, 1998-2005
Associate Professor, Dept. of Physics, Univ. of Maryland, 1992-1998
Assistant Professor, Dept. of Physics, Univ. of Maryland, 1987-1992
Research Assistant Professor, Syracuse University 1986-1987
Research Associate, Syracuse University 1981-1986

Visiting Scientist Positions

Cornell Electron Storage Ring (CESR), Cornell Univ. 1981-1987
CERN Laboratory, Geneva, Switzerland 1990
Stanford Linear Accelerator Center (SLAC) 2001-2002
Stanford Linear Accelerator Center (SLAC) 2006-present

Honors and Award

Elected Fellow of the American Physical Society (APS) (2004)
Distinguished Faculty Graduate Research Board award (2001)
UMD Graduate Research Board Semester award (2000)
UMD Graduate Research Board Research support award (1988)

Professional Activities

Postitions in International Research Collaborations

Spokesperson, BaBar Experiment, Stanford Linear Accelerator Center (SLAC), 2006-2008.
Physics Analysis Coordinator, BaBar experiment, SLAC, 2001-2002.
Physics Analysis Coordinator, CLEO experiment, Cornell Electron Storage Ring, 1987-88.
Convener of B physics Group, OPAL experiment at CERN, 1990.

Editorial positions

Associate Editor, Annual Review of Nuclear and Particle Science, 2003-present
Member, Particle Data Group (PDG) collaboration, 2002-2005

Conference Advisory Boards and Conference Organizations

Member, International advisory comm., CKM workshop, Nagoya, Japan, Dec. 12-16, 2006.

Convener, Super B Factory Workshop, Hawaii, April 20-22, 2005. Convener, Division of Particles and Fields Symposium, APS meeting in Philadelphia, April 4-8, 2003.

Member, International Advisory Comm., workshop on “Beyond $10^{34} e^+e^-$ luminosity- B physics at Second Generation B Factories”, Sleeping Bear Dunes, Michigan, June 2000.

Convener, The year long international workshop on physics of the B factory with the BaBar experiment. Meetings were held, in Rome in November 1996, in Princeton March 1997, Orsay-Paris, June 1997, and Caltech, Pasadena September 1997.

Member, Organizing Committee, SUSY conference at Maryland, 1996.

Member, Organizing Committee, Hadron Spectroscopy conference, 1991, Univ. of Maryland.

Convener, Snowmass Workshop on B Physics at Hadron Accelerators, June, 1993.

Convener, Workshop on Experiments, Detectors and Experimental Areas for the Super Collider at Berkeley, CA. (1987).

Convener, Snowmass Workshop on B Physics at Hadron Accelerators, June, 1993.

Doctoral Graduate students advised

1. Pasquale Lubrano, Ph.D. (1988) Syracuse University, (Now Senior Scientist at Universit & INFN, Perugia, Italy)
Thesis: D_s Production and Decay in Electron Positron annihilation in the Upsilon Region.
2. Vivek Sharma, Ph.D. (1989) Syracuse University, (Now Professor at Univ. of California, San Diego)
Thesis: D_s Production in B-Meson Decay.
3. Chul Hi Park, Ph.D. (1990) University of Maryland,
Thesis: A Search for the Strange B Meson (B_s) in $\Upsilon(5S)$ Decays.
4. Robert W. Springer, Ph.D. (1991) University of Maryland, (Now Associate Professor, University of Utah)
Thesis: A Study of the Process $e^+e^- \rightarrow Z^0 \rightarrow b\bar{b}$ using Muon Inclusive Z^0 Decays.
5. John M. Lorah, Ph.D. (1993) University of Maryland, (Now Senior Staff Computer Sciences Corporation)
Thesis: A Measurement of the Forward-Backward Asymmetry in the Process $e^+e^- \rightarrow Z^0 \rightarrow b\bar{b}$.
6. Gordon D. Long, Ph.D. (1996) University of Maryland,
Thesis: A Measurement of $B^0 \leftrightarrow \bar{B}^0$ Oscillation Frequency using the OPAL detector at LEP.
7. Matthew Herndon, Ph.D. (1998) University of Maryland, (Now Assistant Professor, University of Wisconsin)
Thesis: Search For the B_c meson in Hadronic Z^0 Decays using the OPAL Detector at LEP.

8. Amir Farbin, Ph.D. May 2003, University of Maryland, (Now Assistant Professor, University of Texas, Arlington)
Thesis: Study of CP violation in Charmless B decays with the BaBar experiment.
9. Dmytro Kovalskyi, Ph.D. Dec. 2005, University of Maryland, (Now Research Associate, University of California, Santa Barbara)
Thesis: Measurement of CP asymmetry in $B^0 \rightarrow K_s^0 \pi^0$ and $B^0 \rightarrow K_s^0 \pi^0 \gamma$.
10. Joe Tuggle, Ph.D. Expected 2008, University Of Maryland. Experiment.

Postdoctoral research associates

Wayne Springer (Also my student & now Assistant Prof. at Univ. of Utah)

Maurice Foucher (now at Raytheon Corp.)

Carlo Dallapiccola (now Associate Prof. at U. of Massachusetts, Amherst)

Jim Olsen (on BaBar, now Assistant Prof. at Princeton University.)

Wouter Hulsbergen (Now Permanent research staff at NIKHEF, Netherlands).

Amir Farbin (Also my student & Now Assistant Prof. Univ. of Texas, Arlington)

Chunhui Chen (currently on BaBar)

Gabriele Simi (currently on BaBar)

INVITED TALKS

1. A. Jawahery, "Results on B Meson and Υ Resonances from CLEO Experiment", at the Gordon Conference on Elementary Particle Physics, 1983, Andover, New Hampshire.
2. A. Jawahery, "A Review of Results on B Decays", at the meeting of the APS Division of Particles and Fields (1985), Eugene, Oregon. Proceedings edited by R. K. Hwa (World Scientific Publishing), pp.
3. A. Jawahery, "Inclusive and Exclusive Decays of B Mesons", at XXIII International Conference on High Energy Physics (1986) Berkeley, CA. Proceedings edited by S. C. Loken (World Scientific Publishing), pp. 773.
4. A. Jawahery, " $B^0 \bar{B}^0$ Mixing and Rare Decays of B Mesons" at XXIV International Conference on High Energy Physics, August (1988), Munich, W. Germany. Proceedings edited by R. Kotihaus and J. H. Kuhns (Springer- Verlag), pp. 545.
5. A. Jawahery, "Measurement of the Z^0 Couplings to Quarks with the OPAL Detector", at XXV International Conference on High Energy Physics, August 1990, Singapore.

6. A. Jawahery, “b Quark Physics at High Energy e^+e^- Colliders”, at The Conference on “Future Directions in B Physics”, June 1991, Columbus, Ohio.
7. A. Jawahery, “A Review of Various Approaches for Measuring the Unitarity Angle α at Hadron Accelerators- Working Group Summary” at the Snowmass Workshop On B Physics at Hadron Accelerators, June, 1993, Snowmass, Colorado.
8. A. Jawahery, “B Hadron Spectroscopy with the OPAL Detector at LEP”, At the Conference on the “Intersections of Particle And Nuclear Physics”, June 1994, St. Petersburg, Florida.
9. A. Jawahery, “Study of $B^0 \leftrightarrow \bar{B}^0$ Oscillations with the OPAL detector at LEP”, At the meeting of the APS Division of Particles and Fields, August (1996), Minneapolis, Minnesota.
10. A. Jawahery, “CP Studies with Asymmetric e^+e^- colliders”, At the conference on “Frontiers in the Contemporary Physics- Fundamental Particles and Interactions”, May 1997, Vanderbilt University, Nashville, Tennessee.
11. Summary talks (and Convenor) at the meeting of the BaBar Physics Workshops, at SLAC, February and March, 1998, Princeton (March 1997), Orsay, France (June 1997), and CALTECH (September 1997) and Rome, Italy (September 1996).
12. A. Jawahery “CP violating phased Alpha and Gamma”, Rapporteur talk at the Lepton-Photon Symposium, Fermi National Accelerator Laboratory, Batavia, IL, August, 2004.
13. A. Jawahery “CP violation in B decays: Search for Physics Beyond the Standard Model” Particles and Nuclei International Conference, Santa Fe, NM, October 24-28, 2005.
14. A. Jawahery “Summary talk of the Conference on CP violation and Flavor Physics”, Flavor Physics and CP violation, Vancouver, Canada, April 9-12, 2006.
15. A. Jawahery “BaBar Physics”, Annual Meeting of The SLAC User Organization (SLUO), SLAC, September 2006.
16. A. Jawahery “Status of the BaBar experiment and its physics prospects”, Super B factory workshop”, Frascati, Italy, November 2006.
17. Numerous talks on the Status of the BaBar experiment to the collaboration, funding agencies and advisory committees (2006-2007).

PUBLICATIONS

Edited Books

1. Annual Review of Nuclear and Particle Science, Volume 54, 2004
 Edited by B. Kayser, B. Holestín and A. Jawahery

2. Review of Particle Physics
Special issue of Physics Letters B, Volume 592, issues 1-4 (2004)
A. Jawahery with S. Eidelman *et al.*, (*Particle Data Group*)
3. *Annual Review of Nuclear and Particle Science, Volume 55, 2005*
Edited by B. Kayser, B. Holestin and A. Jawahery
4. *Annual Review of Nuclear and Particle Science, Volume 56, 2006*
Edited by B. Kayser, B. Holestin and A. Jawahery
5. *Annual Review of Nuclear and Particle Science, Volume 57, 2007*
Edited by B. Kayser, B. Holestin and A. Jawahery

Select list of Articles in Refereed Journal

Complete list in a separate 48-page document

References

- [1] B. Aubert *et al.* [BABAR Collaboration], “Evidence for D^0 - anti- D^0 mixing,” Phys. Rev. Lett. **98**, 211802 (2007) [arXiv:hep-ex/0703020].
- [2] B. Aubert *et al.* [BABAR Collaboration], “Observation of CP violation in $B^0 \rightarrow K^+\pi^-$ and $B^0 \rightarrow \pi^+\pi^-$,” Phys. Rev. Lett. **99**, 021603 (2007) [arXiv:hep-ex/0703016].
- [3] B. Aubert *et al.* [BABAR Collaboration], “Evidence for B^0 to $\rho^0 \rho^0$ decay and implications for the CKM angle α ,” Phys. Rev. Lett. **98**, 111801 (2007) [arXiv:hep-ex/0612021].
- [4] B. Aubert *et al.* [BABAR Collaboration], “Measurement of B decays to $\Phi K \gamma$,” Phys. Rev. D **75**, 051102 (2007) [arXiv:hep-ex/0611037].
- [5] B. Aubert *et al.* [BABAR Collaboration], “Observation of CP violation in B^0 to $\eta' K^0$ decays,” Phys. Rev. Lett. **98**, 031801 (2007) [arXiv:hep-ex/0609052].
- [6] B. Aubert *et al.* [BABAR Collaboration], “Observation of B^+ to anti- $K^0 K^+$ and B^0 to K^0 anti- K^0 ,” Phys. Rev. Lett. **97**, 171805 (2006) [arXiv:hep-ex/0608036].
- [7] B. Aubert *et al.* [BABAR Collaboration], “Improved Measurements of the Branching Fractions for B^0 to $\pi^+\pi^-$ and B^0 to $K^+\pi^-$, and a Search for B^0 to K^+K^- ,” Phys. Rev. D **75**, 012008 (2007) [arXiv:hep-ex/0608003].
- [8] B. Aubert *et al.* [BaBar Collaboration], “Measurement of the time-dependent CP-violating asymmetry in $B^0 \rightarrow K_S^0 \pi^0 \gamma$ decays,” Phys. Rev. D **72**, 051103 (2005) [arXiv:hep-ex/0507038].

- [9] B. Aubert *et al.* [BABAR Collaboration], “Improved measurement of the CKM angle α using $B^0 \rightarrow \rho^+ \rho^-$ decays,” Phys. Rev. Lett. **95**, 041805 (2005) [arXiv:hep-ex/0503049].
- [10] B. Aubert *et al.* [BABAR Collaboration], “Measurement of the branching fraction and the CP-violating asymmetry for the decay $B^0 \rightarrow K_S^0 \pi^0$,” Phys. Rev. D **71**, 111102 (2005) [arXiv:hep-ex/0503011].
- [11] B. Aubert *et al.* [BaBar Collaboration], “Measurements of branching fractions and time-dependent CP-violating asymmetries in $B \rightarrow \eta' K$ decays,” Phys. Rev. Lett. **94**, 191802 (2005) [arXiv:hep-ex/0502017].
- [12] B. Aubert *et al.* [BABAR Collaboration], “Branching fraction and CP asymmetries of $B^0 \rightarrow K_S^0 K_S^0 K_S^0$,” Phys. Rev. Lett. **95**, 011801 (2005) [arXiv:hep-ex/0502013].
- [13] B. Aubert *et al.* [BaBar Collaboration], “Improved measurements of CP-violating asymmetry amplitudes in $B^0 \rightarrow \pi^+ \pi^-$ decays,” Phys. Rev. Lett. **95**, 151803 (2005) [arXiv:hep-ex/0501071].
- [14] B. Aubert *et al.* [BABAR Collaboration], “Limit on the $B^0 \rightarrow \rho^0 \rho^0$ branching fraction and implications for the CKM angle α ,” Phys. Rev. Lett. **94**, 131801 (2005) [arXiv:hep-ex/0412067].
- [15] B. Aubert *et al.* [BABAR Collaboration], “Branching fractions and CP asymmetries in $B^0 \rightarrow \pi^0 \pi^0$, $B^+ \rightarrow \pi^+ \pi^0$ and $B^+ \rightarrow K^+ \pi^0$ decays and isospin analysis of the $B \rightarrow \pi \pi$ system,” Phys. Rev. Lett. **94**, 181802 (2005) [arXiv:hep-ex/0412037].
- [16] A. Jawahery, “CKM unitarity angles $\alpha(\phi(2))$ and $\gamma(\phi(3))$,” Int. J. Mod. Phys. A **19**, 975 (2004).
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- [20] B. Aubert *et al.* [BABAR Collaboration], “Measurement of time-dependent CP-violating asymmetries in $B^0 \rightarrow K^{*0} \gamma (K^{*0} \rightarrow K_S^0 \pi^0)$ decays,” Phys. Rev. Lett. **93**, 201801 (2004) [arXiv:hep-ex/0405082].
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- [24] B. Aubert *et al.* [BABAR Collaboration], “Observation of the decay $B^0 \rightarrow \rho^+\rho^-$ and measurement of the branching fraction and polarization,” *Phys. Rev. D* **69**, 031102 (2004) [arXiv:hep-ex/0311017].
- [25] B. Aubert *et al.* [BABAR Collaboration], “Measurement of $\sin(2\beta)$ using hadronic J/ψ decays,” *Phys. Rev. D* **69**, 052001 (2004) [arXiv:hep-ex/0309039].
- [26] B. Aubert *et al.* [BABAR Collaboration], “Measurements of the branching fractions of charged B decays to $K^\pm\pi^\mp\pi^\pm$ final states,” *Phys. Rev. D* **70**, 092001 (2004) [arXiv:hep-ex/0308065].
- [27] B. Aubert *et al.* [BABAR Collaboration], “Observation of the decay $B^0 \rightarrow \pi^0\pi^0$,” *Phys. Rev. Lett.* **91**, 241801 (2003) [arXiv:hep-ex/0308012].
- [28] B. Aubert *et al.* [BABAR Collaboration], “Observation of the decay $B^\pm \rightarrow \pi^\pm\pi^0$, study of $B^\pm \rightarrow K^\pm\pi^0$, and search for $B^0 \rightarrow \pi^0\pi^0$,” *Phys. Rev. Lett.* **91**, 021801 (2003) [arXiv:hep-ex/0303028].
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- [34] G. Alexander *et al.* [OPAL Collaboration], “A measurement of the B/d_0 oscillation frequency using leptons and D^{*+-} mesons,” *Z. Phys. C* **72**, 377 (1996).
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- [37] R. Akers *et al.* [OPAL Collaboration], “A Study Of B Meson Oscillations Using Dilepton Events,” *Z. Phys. C* **66**, 555 (1995).
- [38] R. Akers *et al.* [Opal Collaboration], “Measurement of the time dependence of $B(d)_0$ j^- to anti- $B(d)_0$ mixing using leptons and D^{*+-} mesons,” *Phys. Lett. B* **336**, 585 (1994).

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