

**Darren J. G. Craig**  
501 College Ave.  
Wheaton, IL 60187  
630-752-7116 (Office) 630-752-5996 (Fax)  
Darren.Craig@wheaton.edu

## **Education**

Ph.D. in Physics (Plasma), UNIVERSITY OF WISCONSIN - Madison, WI - 1998

B.S. in Physics, with high honor, MICHIGAN STATE UNIVERSITY - East Lansing, MI - 1994

## **Employment History**

### WHEATON COLLEGE

Professor of Physics

Associate Professor of Physics

Wheaton, IL

July 2018 - present

August 2006 – June 2018

- Taught calculus-based introductory physics lecture and lab, physics and engineering freshman seminar, modern science skills lab, computer modeling of physical systems, analog electronics lecture and lab, data analysis and presentation, electromagnetic theory, quantum mechanics, thermodynamics, experimental physics, introductory optics lecture and lab, advanced optics lecture and lab, plasma physics, and general education courses on stellar astronomy and energy for the future.
- Developed new experimental plasma physics research project to study impulsive magnetic reconnection – the Wheaton Impulsive Reconnection Experiment (WIRX).
- PI for external grants and subawards totaling \$760,000 from 2006 – 2018.
- Mentored 30 different undergraduate students in independent research and supervised 10 honors theses. The students have presented their work at local and national meetings and some have been coauthors on peer-reviewed articles.
- Physics and Engineering Department Chair, 2011 – 2020, 2022 – present.
- Dual Degree Engineering Program Coordinator, 2009 – 2012.

### UNIVERSITY OF WISCONSIN

Associate Scientist

Assistant Scientist

USDOE Fusion Energy Postdoctoral Fellow

Research Associate - Physics Department

Research Assistant - Physics Department

Teaching Assistant - Introductory Physics

Madison, WI

2004 - 2006

2001 - 2004

1999 - 2001

1998 - 1999

1994 - 1998

Fall 1994

- Co-PI on \$6M/yr grant from the U.S. Department of Energy to study plasmas produced in the Madison Symmetric Torus (MST) - a large magnetic confinement system used for plasma science and fusion energy studies.
- Active in all phases of research including proposal writing, project planning and development, design and fabrication of apparatus, collection and interpretation of data, publishing results, and supervision/mentoring of other researchers including students.

- Topical coordinator for research on momentum transport within the Center for Magnetic Self-Organization in Laboratory and Astrophysical Plasmas – a physics frontier center funded jointly by the National Science Foundation and the U.S. Department of Energy.
- Hardware experience - arc discharge plasma sources; electrostatic and magnetic probes; UV and visible spectroscopy; laser interferometry; high and low power electronics; data acquisition; vacuum techniques; custom spectrometer design; time series analysis techniques.
- Physics topics studied include plasma sources, plasma equilibrium and stability, transport in magnetically confined plasmas, plasma diagnostics, turbulence and nonlinear phenomena in plasmas, the magnetohydrodynamic dynamo, magnetic reconnection, and applications of plasma physics in astrophysics.

HOLT SENIOR HIGH SCHOOL  
Science Olympiad Coach

Holt, MI  
Fall 1992 - Spring 1994

MICHIGAN STATE UNIVERSITY  
Teaching Assistant

East Lansing, MI  
Fall 1991 - Spring 1993

Cooperative Highly Accelerated Math Program (CHAMP)  
Undergraduate Research Assistant - National Superconducting Cyclotron Laboratory  
1990 - 1994

## **Leadership and Service**

Reviewer for Journal of Plasma Physics, Perspectives on Science and Christian Faith, Physical Review Letters and Review of Scientific Instruments

Reviewer for NSF and USDOE research proposals in plasma physics

College Life and Enrollment Committee at Wheaton College (Secretary, 2008 – 2010)

Curriculum Committee at Wheaton College (2015 – 2018)

Health Professions Committee at Wheaton College (2009 – 2013)

Executive Committee of University Fusion Association (2009 – 2012)

Academic Staff Assembly Representative at UW – Madison

Program Committee for APS-Division of Plasma Physics Meeting

Program Committee for Innovative Confinement Concepts Workshop

Selection Committee for USDOE Fusion Energy Sciences National Undergraduate Fellowship

Subcommittee of Fusion Energy Science Advisory Committee tasked with setting priorities for the USDOE Fusion program

Local Arrangements Co-Chair for 2019 American Scientific Affiliation Meeting

Fellow, American Scientific Affiliation

Facilitator for Plasma Science Christian Fellowship (2007 – present)

Member, Deacon, Small Group Leader, High Point Church, Madison, WI

Member, Sunday School Teacher, Small Group Leader & Coach, Pulpit Small Group

Curriculum Writer, Evangelism Team, Prayer Team Leader – Gospelife Church  
(formerly Crossroads Community Church) Carol Stream, IL (2010 – present)

## **Publications and Presentations**

Ninety-one articles published in peer-reviewed journals (full list available upon request)

Eleven invited and fifty-five contributed conference presentations