

## *Curriculum Vitae (12/00)*

### **Jens C. Zorn**

Professor of Physics, University of Michigan, Ann Arbor, Michigan

### **Education**

- 1937-1949 Schools in Los Angeles, California and Bloomington, Indiana  
1949-1950 U.S. Naval Electronics School, Treasure Island, California  
1953-1955 Miami University, Oxford, Ohio (AB 1955)  
1956-1957 University of Tübingen, Germany  
1957-1961 Yale University, Connecticut (Ph.D. in Physics 1961)

### **Positions Held**

- 1949-1953 US Navy service on the aircraft carrier Sitkoh Bay [CVE-86], destroyer J. W. Thomason [DD-760], and at Naval Communication Station, Guam.  
1953-1955 Electronics Engineer, Tarzian Television Co. Bloomington, IN.  
1955-1956 Research Assistant, Univ. Tübingen electron microscope lab  
1957-1960 Research and Teaching Assistant, Yale University  
1960-1962 Instructor in Physics, Yale University  
1962-1967 Assistant Professor of Physics, University of Michigan  
1967-1970 Associate Professor of Physics, University of Michigan  
1970-present Professor of Physics, University of Michigan

### **Concurrent Positions**

- 1965- 1973 Visiting Professor at Universities of Puebla and Mexico City  
1967-1978 joint appointment with Residential College, U. Michigan.  
1973-1974 Director, Residential College, University of Michigan.  
1980-1982 Associate Dean for Curriculum, College of Literature, Science and the Arts, University of Michigan

### **Recognitions:**

- Phi Beta Kappa, (1955) Gerard Swope Fellow, Yale University (1959)  
At the University of Michigan: Faculty Achievement Award (1968)  
Distinguished Teaching Award(1992); Amoco Prize(1994)  
Elected in 1973 as Fellow of the American Physical Society

### **Research Areas**

#### *Experimental Atomic Physics and Laboratory Astrophysics:*

Atomic polarizability and excited state lifetimes; physics of collisions;  
radiofrequency and microwave spectroscopy; nuclear shape measurements;  
molecular dissociation; production of nanokelvin gases.

*Visual Display of Quantitative Information:* Animations and graphical displays of quantum processes; Visual displays of algebraic and other quantitative reasoning. Scientific illustration.

*Organizational Development:* Career development of scientists; management of academic organizations; conflict resolution in organizational settings.

*History of Science:* 20th century atomic physics, particularly that of atomic and molecular beam experiments; 19th and early 20th century electrical measurements; history of radio; history of photography. Scientific fraud and misconduct.

### **Teaching at the University of Michigan**

I have taught courses in quantum mechanics, atomic physics, optics, physics of music, and the physics of photography as well as the usual assortment of introductory courses. I have also given the physics senior seminar that has a strong emphasis on teaching of scientific writing. In addition, I have given sophomore seminars for non-specialists with an emphasis on the development of modern physics. Since 1994 I have offered a graduate tutorial in Quantum Mechanics.

For ten years running (1967-1976) I taught a Michigan Freshman Seminar on the effect of technology on Appalachian life.

I have directed the undergraduate research of many physics majors, several of whom have received national recognition for that research:

David Crosby: 1970 IEEE George Award for instrument development

Daniel Stearns 1978 runner-up for the 1979 APS Apker Research Award

Michael Weiss 1993 George C. Marshall Fellow

I have directed, as chair of the thesis committee, the dissertation research of 25 Ph.D. students in experimental physics. I have been on numerous doctoral degree committees in physics, chemistry, atmospheric sciences, electrical engineering, mathematics, geology, and art history.

### **Service at the University of Michigan Physics Department**

#### **Major Assignments**

Graduate Student Advising Committee (chair) 1965-66, Department Executive Committee 1970-72, 1982-84, Graduate Admissions Committee 1967-70, 1987-1993  
Graduate Placement officer 1975-1980, Department Newsletter editor (1974-1980)  
External Relations and Development, 1981-83; 1993-

#### **Additional Service**

on committees for instrument shop supervision, atomic physics seminar series, graduate curriculum review, graduate student fellowships, room assignments. Also service on committees searching for new faculty and for faculty promotions.

### **College and University Service**

#### **Major Assignments:**

Director of the Residential College 1973-4; Associate Dean for Curriculum, College of LSA, 1980-1982; Faculty Ombudsman 1983-1988; Chair of University Council 1988-1990; Executive Committee, College of LSA, 1990-1993

#### **Additional Service**

Residential College Executive Committee 1970-1973, University of Michigan Press Executive Committee 1977-1982; .University Collective Bargaining Committee 1982-1984 University Budget Priorities Committee 1982-1986; Chair of LSA-Residential College Liaison Committee 1994-6; University Senate Assembly, 1994-96; 1998-2001

Also service on committees for unit reviews, grievance hearings, administrative evaluations, and tenure policy. Also service on committees searching for department chairs and administrative officers, college nominating committee, search committees for staff and administrative positions. .

### Extra-University Service

#### Major Assignments

Economic Concerns Committee, American Physical Society 1971-73  
 Electronic and Atomic Physics Steering Committee (APS) 1973-5  
 International Conference on Atomic Physics, co-chair 1990-91  
 Organizer, Midwest Regional Conferences on Teaching of Quantum Mechanics,  
 1993 and 1994

#### Additional Service

on steering committees for Molecular Spectroscopy Conference (1976) and for  
 American Association of Physics Teachers workshops (1966, 1974). On review panels  
 for the National Science Foundation (since 1968) in atomic physics, in ethics and values,  
 and in international programs development.

Reviewer of manuscripts for Physical Review, American Journal of Physics, Physical  
 Review Letters, Journal of Chemical Physics, and Review of Scientific Instruments.

Reviewer of manuscripts for publishers including John Wiley, Addison Wesley,  
 Prentice Hall, and McGraw Hill.

### Publications

My publications are summarized below in a tabulation arranged according to content and  
 enumerated as refereed, contributed, or other. In all of these listings I am either the senior  
 author or the author responsible for initiating and directing the work (e.g. graduate student  
 research reports). The tabulation avoids duplication by NOT including another 56  
 abstracts and conference reports on results that were eventually reported in the refereed  
 literature.

#### Publications classified

Section	Emphasis	total	refereed	contributed	other
1	Atomic Moments	8	5	3	
2	Molecular Hfs	10	10		
3	Review Articles	5	5		
4	Develop TOF	7	7		
5	Physics w/TOF	13	10	3	
6	Ultracold Gases	3	1	2	
7	Other Expt Phys	3	3		
8	History	1			1
9	Teaching	3	2		1
10	General Reference	2	2		
11	Animated Films	5			5
12	Academic Policy etc	7	2	2	3
	Totals:	<u>67</u>	<u>47</u>	<u>10</u>	<u>10</u>

### Doctoral Students of Jens Zorn

	PhD	Current (2000) or last employment	
1 Thomas C. English	1966	Principal Research Scientist,	Efratom,, Costa Mesa, CA
2 Carl E. Miller	1967	Research Scientist	General Motors AC Divison, Flint MI
3 William D. Hall	1968	Assoc. VP for Research	SAI Internat., La Jolla, CA
4 J. Thomas Dickinson	1968	University Professor of Physics	Washington State Univ.
5 David Stephenson	1968	Research Scientist	UC Livermore Laboratories
6 John C. Pearl	1970	Project Scientist	NASA Goddard
§ Neil B. Johnson	1970	Prof.of Physics (died 1983)	Tri-State U, Angola, IN
8 Robert Hammerle	1971	Engineering Group Leader	Ford Motor Company
9 Martin Misakian	1971	Research Scientist	NIST Gaithersburg
10 David A. Kaslow	1971	Project Scientist	GE Systems Div, King of Prussia, PA
11 Ray G. Van Ausdal	1972	Staff Scientist	Central Region Hospital, York, PA
12 Richard A. Heppner	1973	Research Scientist	EPA Laboratories, Laramie, WY
13 John L. Barrett	1975	Engineering Development	Pelham, New Hampshire
14 Mustafa Marafi	1976	Professor/Chair of Physics	University of Kuwait
15 Carlos Vargas	1978	Professor of Applied Science	Kent State University
16 Daniel G. Reichel	1982	Research Scientist	Rogers Corporation, Roanoke, VA
§ Aleks Nudelfuden	1982	Project Scientist (died 1987)	Arthur D. Little
18 Jeffrey Berkowitz	1983	Project Scientist	Seagate, Inc.
§ Richard N. Watts	1986	Research Scientist (died 1990)	NIST Gaithersburg
20 David Shiner	1988	Research Scientist	Yale University
§ Cho, Sang Young	1989	Research Scientists(died 1989)	Space Physics, U. Michigan
22 Bucselea, Eric	1993	Postdoctoral Scientist	Space Physics , U. Michigan
23 Christopher Sweeney	1995	Research Scientist	Boston University, MA
24 David A. Crosby	MS '71	Chief Development Engineer	MicoMark, Inc. Anacortes, WA
25 Russ Pichlik	MS '67	Head of Science Department,	Clinton HS, Clinton, MI
26 Alan Grafe	1995	Scientist/Lecturer	U. Mich. Flint, MI