

INFORMAȚII PERSONALE

Elena HELEREA

✉ helerea@unitbv.ro

**LOCUL DE MUNCA
POZIȚIA IOSUD UTBV**

 Universitatea Transilvania din Brașov
 Conducător de doctorat – Domeniul Inginerie electrică...
 Anul obținerii dreptului de conducere doctorat: 2004

**DOMENII DE COMPETENȚĂ
PROFESIONALĂ / ARII DE
INTERES ÎN CERCETARE**

Metode și tehnici de monitorizare a calității energiei electrice și de reducere a pierderilor în rețelele electrice cu generare distribuită
 Dezvoltarea de metode și instrumente de creștere a imunității echipamentelor electrice la acțiunea câmpurilor electromagnetice - Ecranarea electromagnetică
 Diagnoza defectelor și prognoza duratei de viață la componentele și echipamentele electrice
 Specificații domeniile

EXPERIENȚA PROFESIONALĂ

De la 1976- până în prezent

Professor universitar (din 1999), Conferențiar universitar (din 1992), Sef lucrări (din 1988), Asistent universitar (din 1976)

Universitatea Transilvania din Brașov , www.unitbv.ro

- Titular și de dezvoltare de cursuri : Materiale electrotehnice, Componente pasive , Calitatea energiei, Compatibilitate electromagnetică, Stabilitatea sistemelor electrice, Evoluția tehnologiei.
- Director al Bibliotecii Universitatii Transilvania din Brașov (2008-2012)
- Prorector cu activitatea didactică al Universitatii Transilvania din Brașov (2004-2008)
- Coordonator studii doctorale în Ingineria electrică
- Director al Colegiului Universitar Tehnic (1992-1995)

De la 1975- până la 1976

Inginer de cercetare

Combinatul Chimic Fagaras

- Masuratori și automatizări în industria chimică

De la - până la)

Profesor inginer

Liceul de Chimie Făgăraș

Discipline: Electrotehnică, Măsurări, Automatizări

EDUCAȚIE ȘI FORMARE

de la 1978- până în 1987

Doctor inginer

Institutul Politehnic București

 Scrieți nivelul EQF,
dacă îl cunoașteți

 Institutul Politehnic București
 Scrieți denumirea organizației de educație sau formare și localitatea (dacă este relevant, scrieți și țara)

Teza de doctorat: Contribuții la îmbunătățirea calității izolației electrice din mase plastice folosite în echipamentul electric al autovehiculelor și aeronavelor

de la 1965- până în 1970

Inginer

 Scrieți nivelul EQF,
dacă îl cunoașteți

Institutul Politehnic din Brașov

Abilitățile acumulate : proiectare și mentenanța echipamentelor electrice

COMPETENTE PERSONALE

Limba maternă Română

Alte limbi străine cunoscute

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citare	Participare la conversație	Discurs oral	
Limba engleză	B2	B2	B2	B2	B2
Scrieți denumirea certificatului. Scrieți nivelul, dacă îl cunoașteți.					
Limba franceză	B2	B2	B2	B2	B2
Scrieți denumirea certificatului. Scrieți nivelul, dacă îl cunoașteți.					
Limba rusă	B2	B2	B1	B1	B2

B2

Competențe de comunicare Bune competențe de comunicare dobândite prin experiența proprie de profesor și cercetător

Competențe informatice O bună cunoaștere a instrumentelor Microsoft Office™

INFORMATII SUPLIMENTARE

Coordonator principal pentru studenți doctoranzi

O bună cunoaștere a instrumentelor Microsoft Office™

1. Lungoci Carmen, Modelarea și gestiunea de energie într-un sistem hibrid de alimentare cu supracondensatoare și baterii pentru vehicule electrice, Septembrie 2009.
2. Filip Melania, Optimizarea tehnologiilor de fabricație a mașinilor electrice în vederea creșterii eficienței și eficacității, Decembrie 2010.
3. Mațoi Adrian Marian, Soluții moderne pentru măsurarea și controlul parametrilor electromagnetici ai mediului din autovehicule, Iulie 2012
4. Mușat Radu, Îmbunătățirea confortului termic în autovehicule, Octombrie 2011.
5. Călin Daniel, Cercetări privind utilizarea optimă a materialelor magnetice în construcția mașinilor electrice destinate transportului, Octombrie 2011.
6. Măriuț Larisa, Monitorizare și predicție pentru liniile electrice în cablu, Octombrie 2012.
7. Ciobanu Anca, Contribuții privind diagnoza și prognoza defectelor la motoarele electrice, Septembrie 2013.
8. Mihai Nicolae Cătălin, Studii privind îmbunătățirea calității energiei în sistemele de distribuție a energiei electrice, Noiembrie 2013
9. Lepadat Ionel, Optimizarea sistemului electric de alimentare și protecție la consumator, Octombrie 2014.
10. Serban Mariana, Studii privind îmbunătățirea calității uleiului de transformator, Februarie 2015.
11. Ursachi Corneliu, Evaluarea imunității electromagnetice a echipamentelor electrice și electronice la perturbații conduse, Februarie 2015.
12. Moasa Beatrice Costela, Contribuții privind asigurarea imunității echipamentelor la descărcări electrostatice, Octombrie 2015
13. Abagiu Sorin, Optimizări la sistemele electrice cu centrale fotovoltaice, Martie 2016.

Membru în comisii de doctorat

25 of evaluări ale tezelor de doctorat – Universitatea Politehnică de București (15), Universitatea din Craiova (2), Universitatea Tehnică din Cluj-Napoca (2), Universitatea Tehnică Gheorghe Asachi din Iași (2), Universitatea Transilvania din Brașov.

**Recenzor la publicații relevante-
(selecție)**

- Journals: IEEE Transactions on Electromagnetic Compatibility; Applied Energy; International Journal of Electrical Power and Energy Systems; Journal of Magnetism and Magnetic Materials, since 2017
- Revue Roumaine des Sciences Techniques, Bucharest, since 2009
 - Revue Polak Periodica, Budapest, since 2010
 - Scientific Bulletin of Transilvania University of Brasov, since 2008
 - IEEE Conferences: OPTIM Conference, since 2008, ICATE Conference, since 2012, ATEE, since 2010,
 - SNET Conference (about 80 papers).

**Membru în asociații profesionale și
științifice**

- IEEE - Institute of Electrical and Electronic Engineering (Dielectrics, Magnetics, CEM, Education, Measurements & Instrumentation), din 2001,
- ACER – Asociația Română de Compatibilitate Electromagnetică, din 2001,
- AGIR – Asociația Generală a Inginerilor din România, din 2010,
- ICOHTEC - International Committee of History of Technology, din 1997.
- CRIFST – Comitetul Român pentru Istoria și Filosofia Științei și Tehnicii al Academiei Române, din 2000.

**Recunoaștere națională și
internațională**

2018- present: President of CRIFST of the Romanian Academy, Brasov Branch.
2018-present: President of Women in Engineering Affinity Group of IEEE Romania Chapter.
2017: Senior member of IEEE.
2017-2018: Secretary of IEEE Instrumentation and Measurement Society Romania Chapter.
2014 - 2017: Member of Executive Committee of the IEEE Romania Section, as Historian.
2011- Honorary Professor of the University of Pecs, Hungary.
2008 – 2017: Member of ICOHTEC Coordination Committee.
2011 – 2014: Member of the Steering Committee of Romanian Association of Electromagnetic Compatibility.
2004 – 2018: Secretary of CRIFST of the Romanian Academy, Brasov Branch.

Realizări și referințe

- 20 de monografii științifice și cărți publicate în Editurile Universității din Brașov, Lux Libris Brasov, Matrix Bucuresti, Lap Lambert, Editura AGIR, ca autor sau coordonator.
- 13 materiale didactice suport publicate în Editura Universității Transilvania din Brașov.
- 42 contracts of scientific research
- Peste 200 de articole științifice publicate în jurnale și volumele conferintelor naționale și internaționale.

Indice Hirsch 5

Lista publicațiilor relevante – selecție

1.

Near and Far Field Measurements in Industrial Environment of Passive UHF RFID Tags

 By: [Moraru, Aurelian](#); [Ursachi, Corneliu](#); [Helerea, Elena](#)

Conference: 11th International Symposium on Advanced Topics in Electrical Engineering (ATEE) Location: Bucharest, ROMANIA Date: MAR 28-30, 2019,

2019 11TH INTERNATIONAL SYMPOSIUM ON ADVANCED TOPICS IN ELECTRICAL ENGINEERING (ATEE) Book

Series: International Symposium on Advanced Topics in Electrical Engineering Published: 2019

2.

Statistical and Physical Approaches on the Initial Failure Rate of High Voltage Power Transformers

 By: [Pierrat, Lambert](#); [Helerea, Elena](#); [Sangeorzan, Livia](#)

Conference: International Conference on Applied and Theoretical Electricity (ICATE) Location: Craiova, ROMANIA Date: OCT 04-06, 2018

Sponsor(s): Univ Craiova, Fac Elect Engn; Inst Elect & Elect Engineers; IEEE, Romanian Sect CS Chapter; IEEE, Romanian Sect EMB Chapter; IEEE, Romanian Sect EMC Chapter; Minist Res & Innovat; Assoc Support Engn Educ

2018 INTERNATIONAL CONFERENCE ON APPLIED AND THEORETICAL ELECTRICITY (ICATE) Book Series: International

Conference on Applied and Theoretical Electricity Published: 2018

3.

Passive RFID Tags for Textile Items - Requirements and Solutions

 By: [Moraru, A.](#); [Helerea, E.](#); [Ursachi, C.](#)

Conference: International Symposium on Fundamentals of Electrical Engineering (ISFEE) Location: Univ Politehnica Bucharest, Fac Elect Engn, Elect Engn Dept, Bucharest, ROMANIA Date: NOV 01-03, 2018

Sponsor(s): Assoc Romanian Elect Elect Engineers; IEEE Romania Sect CAS CS Chapter; IEEE

2018 INTERNATIONAL SYMPOSIUM ON FUNDAMENTALS OF ELECTRICAL ENGINEERING (ISFEE) Published: 2018

4.

Visual Solutions Developed With Graph 4.3 Software Based on a Mathematical Model for Determining the Coordinates of Brocard Points in Euclidean Geometry

 By: [Anghel, Gheorghe](#); [Anghel, Iulia Andreea](#); [Helerea, Elena](#)

Conference: 14th International Scientific Conference on eLearning and Software for Education - eLearning Challenges and New Horizons Location: Bucharest, ROMANIA Date: APR 19-20, 2018

Sponsor(s): Romanian Adv Distributed Learning Assoc; Univ Natl Aparare Carol I; European Secur & Def Coll; Romania Partnership Ctr ELEARNING CHALLENGES AND NEW HORIZONS, VOL 1 Book Series: eLearning and Software for Education Pages: 333-342 Published: 2018

5.

Magnetics Tutorial. Modelling Permanent Magnets Using the Electromagnetic Software FEMM 4.2

 By: [Anghel, Gheorghe](#); [Anghel, Iulia Andreea](#); [Calin, Marius Daniel](#); et al.

Conference: 14th International Scientific Conference on eLearning and Software for Education - eLearning Challenges and New Horizons Location: Bucharest, ROMANIA Date: APR 19-20, 2018

Sponsor(s): Romanian Adv Distributed Learning Assoc; Univ Natl Aparare Carol I; European Secur & Def Coll; Romania Partnership Ctr

ELEARNING CHALLENGES AND NEW HORIZONS, VOL 4 Book Series: eLearning and Software for Education Pages: 267-274 Published: 2018

6.

Temperature Influence and Measurement Uncertainty on NdFeB Magnetic Characteristics

 By: [Calin, Marius Daniel](#); [Helerea, Elena](#); [Anghel, Gheorghe](#)

Conference: 5th International Symposium on Electrical and Electronics Engineering (ISEEE) Location: Galati, ROMANIA Date: OCT 20-22, 2017

Sponsor(s): IEEE; Dunarea Jos Univ Galati, Fac Automat Comp Sci Elect & Elect Engn; Minist Res & Innovat; Adv Technol Inst; IEEE Romania Sect CAS CS Joint Chapter; IEEE Power Elect Romania Chapter

2017 5TH INTERNATIONAL SYMPOSIUM ON ELECTRICAL AND ELECTRONICS ENGINEERING (ISEEE) Book

Series: International Symposium on Electrical and Electronics Engineering Published: 2017

7.

Losses in Power Supply System of Industrial Consumers - A Technical and Economic Issue

 By: [Lepadatu, Ionel](#); [Helerea, Elena](#); [Abagiu, Sorin](#); et al.

Conference: 5th International Symposium on Electrical and Electronics Engineering (ISEEE) Location: Galati, ROMANIA Date: OCT 20-22, 2017

Sponsor(s): IEEE; Dunarea Jos Univ Galati, Fac Automat Comp Sci Elect & Elect Engn; Minist Res & Innovat; Adv Technol Inst; IEEE Romania Sect CAS CS Joint Chapter; IEEE Power Elect Romania Chapter

2017 5TH INTERNATIONAL SYMPOSIUM ON ELECTRICAL AND ELECTRONICS ENGINEERING (ISEEE) Book

Series: International Symposium on Electrical and Electronics Engineering Published: 2017

8.

Load forecasting using artificial neural networks for industrial consumer

By: [Mihai, Catalin](#); [Helerea, Elena](#)

Conference: 7th International Conference on Modern Power Systems (MPS) Location: Cluj Napoca, ROMANIA Date: JUN 06-09, 2017

Sponsor(s): IEEE; Tech Univ Cluj Napoca; SDEE Transilvania Nord SA; Transelectica SA; IEEE Romanian Sect
2017 7TH INTERNATIONAL CONFERENCE ON MODERN POWER SYSTEMS (MPS) Published: 2017

9.

Impact of Distributed Generation on Voltage Profile and Power Losses in a Test Power Grid

By: [Lepadatu, Ionel](#); [Helerea, Elena](#); [Abagiu, Sorin](#); et al.

Conference: International Conference on Optimization of Electrical and Electronic Equipment (OPTIM) / Intl Aegean Conference on Electrical Machines and Power Electronics (ACEMP) Location: Transilvania Univ Brasov, Brasov, ROMANIA Date: MAY 25-27, 2017

Sponsor(s): Univ Politehnica Timisoara; Tech Univ Cluj Napoca; Middle E Tech Univ Ankara; Inst Elec & Elect Engineers; IEEE Ind Elect Soc; IEEE Ind Applicat Soc; IEEE Power Elect Soc; Inst Elect Engineers Japan; Korean Inst Power Elect
2017 INTERNATIONAL CONFERENCE ON OPTIMIZATION OF ELECTRICAL AND ELECTRONIC EQUIPMENT (OPTIM) & 2017 INTLAEGEAN CONFERENCE ON ELECTRICAL MACHINES AND POWER ELECTRONICS (ACEMP) Pages: 128-133 Published: 2017

10.

Balancing a Three-Phase Induction Motor Supplied from a Single-Phase Source with Two SVCs

By: [Wang, Yaw-Juen](#); [Pierrat, Lambert](#); [Helerea, Elena](#)

Conference: International Conference on Optimization of Electrical and Electronic Equipment (OPTIM) / Intl Aegean Conference on Electrical Machines and Power Electronics (ACEMP) Location: Transilvania Univ Brasov, Brasov, ROMANIA Date: MAY 25-27, 2017

Sponsor(s): Univ Politehnica Timisoara; Tech Univ Cluj Napoca; Middle E Tech Univ Ankara; Inst Elec & Elect Engineers; IEEE Ind Elect Soc; IEEE Ind Applicat Soc; IEEE Power Elect Soc; Inst Elect Engineers Japan; Korean Inst Power Elect
2017 INTERNATIONAL CONFERENCE ON OPTIMIZATION OF ELECTRICAL AND ELECTRONIC EQUIPMENT (OPTIM) & 2017 INTLAEGEAN CONFERENCE ON ELECTRICAL MACHINES AND POWER ELECTRONICS (ACEMP) Pages: 268-274 Published: 2017.

11.

RFID System with Passive RFID Tags for Textiles

By: [Moraru, Aurelian](#); [Helerea, Elena](#); [Ursachi, Corneliu](#); et al.

Conference: 10th International Symposium on Advanced Topics in Electrical Engineering (ATEE) Location: Bucharest, ROMANIA Date: MAR 23-25, 2017

Sponsor(s): Univ Politehnica Bucharest, Fac Elect Engr; IEEE
2017 10TH INTERNATIONAL SYMPOSIUM ON ADVANCED TOPICS IN ELECTRICAL ENGINEERING (ATEE) Book Series: International Symposium on Advanced Topics in Electrical Engineering Pages: 410-415 Published: 2017

12.

New Stochastic Criterion of Restoration Time after Collapse of a Large Power Network

By: [Pierrat, Lambert](#); [Helerea, Elena](#)

Conference: International Symposium on Fundamentals of Electrical Engineering (ISFEE) Location: ROMANIA Date: JUN 30-JUL 02, 2016

Sponsor(s): Univ Politehnica Bucharest, Fac Elect Engr, Elect Engr Dept; Assoc Romanian Elect Elect Engineers; IEEE Romania Sect CAS CS Chapter; IEEE; Minist Natl Educ

2016 INTERNATIONAL SYMPOSIUM ON FUNDAMENTALS OF ELECTRICAL ENGINEERING (ISFEE) Published: 2016

13.

On Adequacy of Electrical Engineering and Computers Curriculum to Current and Future Technological Challenges - A Case Study

By: [Helerea, Elena](#); [Ilea, Danut](#); [Moasa, Beatrice](#)

Conference: 17th IEEE International Power Electronics and Motion Control Conference (PEMC) Location: Varna, BULGARIA Date: SEP 25-30, 2016

Sponsor(s): IEEE Ind Elect Soc; IEEE Ind Applicat Soc; IEEE; Tech Univ Sofia; New Univ Lisbon
2016 IEEE INTERNATIONAL POWER ELECTRONICS AND MOTION CONTROL CONFERENCE (PEMC) Book Series: IEEE International Power Electronics and Motion Control Conference IPEMC Pages: 977-982 Published: 2016

14.

Qualification of Polymeric Compounds for Electrostatic Discharge Protection

By: [Ghita, Beatrice](#); [Helerea, Elena](#)

Conference: International Conference on Applied and Theoretical Electricity (ICATE) Location: Craiova, ROMANIA Date: OCT 06-08, 2016

Sponsor(s): Univ Craiova, Fac Elect Engr; Inst Elect & Elect Engineers USA; IEEE Romanian Sect CS Chapter; IEEE Romanian Sect EMB Chapter; IEEE Romanian Sect EMC Chapter; Minist Natl Educ & Res; Assoc Support Engr Educ; IEEE

2016 INTERNATIONAL CONFERENCE ON APPLIED AND THEORETICAL ELECTRICITY (ICATE) Book Series: International Conference on Applied and Theoretical Electricity Published: 2016

15.

Multidisciplinary method to apply system theory in electrical circuit analysisBy: [Lungoci, Carmen](#); [Helerea, Elena](#); [Sorea, Dan](#)

Conference: 13th International Conference on Development and Application Systems (DAS) Location: Suceava, ROMANIA Date: MAY 19-21, 2016

Sponsor(s): Stefan cel Mare Univ Suceava, Fac Elect Engr & Comp Sci Romania; IEEE Ind Applicat Soc, Romania Sect 2016 13TH INTERNATIONAL CONFERENCE ON DEVELOPMENT AND APPLICATION SYSTEMS (DAS 2016) Pages: 219-224 Published: 2016

16.

Variation of Tower Footing Resistance on the Lightning Surge Propagation through Overhead Power**Distribution Lines**By: [Mariut, Elena Larisa](#); [Helerea, Elena](#)[ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING](#) Volume: 16 Issue: 1 Pages: 99-106 Published: 2016

17.

Solutions for Energy Losses Reduction in Power Networks with Renewable Energy SourcesBy: [Abagiu, Sorin](#); [Lepadat, Ionel](#); [Helerea, Elena](#)

Conference: International Conference on Applied and Theoretical Electricity (ICATE) Location: Craiova, ROMANIA Date: OCT 06-08, 2016

Sponsor(s): Univ Craiova, Fac Elect Engr; Inst Elect & Elect Engineers USA; IEEE Romanian Sect CS Chapter; IEEE Romanian Sect EMB Chapter; IEEE Romanian Sect EMC Chapter; Minist Natl Educ & Res; Assoc Support Engr Educ; IEEE 2016 INTERNATIONAL CONFERENCE ON APPLIED AND THEORETICAL ELECTRICITY (ICATE) Book Series: International Conference on Applied and Theoretical Electricity Published: 2016

18.

Influence of Alloy Elements on Magnetic Properties of Electrical SteelsBy: [Pricop, Valentin](#); [Helerea, Elena](#); [Calin, Marius Daniel](#)

Conference: International Conference on Applied and Theoretical Electricity (ICATE) Location: Craiova, ROMANIA Date: OCT 06-08, 2016

Sponsor(s): Univ Craiova, Fac Elect Engr; Inst Elect & Elect Engineers USA; IEEE Romanian Sect CS Chapter; IEEE Romanian Sect EMB Chapter; IEEE Romanian Sect EMC Chapter; Minist Natl Educ & Res; Assoc Support Engr Educ; IEEE 2016 INTERNATIONAL CONFERENCE ON APPLIED AND THEORETICAL ELECTRICITY (ICATE) Book Series: International Conference on Applied and Theoretical Electricity Published: 2016

19.

Electric potential assessment near distribution power lines caused by lightning surge wave propagationBy: [Mariut, Elena Larisa](#); [Helerea, Elena](#); [Ursachi, Corneliu](#)

Conference: Int Aegean Conference on Electrical Machines and Power Electronics (ACEMP) / Int Conference on Optimization of Electrical and Electronic Equipment (OPTIM) / Int Symposium on Advanced Electromechanical Motion Systems (ELECTROMOTION) Location: Side, TURKEY Date: SEP 02-04, 2015

Sponsor(s): IEEE; IEEE Ind Elect Soc; IEEE Power Elect Soc; IEEE Power & Energy Soc; Middle E Tech Univ; Transilvania Univ Brasov; Univ Politehnica Timisoara; Tech Univ Cluj Napoca; IEEE Ind Applicat Soc 2015 INTL AEGEAN CONFERENCE ON ELECTRICAL MACHINES & POWER ELECTRONICS (ACEMP), 2015 INTL CONFERENCE ON OPTIMIZATION OF ELECTRICAL & ELECTRONIC EQUIPMENT (OPTIM) & 2015 INTL SYMPOSIUM ON ADVANCED ELECTROMECHANICAL MOTION SYSTEMS (ELECTROMOTION) Pages: 693-698 Published: 2015

20.

Selection of Soft Magnetic Materials for Particle Accelerator MagnetsBy: [Pricop, Valentin](#); [Helerea, Elena](#); [Cernat, Mihai](#)

Conference: Int Aegean Conference on Electrical Machines and Power Electronics (ACEMP) / Int Conference on Optimization of Electrical and Electronic Equipment (OPTIM) / Int Symposium on Advanced Electromechanical Motion Systems (ELECTROMOTION) Location: Side, TURKEY Date: SEP 02-04, 2015

Sponsor(s): IEEE; IEEE Ind Elect Soc; IEEE Power Elect Soc; IEEE Power & Energy Soc; Middle E Tech Univ; Transilvania Univ Brasov; Univ Politehnica Timisoara; Tech Univ Cluj Napoca; IEEE Ind Applicat Soc 2015 INTL AEGEAN CONFERENCE ON ELECTRICAL MACHINES & POWER ELECTRONICS (ACEMP), 2015 INTL CONFERENCE ON OPTIMIZATION OF ELECTRICAL & ELECTRONIC EQUIPMENT (OPTIM) & 2015 INTL SYMPOSIUM ON ADVANCED ELECTROMECHANICAL MOTION SYSTEMS (ELECTROMOTION) Published: 2015

21.

Mathematical Expression of Electromagnetic Pulse in Immunity StandardsBy: [Ursachi, Corneliu](#); [Helerea, Elena](#); [Mariut, Elena Larisa](#); et al.

Conference: Joint IEEE International Symposium on Electromagnetic Compatibility (EMC) and EMC Europe Location: Dresden, GERMANY Date: AUG 16-22, 2015

Sponsor(s): IEEE; EMC Soc; EMC Europe; VDE; Wurth Elektronik; Rohde & Schwarz; Huawei; EMCoS; Altair; AMETEK; ETS LINDGREN; Albatross Projects; Nolato; Airbus; Thales; ANDRO; ThyssenKrupp; AR 2015 IEEE INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY (EMC) Book Series: IEEE International Symposium on Electromagnetic Compatibility Pages: 1357-1362 Published: 2015