

# CURRICULUM VITAE

## Dr. inż. Malgorzata Celuch

### Affiliation, position, and official address:

Institute of Radioelectronics, Warsaw University of Technology (WUT)  
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### Date and place of birth:

May 10<sup>th</sup>, 1964

### Nationality:

Polish

### Degrees:

- 1996 Ph.D. (honours)  
from: Warsaw University of Technology  
thesis title: "A generalized approach to the FDTD and TLM algorithms for microwave circuit modelling"  
advisor: Prof. Wojciech Gwarek
- 1988 M.Sc. (honours)  
from: Warsaw University of Technology  
thesis title: "Numerical analysis of planar circuits incorporating nonlinear components"  
advisor: Prof. Wojciech Gwarek
- 1983 International Baccalaureate (distinctions)  
from: United World College of the Atlantic, UK, and IB Office, Switzerland

### Career/Employment:

#### current:

- 1996→ Assistant Professor, Warsaw University of Technology  
1994→ free-lance electromagnetic software developer  
1999→ vice-president of QWED company [www.qwed.eu](http://www.qwed.eu)

#### former:

- 1988-1989 researcher (rektorski etat naukowo-badawczy), Warsaw University of Technology  
1989-1991 maternity leave  
1992-1996 Ph.D. studies, Warsaw University of Technology

**Specialisation:**

main fields: computational electromagnetics, multiphysics modelling  
other fields: microwave circuits  
current research: conformal FDTD methods,  
new applications of FDTD for microwave power problems,  
frequency-domain parameter extraction from FDTD simulations

**Awards for excellence in research and /or innovation:**

2010 The Highest Quality Workshop Award for RAMPAnT 2009 (*individual*)  
(IEEE Microwave Theory and Techniques Society)  
2001, 2006 Leader in Software Export  
(Polish Software Market Association)  
2000 Proton Award  
(from State Committee for Scientific Research and Proton TV programme)  
2000 Master of Technology Award  
(from NOT - Polish Federation of Engineering Associations)  
1999 Prime Minister of Poland Award  
1998 European Information Technology Prize  
(from European Commission and Euro-Case)  
1997 Rector of the Warsaw University of Technology Award (*individual*)  
1996 Scholarship of the Foundation for Polish Science (*individual*)  
1995 Minister of Education Award

Note: the awards not marked as '*individual*' were granted to the core QuickWave team of 4 researchers or QWED company run by them.

**Editor of books:**

*Microwave Power Engineering with Advanced Computer Modeling*  
(ed. M.Celuch and V.V.Yakovlec), CRC Press, 2013

**Reviewer for:****journals:**

*IEEE Transactions on Microwave Theory & Techniques* (since 1996)  
*IEEE Transactions on Antennas and Propagation* (since 1997)  
*IEEE Microwave and Wireless Components Letters* (since 2001)  
*Journal of Microwave Power and Electromagnetic Energy* (since 2006)  
*Applied Computational Electromagnetics Society Journal* (since 2007)  
*IEEE Antennas and Propagation Society Magazine* (since 2008)  
*International Journal of Infrared and Millimeter Waves* (since 2008)  
*Physica Status Solidi B* (since 2008)  
*Computer Physics Communications* (2009)  
Wydawnictwa Komunikacji i Łączności (2009)  
*Challenges of Modern Technology* (2011)

**theses at foreign universities:**

Helsinki University of Technology, Finland - pre-examiner of Ph.D.Thesis in 2001  
McMaster University, Canada - examiner of Ph.D. thesis, 2010

**conferences:**

TPC member of *IEEE MTT-S International Microwave Symposium* since 2002  
TPRC founder and chair of *IEEE MTT-S IMS SC-33* since 2010  
TPC member of *Microwave Materials and Applications Conference MMA-2010*  
TPC member of *ANTEM 2010*  
TPC member of *IET Computation in Electromagnetics CEM-2011*

**projects:**

FP7 expert for the European Commission (since 2008)

**Teaching experience – Warsaw University of Technology:**

*Fields, Wave,s and Antennas* (lecturer in charge)  
*Computational Electromagnetics for Telecommunications* (lecturer in charge)  
*Komputerowa Analiza Problemów Elektrodynamiki* (with prof. W.Gwarek)  
*Oddziaływanie fal elektromagnetycznych na organizmy żywe* (6 hrs lectures)  
author of laboratory exercises for POFA, EFWA  
contributions to other courses in computational electromagnetics and microwave theory

**Teaching experience – international and foreign universities:**

Franco-Polish High School of New Information and Telecommunication Technologies, Poznan  
tutorials and laboratory exercises in electronic circuit theory, 1992-1993  
Chalmers University of Technology, Gothenburg, Sweden  
contractual consultancy on FDTD modelling for mobile communications, 1995-1996  
Chalmers University of Technology, Gothenburg, Sweden  
*Microwave Modelling with the FDTD method*  
graduate level lectures 20 hrs, Nov.1995  
University of Guadalajara, Guadalajara, Mexico  
*Computational Electromagnetics*  
Ph.D. course 30 hrs (co-taught with prof. W.Gwarek), Feb.2005  
California Institute of Technology, Pasadena, CA  
*Electromagnetic Software Applications to Antenna Problems*  
M.Sc. / Ph.D. lecture and tutorials 8 hrs, Jan.2007  
Worcester Polytechnic Institute, Worcester, MA  
*The finite-difference time-domain algorithms: numerical properties & practical applications*  
lectures 4 hrs within graduate course, Apr. 2008  
McMaster University, Hamilton, Canada, May 2010

**Co-organiser and tutor of professional training courses:**

Chalmers University of Technology, Gothenburg, Sweden  
*QuickWave Modelling*  
3 days (co-taught with prof. W.Gwarek), Nov.1999  
Northampton Community College, Bethlehem, PA  
*Electromagnetic Modelling for Microwave Heating*  
2 days (co-taught with dr. V.Yakovlev), Jan.2002  
Swedish Institute for Food and Biotechnology, Gothenburg, Sweden  
*QuickWave Electromagnetic Software Application*  
2 days (co-taught with prof. W.Gwarek), May 2002

The Ferrite Company, Inc., Hudson, NH

*Advanced & Specialised Training in QuickWave-3D*

1 day (co-taught with Dr. V.Yakovlev), Jan.2003

Politechnika Wroclawska, Wrocław

*Modelowanie Elektromagnetyczne Układów Mikrofalowych i Antenowych Symulatorem FDTD*

2 days (co-taught with prof. W.Gwarek), Apr.2006

**Invited speaker at seminars in academic and industrial institutions:**

Ferdinand-Braun-Institut für Höchstfrequenztechnik, Berlin, Germany, Oct.1993

University of Victoria, Victoria, Canada, June 2001

Technische Universität Darmstadt, Darmstadt, Germany, July 2002

Chalmers University of Technology, Gothenburg, Sweden, Nov.1998, Feb.2003

*Whirlpool*, Norrköping, Sweden, Aug.2003

VertexRSI (General Dynamics), Kilgore, TX, June 2004

Ericsson, Kista, Sweden, Jan.2004

Dalhousie University, Halifax, Canada, June 2005

Stellenbosch University, Stellenbosch, RPA, Sep.2005

California Institute of Technology, Pasadena, CA, Jan.2007

Jet Propulsion Laboratory, Pasadena, CA, Jan.2007

*Nestle PTC*, Singen, Germany, Aug.2007

Universita di Modena e Reggio Emilia, Modena, Italy, Feb.2008

Worcester Polytechnic Institute, Worcester, MA, Jan.2002, Jan.2009

McMaster University, Hamilton, Canada, 2010

Universita degli Studi di Padova, Padova, Italy, Sept.2011

**Invited speaker at scientific conferences:**

*MIKON*, May 1998

*East-West Workshop "Advanced Techniques in Electromagnetics"*, May 2004

*Computer Modelling & Microwave Power Industry*

June 2000, Jan.2003, Jan.2004, Feb.2008, Jan.2009

**Invited speaker at business and political events:**

Polish Software Market Association:

*Leader in Software Export Event*, Mar.2001

European Network for Financing Food Innovation:

*Roundtable Meeting*, Warsaw, Sep.2006

IEEE MTT-S Winter Technical Panel Session:

*Government Support for MTT Research*, Long Beach, CA, Jan.2007

European Commission and OSEO Conference:

*Consolidating Research and Innovation for European SMEs*, Paris, Sep.2008

**Session / workshop organiser:**

*Applied Computational Electromagnetics Society Symp.* – sessions in 2007, 2008

*IEEE MTT-S International Microwave Symp.* – workshop in 2009

**Session chair at scientific conferences:**

about 15 sessions at *MIKON*, *IEEE IMS*, *ACES*, *AMPERE*, *IEEE APMC*

**Managerial experience:**

coordinating QWED company activities (8 employees, 10 consultants)  
leading European projects (Eureka, two STREP FP6, ToK Marie Curie, FP7, ENIAC JU)  
leading industrial projects at WUT and QWED

**Professional organisations:**

member of IEEE since 1996  
co-chair of IEEE AES/AP/MTT Joint Chapter, Section Poland, 2007-2008  
member of Applied Computational Electromagnetics Society since 2009

**Other voluntary organisations:**

founding member of Polish UWC Association (Towarzystwo Szkół Zjednoczonego Świata)  
member of National Committee selecting students for United World Colleges since 2001

**Publications:**

total of approx.150  
5 chapters in monographs  
over 20 international journal articles  
10 national journal articles