

# Jerzy Kanicki, D.Sc.

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College of Engineering  
University of Michigan

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## Education

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### Universite Libre de Bruxelles, Bruxelles, Belgium

(Free University of Brussels, Brussels, Belgium)

- 1/20/1982      **Docteur en Sciences** (*Doctor es Science, D.Sc.*), D.Sc. Thesis: “*Optical Electrical and Photo-electronic Properties of trans-Poly-acetylene.*” Graduated with “Highest Distinction” (“La Plus Grande Distinction”)
- 7/20/1978      **Master of Science** (*M.Sc.*), section Chemical Sciences, M.Sc. Thesis: “*Photo-electronic Properties of the SnO<sub>2</sub>-(poly-2-Vinlpyridine-I<sub>2</sub>) structures.*” Graduated with “High Distinction” (“Grand Distinction”)
- 7/20/1976      **Bachelor of Science** (*B.Sc.*), section Chemical Sciences

## Employment History

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- 9/11/1994 - present      **University of Michigan, College of Engineering, Ann Arbor**  
**Position:** Professor of Electrical Engineering and Computer Sciences  
**Research Interest:** Amorphous and polycrystalline semiconductors (inorganic and organic) thin-film devices and circuits; Flat panel displays and detectors; X-ray imagers; Organic opto-electronic devices; Flexible substrates; Inorganic and organic solar cells
- 2000 - 2011      **University of Michigan, College of Engineering, Ann Arbor**  
**Position:** Professor of Macromolecular Science and Engineering  
**Research Interest:** Organic materials, devices, and electronics
- 7/11/2009-  
6/30/2010      **University of California, San Diego, CA**  
**Position:** Visiting Scholar (California Institute for Telecommunications and Information Technology) - sabbatical  
**Research Interest:** Organic thin – film transistor chemical sensors, amorphous InGaZnO thin – film transistors, image sensors and Cu(In,Ga)Se solar cells

*Host:* Prof. Andrew C. Kummel, Department of Chemistry and Biochemistry

7/31/2003-  
8/11/2002

**University of California, Santa Barbara, CA**

*Position:* Visiting Professor (Center for Polymers and Organic Solids) - sabbatical

*Research Interest:* Organic polymer thin – film transistors, organic light – emitting devices and electrically injected lasers

*Host:* Prof. Alan J. Heeger, Department of Physics

8/30/1994-  
1/31/1983

**IBM Thomas J. Watson Research Center, Yorktown Heights, NY**

*Position:* Research Staff Member

*Duties:* Member of the team that developed hydrogenated amorphous silicon (a-Si:H) thin film transistors (TFTs) and active-matrix arrays technology for active-matrix (AM) liquid crystal displays (LCDs). This development resulted in introduction by IBM of the first color laptop computer (CL57-SX) on March 24, 1992

1982

**Belgium Army, Belgium**

*Position:* Sergeant Major in Belgium Army

*Duties:* Responsible for a unit of about 30 soldiers, and training of new soldiers

## **Teaching: Undergraduate and Graduate Courses**

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EECS 215 – Introduction to Circuits

EECS 314 – Electrical Circuits, Systems and Applications

EECS 421 – Properties of Transition

EECS 423 – Solid State Device Laboratory

EECS 512 – Amorphous and Microcrystalline Thin Film Devices

EECS 513 – Flat Panel Displays

EECS 498 & 598 – Organic and Molecular Electronics

## **Consulting & Expert Witness**

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Past consulting has been in fields of study generally related to:

- ❖ Hydrogenated amorphous silicon (a-Si:H) thin-film transistors (TFT) technology
- ❖ Active-matrix liquid-crystal displays (AM-LCDs) technology
- ❖ A-Si:H TFT processing, properties and electrical characterization methods
- ❖ Thin-film plasma-enhanced chemical vapor deposition (PECVD) technology
- ❖ AM-LCD pixel electrodes circuits and related driving schemes
- ❖ Electrical instability of the a-Si:H TFTs
- ❖ Device physics of the a-Si:H TFTs
- ❖ Electrostatic discharge protection (ESD) circuits for AM-LCDs
- ❖ Organic light emitting devices for active-matrix organic light emitting displays (AM-OLEDs)
- ❖ Amorphous metal oxide thin-film transitions for next generation flat panel displays

Has expertise in the following topics:

- ❖ Patent infringements
- ❖ Expert witness
- ❖ Expert testimony
- ❖ Litigation support consultant

Able to provide patents background research and testimonials in support of the attorneys and their clients during patents infringement litigations. Past projects have been with a number of multinational organizations both large and medium size.

## **Honors and Awards**

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2013	Certificate of Commendation for Outstanding Service by Society for Information Display for his organization of the first I-Zone at the 2012 SID International Symposium
2011	The IEEE Electron Devices Society Certificate in Recognition and Appreciation of valued services and contributions as IEEE Transactions on Electron Device Editor, Molecular and Organic Devices 2004-2011
2008, 2010, 2011, 2012, and 2014	Certificate of Appreciation Award for contributing to the success of the annual “Symposium on Vehicular Displays” by Society for Information Display
2008	The Minister of Education, Science and Technology of Republic of Korea, Excellence Award in Fundamental and Original Technology section of the 8 <sup>th</sup> International Meeting on Information Display (IMID) (2 <sup>nd</sup> place) for “Photofield-Effect in Amorphous InGaZnO TFTS” paper
2001	RSNA Certificate of Merit in recognition of the excellence of your education exhibit presented at the 87 <sup>th</sup> Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA)
1999	Recognized by Materials Research Society (MRS) for serving as a tutorial instructor during Spring Meeting
1992 & 1996	Recognized by MRS for contributions in serving the society as symposia organizer
1992	IBM Appreciation and Recognition Award for a first plateau invention achievement
1990	IBM Invention Achievement Award for a first patent application

1989, 1990 & 1993 IBM External Honors for technical leadership

1982 Stas Prize for outstanding D.Sc. thesis research work

## **Professional Service and Associations**

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### **Officer:**

- ❖ Director for Metropolitan Detroit, Society for Information Display (SID): 2005 - present
- ❖ Board of Directors, SID, 2005-present

### **Editor:**

- ❖ IEEE Transaction on Electron Devices: 1989, 2005 – 2011
- ❖ Materials Research Society Proceedings: 1993, 1995 - 1997
- ❖ Journal of Non - Crystalline Solids: 1995
- ❖ Artech House, Inc., “*Amorphous & Microcrystalline Semiconductor Devices,*” book- two volumes, 1991 and 1992
- ❖ Journal of Korean Display Society, foreign member

### **Conference Organizer:**

- ❖ Display Week I-Zone- 2012, 2013, and 2014 during SID International Symposium and Exhibit
- ❖ Symposium on “*Flat Panel Displays Materials II,*” 1996 Materials Research Society Spring Meeting, April 8-12, 1996, San Francisco, CA
- ❖ Symposium on “*Amorphous and Crystalline Insulating Thin Films III,*” 1995 International Conference on Solid State Devices and Materials, August 21-24, 1995, Osaka, Japan
- ❖ Symposium on “*Amorphous Insulating Thin Films II,*” 1994 European Materials Research Society Spring Conference, May 24-27, 1994, Strasbourg, France
- ❖ Symposium on “*Amorphous Insulating Thin Films,*” 1992 Materials Research Society Fall Meeting, December 1-4, 1992, Boston, MA
- ❖ International Topical Conference on “*Hydrogenated Amorphous Silicon Devices and Technology,*” November 21-23, 1988, Yorktown Heights, NY

### **Technical Program Committee:**

- ❖ IEEE – The Electron Devices Society; IEDM and DRC – program committee member and chair
- ❖ IEEE “*Standard Test Methods for the Characterization of Organic Transistors*”- standard development committee member
- ❖ IEEE Standard development for “*Organic Electronics*” - technical committee member
- ❖ Society for Information Display; SID International Symposium – program- Committee member
- ❖ Society for Information Display; SID Vehicle Displays and Interfaces- program committee chair and member
- ❖ Society for Information Display; International Meeting on Information Display (IMID)- program committee member
- ❖ Society for Information Display; Display Week I-Zone- program committee chair and member
- ❖ Materials Research Society; MRS Meetings – program committee member

- ❖ The Japan Society of Applied Physics; AM-FPDs Workshops – program committee member

**Professional Journal Referee:**

- ❖ IEEE Trans. Elec. Dev., IEEE Elec. Dev. Letters, Appl. Phys. Letters, J. Appl. Phys., Thin Solid Films, Solid-State Electronics, and many others

**Panelist and proposal review:**

- ❖ National Science Foundation, Department of Energy (DoE) and Department of Defense (DoD)
- ❖ Panelist at various national and international meetings

**Professional Society Member:**

- ❖ Institute of Electrical and Electronics Engineers (IEEE)-elected to grade of Senior Member since 2000
- ❖ Society for Information Display (SID)- member

**Service to University of Michigan, College of Engineering and EECS Department**

- ❖ College of Engineering (CoE) Freshmen advisor
- ❖ EECS Casebook committee – chair
- ❖ College representative for EECS department
- ❖ ECE faculty search committee - member
- ❖ Senate Assembly and SACU - alternate
- ❖ Electrical engineering graduate program committee - member
- ❖ ECE student projects laboratory - coordinator
- ❖ Industrial Programs Committee - member
- ❖ CoE Faculty committee on discipline - member
- ❖ CoE Library Advisory Committee - member

**Research Record, Headlights**

1983 - present      List enclosed.

**Publications**

1983 - present      Over 380 publications, 5 book chapters, and 3 books on (List enclosed.)

**Google Scholar and ResearchGate (R<sup>G</sup>) Citations**

- ❖ Citations: 7081 since 2011
- ❖ h-index: 45
- ❖ i10-index: 134
- ❖ R<sup>G</sup> score: 41.65

## **Presentations**

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1985-present            Over 100 invited and 250 contributed presentations at the national and international meetings. (List enclosed)

## **Areas of Expertise**

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- ❖ Hydrogenated amorphous and polycrystalline silicon and alloys, devices and circuits
- ❖ Flat panel displays (transmissive, reflective, emissive, and electrochromic) technology
- ❖ Organic semiconductors, devices and circuits
- ❖ Metal oxide semiconductors, devices, and circuits
- ❖ Solar cells
- ❖ Detectors
- ❖ X-ray imagers
- ❖ Chemical sensors
- ❖ DNA-based membranes and flexible substrates

## **Interests and Others**

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- ❖ Enjoy working with others in team oriented projects
- ❖ Love sports and spending time with his family
- ❖ Married, three grown children
- ❖ Fluent in French and Polish; and limited knowledge of Italian and Russian
- ❖ Familiar with different cultures (citizen of the world)

## **References**

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- ❖ Can be provided upon request