CURRICULUM VITAE

Mark G. Alford

Office address:

Physics Department
Washington University CB 1105
St. Louis, MO 63130

Date of birth: 3 July 1962
Citizenship: U.S./U.K.

EDUCATION

Harvard University, Cambridge, MA

1990 Ph.D. in Theoretical Particle Physics.
Thesis title: *Interactions and Excitations of Gauge Vortices.*
Thesis advisor: Sidney Coleman.

1988 A.M. in physics.

Oxford University (Exeter College)

1984 B.A. Honours in physics, first class.

1981 Open Scholarship in physics.

EMPLOYMENT

2012 –	Chairman, Physics Department, Washington University, St. Louis.
2010 –	Full Professor, Washington University, St. Louis.
2007 – 2010	Associate Professor, Washington University, St. Louis.
2003 – 2007	Assistant Professor, Washington University, St. Louis.
2000 – 2002	Lecturer, University of Glasgow.
1998 – 2000	Research Scientist, Massachusetts Institute of Technology.
1995 – 98	Member, Institute for Advanced Study, Princeton.
1992 – 95	Research Associate, Laboratory of Nuclear Studies, Cornell University. Postdoctoral advisor: Prof. G. P. Lepage
1990 – 92	Postdoctoral researcher, Institute for Theoretical Physics, University of California, Santa Barbara. Postdoctoral advisor: Prof. A. Zee

GRANT AWARDS

2014 Department of Energy (Nuclear Theory) research grant.
Funded at $120k/year for 3 years

2011 Department of Energy (Nuclear Theory) research grant.
Funded at $108k/year for 3 years

2010 Co-investigator on DoE 5-year Topical Collaboration
Individual share: $30k/year for 5 years

2008 Department of Energy (Nuclear Theory) research grant.
Funded at $108k/year for 3 years

2008 Department of Energy, Co-investigator on theoretical physics group grant,
Group funded at $300k/year for 3 years

2005 Department of Energy, Outstanding Junior Investigator (Nuclear Theory).
Funded at $105k/year for 3 years

2005 Department of Energy, Co-investigator on theoretical physics group grant,
Group funded at $300k/year for 3 years

TEACHING

Physics and Society	2009-2014
Introduction to Quantum Physics I	2003-2005, 2008
Introduction to Quantum Physics II	2004-2006
Introduction to Particle Physics	2003, 2007, 2008, 2011
Quantum Mechanics II (graduate-level)	2010
Quantum Field Theory I (graduate-level)	2007
Quantum Field Theory II (graduate-level)	2008 and 2012

SERVICE ACTIVITIES

- In collaboration with C. Horowitz and P. Danielewicz, successfully proposed a workshop on "The phases of dense matter" at the Institute for Nuclear Theory, University of Washington, scheduled for summer 2016.
- Board member, The Helix Center `http://www.thehelixcenter.org`.
- Convenor for section F of "Quark confinement and the hadron spectrum 10", 2006, 2008, 2010, 2012, 2014.
- Scientific Organization Committee for "Compact Stars in the QCD Diagram III", Guaruja, Brazil, Dec 2012.
- International Advisory committee for Hirschegg 2009, "Nuclear Matter at High Density".
- Organizer, Midwest Nuclear Theory Get-Together, Oct 2008.
- In collaboration with J. Clark and A. Sedrakian, successfully proposed and organized a workshop on "Pairing beyond the BCS theory" the Institute for Nuclear Theory, University of Washington, Sept 2005.
- Grant proposal referee for DoE, NSF, PPARC (United Kingdom), NSERC (Canada), Israel Science Foundation, Swiss Federal Institute of Technology Research Commission, Austrian Science Fund.
- Served on NSF Nuclear Physics panel, ranking proposals for funding by NSF.
- Served on DoE review panel for LQCD, the U.S. national effort in computing for lattice gauge theory.
- Frequent referee for Physical Review, Physical Review Letters, Nuclear Physics, Physics Letters B, and other journals.

INVITED TALKS AT INTERNATIONAL MEETINGS

Date	Talk(s)	Venue
Oct 2014	*Hadronic Stars versus Hybrid stars: how can we identify them?*	APS/JPS Nuclear Physics meeting, Hawaii
Jun 2014	*Quark matter in neutron stars*	QCD@Work 2014, Giovinazzo, Italy
Mar 2014	*Hybrid stars: how can we identify them ?*	Structure and Signals of Neutron Stars, Florence, Italy
Oct 2013	Two invited talks	IWARA 2013, Rio de Janeiro, Brazil
July 2013	*Quark matter in neutron stars*	Neutron Stars 2013, Surrey University, UK
July 2013	*Strange quark matter*	SQM 2013, Birmingham, UK
May 2013	*Quark matter in neutron stars*	Nuclear Physics in Astrophysics 6, Lisbon, Portugal
Mar 2013	*Quark matter in neutron stars*	Quarks, Gluons, and Hadronic Matter under Extreme Conditions, St. Goar, Germany
Feb 2013	*Quark matter in neutron stars*	J-PARC Workshop, Toukai, Japan
July 2012	*Suprathermal effects in dense matter*	Strong and Electroweak Matter 2012, Swansea, UK
June 2012	*Suprathermal effects in dense matter*	QCD@Work 2012, Lecce, Italy
Aug 2011	*Bulk viscosity and the damping of neutron star oscillations*	INT Workshop on Astrophysical Transients, Seattle, WA
May 2011	*Quark Matter and Neutron Stars*	APS April meeting, Anaheim, CA
June 2010	*Bulk viscosity for high amplitude oscillations*	QCD@Work 2010, Bari, Italy

March 2010	*Transport properties of quark matter*	New Frontiers in QCD 2010, Kyoto University, Japan
July 2009	*Phases of matter in compact stars*	Gordon Nuclear Conf, Bryant University, RI
June 2009	*Quark matter in neutron stars*	PNS 2009, Penn State University
May 2009	*Strangelet crystal crust on a strange star*	CRUST09, Santa Fe, NM
Apr 2009	*Quark Matter in neutron stars*	Quark Matter 2009, Knoxville, Tennessee
Sept 2008	*Transport properties of dense quark matter*	24th Max Born Symposium, Wroclaw, Poland
Sept 2008	*Superconductor coupled to a superfluid: flux tubes and the type-I/type-II transition*	The Modern Physics of Compact Stars, Yerevan, Armenia
Oct 2007	*Color superconductivity*	Superconductivity BCS@50, UIUC, USA
Sept 2007	*Color superconductivity in quark matter*	Gordon Superconductivity 2007, Les Diablerets, Switzerland
June 2007	*Bulk viscosity of color superconducting quark matter*	QCD@Work 2007, Bari, Italy
June 2007	*Bulk viscosity of color superconducting quark matter*	Exotic nuclear matter, EXOCT 2007, Catania, Italy
July 2006	Convenor of section F	Quark confinement and the hadron spectrum 7, Azores, Portugal
July 2006	*Color superconductivity in ultra-dense quark matter*	Lattice 2006 (plenary), Tucson, AZ
May 2006	*Color superconductivity in ultra-dense quark matter*	Perspectives in Hadronic Physics 5, Trieste, Italy
Aug 2005	*Color superconductivity and the strange quark*	29th Johns Hopkins Workshop in Theoretical Physics, Budapest, Hungary
June 2005	*Color superconductivity and the strange quark*	QCD@Work 2005, Bari, Italy
June 2004	*Strangeness in compact stars*	Gordon Research Conference, New London, NH

June 2004:	*Color Superconductivity: accommodating the strange quark*	"QCD and dense matter" INT program, University of Washington, Seattle.
Aug 2003	Three lectures on high-density quark matter	Nijmegen 2003, Nijmegen, Netherlands
Aug 2003	*Dense quark matter in nature*	Physics and Astrophysics of Neutron Stars 2003, Santa Fe, NM
July 2003	*Dense quark matter in compact stars*	Confinement 2003, Tokyo, Japan
July 2003	*Dense quark matter in nature*	Finite density QCD at Nara, Nara, Japan
March 2003	*Dense quark matter in compact stars*	Strange Quark Matter 2003, Atlantic Beach, NC
July 2002	*QCD at high density/temperature*	Plenary talk at ICHEP 2002, Amsterdam
May 2002	*Dense quark matter and color superconductivity*	"Compressed baryonic matter 2002", GSI Darmstadt, Germany
Apr 2002	*Color superconducting quark matter*	"QCD in the RHIC era" ITP conference, U.C. Santa Barbara, USA
Nov 2001	*Dense quark matter in compact stars*	"Effective Field Theories of QCD", Bad Honnef, Germany
Aug 2001	*Color superconducting quark matter in compact stars*	"Compact QCD", Copenhagen, Denmark
Mar 2001	Invited set of 4 lectures	"Quark matter" winter school/conference, Schladming, Austria
Sept 2000	Four invited talks	"QCD study days" school, Staffelstein, Germany
June 2000	Two invited talks	"Matter under extreme conditions", ZiF, University of Bielefeld, Germany
Mar 2000	Two invited talks	"QCD at Finite Baryon Density" INT program, University of Washington
Dec 1999	*Color superconductivity in dense quark matter*	TMU-Yale Symposium, Tokyo
May 1999	*Color superconductivity and the strange quark*	HIT-99 (Heavy Ion Theory), CERN
July 1998	*New possibilities for QCD at finite density*	Lattice 98 (plenary), Boulder, CO, USA