

CURRICULUM VITAE

KALLIOPI DROUTSA

M.Sc. Environmental Physicist

ATHENS

March 2017



KALLIOPI DROUTSA, M.Sc

Environmental Physicist, Research Assistant

Group Energy Conservation

www.energycon.org

Institute for Environmental Research & Sustainable Development www.meteo.noa.gr

National Observatory of Athens

www.noa.gr

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Fax: 210-8103236,

Email: pdroutsa@meteo.noa.gr

Place of birth: Athens - Greece, 16-6-1970

Marital status: Married, Two children

RESEARCH INTERESTS & ACCOMPLISHMENTS

Active in the areas of energy conservation, building energy audits, building physics, RES, environmental impact from energy use, indoor air quality, software development (TEE-KENAK, EPIQR, TOBUS) and computer tools. Participant in the development of the TEE-KENAK software and the Technical Guidelines by the Technical Chamber of Greece to support the development of the national regulation on the energy performance in the building sector (KENAK). Participant in the development of the Educational Material by the Technical Chamber of Greece to support the education of Energy Auditors in the building sector. Participation as research assistant in various European and National Research Programmes.

Member of Group Energy Conservation in IERSD at NOA.

EDUCATION

Master of Science (M.Sc.)	Environmental Physics, National Kapodistrian University of Athens Department of Applied Physics Physics	November 1995
Bachelor of Science	National Kapodistrian University of Athens Department of Physics	October 1992

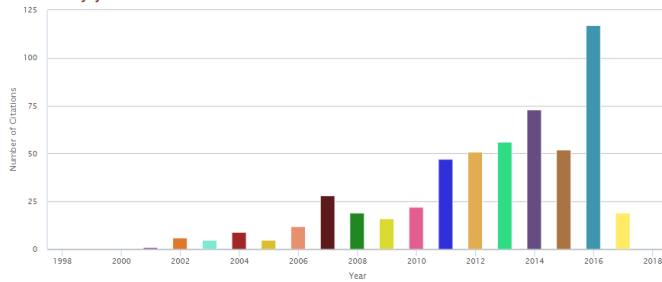
CONTINUING EDUCATION

- Bioclimatic Architecture and Solar Systems, CIENE, 1993 (SAVE Project)
- Energy Conservation in Buildings, CIENE, May 1994 (SAVE Project)
- Solar Energy and Energy Conservation in Urban Buildings, CIENE, November 1994 (SAVE Project)
- Energy Conservation in Office Buildings, CIENE, May 1995 (SAVE Project)
- Training and Education in the Energy Field, CIENE, May 1995 (SAVE Project)
- Passive Cooling of Buildings, CIENE, June 1995 (SAVE Project)
- Advanced Training in Passive & Natural Cooling Techniques and Systems for Energy Conservation, National Kapodistrian University of Athens, September 9-21, 1996.

PUBLICATIONS

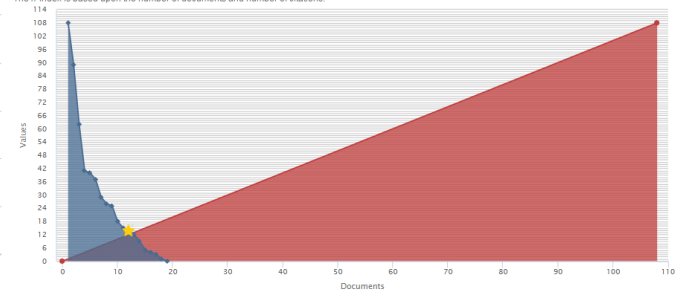
International Journals :	21	Hellenic Journals & Technical Magazines:	18
Books :	2	Scientific Publications:	20
Conferences & Symposiums :	60	Technical Reports:	67
Theses:	2	Citations	509

Citations by year



This author's h-index is 12

The h-index is based upon the number of documents and number of citations.



PARTICIPATION IN SCIENTIFIC COMMITTEES

2010

- Member of the technical committee of the Technical Chamber of Greece (TEE) for the development of the Technical Guideline (TOTE 20701-1/2010) “Analytic National Specifications of Parameters for the Calculation of the Energy Performance of Buildings and the Energy Performance Certificate”, First edition, July 2010.
- Member of the technical committee of the Technical Chamber of Greece (TEE) for the development of the Technical Guideline (TOTE 20701-4/2010) “Guidelines and Forms for Building Energy Audits, Inspection of Boilers & Heating Installations, and Inspection of Air-Conditioning Systems”, First edition, July 2010.

2011

- Member of the Technical Committee of the Technical Chamber of Greece (TEE) for the development of the **Educational Material for the Training of Energy Auditors**, June 2011.

2012

- Member of the technical committee of the Technical Chamber of Greece (TEE) for the development of the Technical Guideline (TOTE 20701-1/2010) “Analytic National Specifications of Parameters for the Calculation of the Energy Performance of Buildings and the Energy Performance Certificate”, Second edition, March 2012.
- Member of the technical committee of the Technical Chamber of Greece (TEE) for the development of the Technical Guideline (TOTE 20701-4/2010) “Guidelines and Forms for Building Energy Audits, Inspection of Boilers & Heating Installations, and Inspection of Air-Conditioning Systems”, Second edition, March 2012.

2017

- Member of the Technical Committee of the Technical Chamber of Greece (TEE) for proposals on the revision of the national Regulation on the Energy Efficiency of Buildings (KENAK), Technical Guidelines (TOTE 20701), Upgrade and debugging of the national software for building energy audits, inspections and certification (TEE-KENAK)

REVIEWER IN SCIENTIFIC JOURNALS

- 2013- “Energy & Buildings”
- 2016 - “Sustainability”
- “AIMS Energy”
- “Energies”

PROFESSIONAL EXPERIENCE

1993 – 7/1996

- **External Research Scientist**
Department of Applied Physics - University of Athens

Participant in various Research and Scientific European and National projects, as a member of the GRoup Building Energy Studies.

- **Associate**

Hellenic Productivity Centre 1996

Development of software and user manual "AIR - Indoor Air Quality".

8 / 1996 – 2001

- **External Research Scientist**

Institute of Meteorology & Physics of Atmospheric Environment (IMP AE) - National Observatory of Athens

Participant in various Research and Scientific European and National projects, as a member of the GRoup Energy Conservation. Building audits - deterioration state and energy (residential buildings). Data analysis and development of material for presentation. Support the commercial development and maintenance of Hellenic version of software. Development of software's User manual.

- **Seminar Lecturer**

Technical Chamber of Greece

Lecture on "Methodology and Software EPIQR"

Seminar Energy conservation in buildings – Energy Inspections

Thessaloniki 4 - 5 February 2000

2001 – today

- **Research Assistant**

Institute for Environmental Research & Sustainable Development (IERSD, ex-IMP AE) - National Observatory of Athens

Participant in various Research and Scientific European projects, as a member of the GRoup Energy Conservation. Participant in the development of the TEE-KENAK software and the Technical Guidelines by the Technical Chamber of Greece to support the development of the national regulation on the energy performance in the building sector (KENAK). Participant in the development of the Educational Material by the Technical Chamber of Greece to support the education of Energy Auditors in the building sector. Building audits - deterioration state and energy (residential and office buildings). Data analysis and development of material for presentation. Maintenance of the Hellenic version of the EPIQR software for residential building audits. Supported the participation of IERSD in the International Exhibitions Climatherm 2004 and Climatherm 2006, ENERGYRES 2007, Climatherm 2008, ENERGYRES 2008

- **Seminar Lecturer**

Institute for Environmental Research & Sustainable Development - National Observatory of Athens

Seminars «Energy Audit and Labeling in Buildings» (November 2007 – May 2009, Athens)

Technical Chamber of Greece TEE A.E.

- Seminars "Energy Conservation – Energy Efficiency of Buildings – European methodologies & software for improvement of buildings' energy efficiency" (September - October 2009, Athens / October 2009, Heraklion / October 2009, Thessaloniki)
- Seminars «Energy Audit and Certification of Buildings» (September - November 2010, Athens / March 2011, Thessaloniki)
- Seminars «Energy Performance of Buildings according KENAK»
- 16 seminars, November 2010 – February 2011, Athens and March 2011, Thessaloniki

Technological Educational Institute Piraeus

- Postgraduate Course "Building Energy Management". (March 2011, Athens)
- Official seminars for Energy Auditors (February – March 2012, Athens)
 - «DK1. Legal Framework, Methodology for the Energy Performance of Buildings - Part 1»
 - «DK3. Building Energy Audit - Part 1»
 - «DK3. Building Energy Audit - Part 2A»
 - «DK3. Building Energy Audit - Part 3

RESEARCH EXPERIENCE

Participant in 5 research programmes and 12 scientific projects with the corresponding affiliations:

UNIVERSITY OF ATHENS

• RESEARCH PROGRAMMES

1992 - 1995	JOULE, DG XII for Science, Research and Development, European Commission TITLE: PASCOOL, Passive Cooling for Buildings (JOU2CT92-0013) PARTICIPANTS: University of Athens, CRES, NOA, and various organisations from Italy, Spain, France, Portugal, Switzerland, England, Belgium.
1996 - 1998	JOULE, DG XII for Science, Research and Development, European Commission TITLE: POLIS: Urban Planning Research Actions to Improve Solar Access, Passive Cooling and Microclimate (JOR-CT95-0024) PARTICIPANTS: BRE, University of Athens, University of Liege, University of Seville

• SCIENTIFIC PROJECTS

1994 - 1996	SAVE, DG XVII for Energy, European Commission TITLE: SPORTS CENTERS - Energy Conservation Strategies for Sports Centers XVII/4.1031/S/94-114) PARTICIPANTS: Central Institution for Energy Efficiency Education, University of Ioannina, Spyropoulou Architects & Associates, Theofylaktos & Associates
1995 - 1996	Ministry of Culture, Organization for the Construction of the New Acropolis Museum TITLE: ACROPOLIS – Study of Passive Solar Systems, Energy Conservation, Indoor Air Quality and Avoidance of Monuments' Deterioration in the New Acropolis Museum PARTICIPANTS: Studio Nicoletti, University of Athens

CIENE, UNIVERSITY OF ATHENS

• SCIENTIFIC PROJECTS

1993-1994	SAVE, DG XVII for Energy, European Commission TITLE: PASSIVE COOLING - Creation of an Educational Structure on the Energy Efficiency of Cooling Systems and Techniques for Buildings (XVII/4.1031/93-071) PARTICIPANTS: Joint European Programme. Central Institution for Energy Efficiency Education, Universities and other organisations from several European countries.
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NATIONAL OBSERVATORY OF ATHENS

• RESEARCH PROGRAMMES

1996-1998	JOULE, DG XII for Science, Research and Development, European Commission TITLE: EPIQR, A Cost Predictive European Retrofitting Evaluation Method for Improving the Energy Performance and the Indoor Environment of Existing Apartment Buildings (JOR3-CT96-0044) PARTICIPANTS: NOA, BRE-UK, CSTB-France, SBI-Denmark, TNO-Netherlands, Fraunhofer Institute - Germany, EPFL-Switzerland
1998-2000	JOULE, DG XII for Science, Research and Development, European Commission TITLE: TOBUS - A Decision making tool for selecting office building upgrading solutions (JOR3-CT98-0235) PARTICIPANTS: NOA, CSTB-France, SETEC-France, COWI-Denmark, SBI-Denmark, TNO-Netherlands, EPFL-Switzerland, Amstein & Walther AG, Switzerland
2001-2004	GROWTH, DG for Research (DG XII), European Commission TITLE: INVESTIMMO - A Decision-making Tool for Long-term Efficient Investment Strategies in Housing Maintenance and Refurbishment (GIRD-CT-2000-00371) PARTICIPANTS: NOA, Hellenic Ministry of State, CSTB & LF – France, EPFL, CUEH & ESTIA sarl – Switzerland, FhG/IBP & VdW – Germany, DIPARC & ENVIPARK – Italy, SBI & SBS – Denmark, KAPE & UZ – Poland.

• SCIENTIFIC PROJECTS

- 2000-2001 Ministry of Development, Operational Energy Programme
TITLE: HELLENIC AIRPORTS - Energy Conservation in Airports
 PARTICIPANTS: National Observatory of Athens
- 2002-2003 ALTENER, DG for Energy(DG XVII), European Commission
TITLE: XENIOS - Development of an audit tool for Hotel buildings and the promotion of RUE and RES (AL 4.1030/Z/01-135/2001)
 PARTICIPANTS: National Observatory of Athens, Terra Nova Ltd - Hellas, CSTB - France, CAATB - Spain, CONPHOEBUS - Italy, CALVIA - Spain, Municipality of Kallithea Rhodes - Hellas, GEDISA - Spain, AHPM - Spain, D.G. D'Energia - Spain.
- 2005-2007 Intelligent Energy – Europe, DG for Energy (DG XVII), European Commission
TITLE: EPA-NR Energy Performance Assessment for Existing Non Residential Buildings (EIE/04/125/S07.38651)
 PARTICIPANTS: National Observatory of Athens, Damen Consultants BV (Holland), Arsenal (Austria), Austrian Institute for Applied Ecology (Austria), DBUR (Denmark), CSTB (France), Fraunhofer-IBP (Germany), ENEA (Italy), TNO (Netherlands).
- 2006-2009 Intelligent Energy – Europe, DG for Energy (DG XVII), European Commission
TITLE: DATAMINE Collecting Data from Energy Certification to Monitor Performance Indicators for New and Existing Buildings (EIE/05/097/SI2.419651)
 PARTICIPANTS: National Observatory of Athens, Institut Wohnen und Umwelt GmbH (Germany), Narodowa Agencja Poszanowania Energii S.A. (Poland), Energy for Sustainable Development Ltd (UK), EBM-consult BV (Netherlands), Politecnico di Torino (Italy), Flemish Institute for technological research (Belgium), Austrian Energy Agency (Austria), Building and Civil Engineering Institute ZRMK (Slovenia), Ecofys ema SL (Spain), Energy Action Limited (Ireland), Sofia Energy Agency (Bulgaria).
- 2009-2012 Energy Intelligent Europe
TITLE: TABULA Typology Approach for Building Stock Energy Assessment (EIE/08/495/SI2.528393)
 PARTICIPANTS: National Observatory of Athens, Institut Wohnen und Umwelt/ Institute for Housing and Environment (Germany), Building and Civil Engineering Institute ZRMK (Slovenia), Politecnico di Torino - Department of Energetics (Italy), French Energy and Environment Agency (France), Energy Action Limited (Ireland), Flemish Institute of Technological Research (Belgium), Narodowa Agencja Poszanowania Energii SA (Poland), Austrian Energy Agency (Bulgaria), Mälardalens University (Sweden), STU-K (Czech Republic), Danish Building Research Institute (Denmark)
- 2010-2013 Technical Chamber of Greece
TITLE: TEE-KENAK - Software Development for the Implementation of the National Regulation on the Energy Performance of Buildings
 PARTICIPANTS: National Observatory of Athens
- 2012-2014 FP7 -Small or medium-scale focused research project (STREP)
TITLE: ISES Intelligent Services for Energy-Efficient Design and Life Cycle Simulation (288819/ FP7-ICT-2011-7)
 PARTICIPANTS: National Observatory of Athens, Technische Universität Dresden (Germany), Olof Granlund Oy (Finland), University of Ljubljana (Slovenia), SOFiSTiK Hellas S.A. (Greece), Nyskopunarmidstod Islands (Iceland), Leonhardt, André und Partner (Germany), Trimio d.d. (Slovenia)
- 2013-2016 Intelligent Energy – Europe, DG for Energy (DG XVII), European Commission
TITLE: EPISCOPE (EY) - Energy Performance Indicator Tracking Schemes for the Continuous Optimisation of Refurbishment Processes in European Housing Stocks (IEE/12/695/SI2.644739)
 PARTICIPANTS: National Observatory of Athens, Institut Wohnen und Umwelt, Institute for Housing and Environment (Germany), Buildings Performance Institute Europe (Belgium), Building and Civil Engineering Institute ZRMK (Slovenia), Danish Building Research Institute, Aalborg University (Denmark), Austrian Energy Agency (Austria), Building Research Establishment Ltd (United Kingdom), Flemish Institute for Technological Research (Belgium), Politecnico di Torino - Department of Energy (Italy), STU-K (Czech Republic), Energy Action Limited (Ireland), Budapest University of Technology and Economics (Hungary), Valencian Institute of Building (Spain), Cyprus University of Technology (Cyprus), Delft University of Technology (Netherlands), Pouget Consultants (France), Norwegian University of Science and Technology (Norway)
- 2016-2019 E.E. Interreg MED Programme, Ευρωπαϊκή Εδαφική Συνεργασία, Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης
TITΛΟΣ : CESBA MED - Sustainable MED Cities
 ΠΕΡΙΟΔΟΣ: 2016-2019
 ΣΥΜΜΕΤΕΧΟΝΤΕΣ: City of Torino (Ιταλία), iiSBE Italia R&D srl (Ιταλία), Municipality of Udine (Ιταλία), EnvirobatBDM (Γαλλία), Rhônalpénergie Environment (Γαλλία), Government of Catalonia (Ισπανία), Municipality Sant Cugat del Vallès (Ισπανία), University of Malta (Μάλτα), Εθνικό Αστεροσκοπείο Αθηνών, Association of Common European Sustainable Built Environment Assessment (Αυστρία), Energy Institute Hrvoje Požar (Ουγγαρία), Urban

Community of Marseille Metropolitan Province (Γαλλία).

COMPUTING EXPERIENCE

- **Programming**
Visual Basic
- **Software Development**
1996 "AIR – Indoor Air Quality" for the Hellenic Productivity Centre
- **Algorithm adaptation**
1996-1998 *EPIQR* - "A cost predictive European retrofitting evaluation method for improving the energy performance and the indoor environment of existing apartment buildings"
1998-2000 TOBUS - "A decision making tool for selecting office building upgrading solutions"
2001-2004 INVESTIMO "A decision-making tool for long-term efficient investment strategies in housing maintenance and refurbishment"
2011- today *eKIA Online application for estimation of energy performance of residential buildings*
- **Software Adaptation**
2000 EPIQR - Refurbishment of Residential Buildings. *Hellenic version of EPIQR (Energy Performance Indoor environmental Quality Retrofit), a European diagnosis and decision making method for apartment building refurbishment. The user can follow the audit procedures to collect data and assess the existing condition, evaluate different interventions (on the building envelope and electromechanical installations) for energy conservation and indoor environmental quality, and come up with a budget and technical report, all within two days*
2007 EPA-NR. ENERGY PERFORMANCE ASSESSMENT METHOD FOR EXISTING NON-RESIDENTIAL BUILDINGS. *Software in line with the Energy Performance Directive for Buildings (EPBD) established by the E.C. and reflect the final draft CEN-standards*
2010-today TEE KENAK - ENERGY AUDIT. *Official software for Energy Performance Certification of Buildings, used by the Energy Auditors. Over 400,000 have been issued. Latest update on 27/03/2012*
TEE KENAK - ENERGY STUDY. *Official software for Energy Study. Latest update on 27/03/2012*
Electronic forms for Inspection Reports of Boilers, Heating Installations and Air-Conditioning Systems
- **Multimedia Development**
2010 - 2013 22 multimedia CD-ROMs presenting the results of various European projects

TEACHING EXPERIENCE

Seminars for:

- **National Observatory of Athens**
- **Technical Chamber of Greece**
- **Technological Educational Institute Pireaus, Greece**

SERVICES TO THE PRIVATE SECTOR

Commercial development and distribution of the EPIQR software - *Hellenic version* for residential building audits, energy and refurbishment assessment (to National Technical University of Athens, CRES, TEI Kozani, TEI Crete, Municipality of Nikea, Various engineers and technical firms).

PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS

1 9 9 8

- ❶ E. Trianti-Stourna, K. Spyropoulou, C. Theofylaktos, K. Droutsas, C.A. Balaras, M. Santamouris, D.N. Asimakopoulos, G. Lazaropoulou, N. Papanikolaou
Energy Conservation Strategies for Sports Centers - Part A: Sports Halls
Energy & Buildings, 27, 109-122, (1998).
- ❷ E. Trianti-Stourna, K. Spyropoulou, C. Theofylaktos, K. Droutsas, C.A. Balaras, M. Santamouris, D.N. Asimakopoulos, G. Lazaropoulou, N. Papanikolaou
Energy Conservation Strategies for Sports Centers - Part B: Swimming Pools
Energy & Buildings, 27, 123-135, (1998).

2 0 0 0

- ❸ C.A. Balaras, K. Droutsas, A.A. Argiriou, D.N. Asimakopoulos
EPIQR Surveys of Apartment Buildings in Europe
Energy & Buildings, 31, 111-128, (2000).
- ❹ C.A. Balaras, K. Droutsas, A.A. Argiriou, D.N. Asimakopoulos
Potential for Energy Conservation in Apartment Buildings
Energy & Buildings, 31, 143-154, (2000).
- ❺ F. Flourentzos, K. Droutsas, K. Wittchen.
EPIQR Software
Energy & Buildings, 31, 129-136, (2000).

2 0 0 2

- ❻ C.A. Balaras, K. Droutsas, A.A. Argiriou, K. Wittchen
Assessment of Energy and Natural Resources Conservation in Office Buildings Using TOBUS
Energy & Buildings 34, 135-153, (2002).

2 0 0 3

- ❼ C.A. Balaras, E. Dascalaki, A. Gaglia, K. Droutsas
Energy Conservation Potential, HVAC Installations & Operational Issues in Hellenic Airports
Energy & Buildings, 35, 1105-1120, (2003).

2 0 0 5

- ❽ C.A. Balaras, K. Droutsas, E. Dascalaki, S. Kontoyiannidis
Heating Energy Consumption and Resulting Environmental Impact of European Apartment Buildings
Energy & Buildings, 37, 429-442, (2005).
- ❾ C.A. Balaras, K. Droutsas, E. Dascalaki, S. Kontoyiannidis
Deterioration of European Apartment Buildings
Energy & Buildings, 37, 515-527, (2005).

2 0 1 0

- ❿ E. Dascalaki, P. Droutsas, A. Gaglia, S. Kontoyiannidis and C.A. Balaras, Data Collection and Analysis of the Building Stock and its Energy Performance – An Example for Hellenic Buildings, **Energy & Buildings**, Vol. 42, No 8, p. 1231-1237, 2010.

2 0 1 1

- ❶❶ E. G. Dascalaki, K. G. Droutsas, C.A. Balaras and S. Kontoyiannidis, Building Typologies as a Tool for Assessing the Energy Performance of Residential Buildings – A Case Study for the Hellenic Building Stock, **Energy & Buildings**, Vol. 43, No 12, p. 3400-3409, 2011.

2 0 1 2

- ❶❷ E. G. Dascalaki, C.A. Balaras, A.G. Gaglia, K. G. Droutsas and S. Kontoyiannidis,
Energy performance of buildings—EPBD in Greece,
Energy Policy 45, p. 467 - 477, 2012.

2 0 1 3

- ❶❸ C. A. Balaras, E. G. Dascalaki, P. Droutsas, and S. Kontoyiannidis,

Hellenic renewable energy policies and energy performance of residential buildings using solar collectors for domestic hot water production in Greece

J. Renewable Sustainable Energy 5 (4), DOI 10.1063/1.4813066, 12 pages, 2013.

- ①④ E. G. Dascalaki, S. Kontoyiannidis, C. A. Balaras and P. Droutsas,
Energy certification of Hellenic buildings: First findings
Energy & Buildings Vol. 65, p. 429–437, 2013.
- ①⑤ C.A.Balaras, S.Kontoyiannidis, E.G.Dascalaki and K. G. Droutsas,
Intelligent Services for Building Information Modeling - Assessing Variable Input Weather Data for Building Simulations (DOI: 10.2174/1874836820131022005)
The Open Construction and Building Technology Journal, Vol.7, p. 138–145, October 2013.

2 0 1 4

- ①⑥ K.G. Droutsas, S. Kontoyiannidis, E.G. Dascalaki, C.A. Balaras
Ranking cost effective energy conservation measures for heating in Hellenic residential buildings
Energy & Buildings, Vol.70, p 318–332, February 2014
<http://dx.doi.org/10.1016/j.enbuild.2013.11.029>
- ①⑦ Balaras C.A., E.G. Dascalaki, K.G. Droutsas, S. Kontoyiannidis, R. Guruz, G. Gudnason,
Energy & Other Key Performance Indicators for Buildings – Examples for Hellenic Buildings
Global Journal of Energy Technology Research Updates, 1 (2), 71-89. <http://dx.doi.org/10.15377/2409-5818.2014.01.02.2>

2 0 1 6

- ①⑧ Constantinos A. Balaras, Elena G. Dascalaki, Kalliopi G. Droutsas, Simon Kontoyiannidis
Empirical assessment of calculated and actual heating energy use in Hellenic Residential buildings
Applied Energy 164 (2016) 115–132
- ①⑨ K.G. Droutsas, S. Kontoyiannidis, E.G. Dascalaki, C.A. Balaras
Mapping the energy performance of hellenic residential buildings from EPC (energy performance certificate) data
Energy 98 p 284-295
- ②① Elena G. Dascalaki, Constantinos A. Balaras, Simon Kontoyiannidis, Kalliopi G. Droutsas
Modeling energy refurbishment scenarios for the Hellenic residential building stock towards the 2020 & 2030 targets
Energy & Buildings, Vol. 132 p 74–90

2 0 1 7

- ②① C.A. Balaras, E.G. Dascalaki, K. Droutsas, S. Kontoyiannidis, Premoščivanje razlike između stvarnog i proračunatog korišćenja toplotne energije i modelovanje stambenih zgrada odozdo naviše (Bridging the gap of actual and calculated heating energy consumption in bottom-up residential building stock modelling)
KGH – Heating, Ventilation and Air-Conditioning, [S.l.], Vol. 46, No 1, p. 59-67, 2017. ISSN 2560-340X

BOOKS

2 0 1 1

Co-author in the following books published by the Technical Chamber of Greece (TEE), Athens, June (2011) for educational purposes and training of permanent energy inspectors throughout Greece (*in Hellenic*).

- ① D. Aravantinos, A. Gaglia, G. Giannakidis, L. Gidakou, E. Dascalaki, K. Droutsas, K. Laskos, C.A. Balaras
DK1 – Legal Framework, Methodology for the Energy Performance of Buildings (44 p.)
- ② D. Aravantinos, K. Axarli, A. Gaglia, L. Gidakou, K. Droutsas, T. Theodosiou, S. Kontoyiannidis, K. Laskos, L. Manasis, D. Mantas, C.A. Balaras, D. Bikas, K. Tsikaloudaki
DK3 –Building Energy Audit (132 p.)

SCIENTIFIC PUBLICATIONS

1996

- ❶ F. Stourna-Trianti, K. Spyropoulou, C. Theofylaktos, C.A. Balaras, P. Droutsas, G. Lazaropoulou, N. Papanikolaou.
Energy Conservation Strategies for Sports Centers. Vol 2: Case Studies.
 Central Institution for Energy Efficiency Education, University of Athens, (eds. M. Santamouris, D.N. Asimakopoulos), European Commission, SAVE Programme, Athens, (1996).

1998

- ❷ C.A. Balaras, K. Droutsas.
Retrofit of Residential Buildings - Case Studies for Hellenic Buildings, 126 p. *in English*
 Group Energy Conservation, IMPAE, National Observatory of Athens, (Eds A.A. Argiriou, D.N. Asimakopoulos, C.A. Balaras), European Commission, JOULE Programme, Athens (1998).
- ❸ C.A. Balaras, K. Droutsas
Retrofit of Residential Buildings - Case Studies for Hellenic Buildings, 137 p. *in Hellenic*
 Group Energy Conservation, IMPAE, National Observatory of Athens, (Eds A.A. Argiriou, D.N. Asimakopoulos, C.A. Balaras), European Commission, JOULE Programme, Athens (1998).
- ❹ C.A. Balaras, K. Droutsas
EPIQR Method, 173 p.
 Group Energy Conservation, IMPAE, National Observatory of Athens, (Eds A.A. Argiriou, D.N. Asimakopoulos, C.A. Balaras), European Commission, JOULE Programme, Athens (1998).

2000

- ❺ C.A. Balaras, K. Droutsas
Retrofit of Office Buildings. Case studies for Hellenic Buildings
 Group Energy Conservation, IERSD, National Observatory of Athens, (A.A. Argiriou, C.A. Balaras, Editors), Publication No 6/2000, NOA Library, 114 p., Athens, August (2000).

2001

- ❻ D. Lalas, C.A. Balaras, E. Dascalaki, A. Gaglia, A.A. Argiriou, K. Droutsas, V. Grigoriadis, S. Paralidou, C. Katsarou.
Hellenic Airports, Vol. A, 187 p., *in Hellenic*,
 Group Energy Conservation, IERSD, National Observatory of Athens, Operational Programme for Energy, Hellenic Ministry of Development, July (2001).

2004

- ❼ C.A. Balaras, E. Dascalaki, K. Droutsas, S. Kontoyiannidis
European Residential Building Audits Database – ERBAD Multimedia CD-ROM
 Group Energy Conservation, IERSD, National Observatory of Athens, (ISBN 960-87905-5-7), Athens, March (2004).
- ❸ C.A. Balaras, E. Dascalaki, K. Droutsas, S. Kontoyiannidis
Building Deterioration Assessment Guidelines – BDAG Multimedia CD-ROM
 Group Energy Conservation, IERSD, National Observatory of Athens, (ISBN 960-87905-6-5), Athens, March (2004).
- ❹ C.A. Balaras, E. Dascalaki, K. Droutsas, S. Kontoyiannidis, K. Hansen, E.H. Petersen
Building Environmental Impact Guidelines – BEIG Multimedia CD-ROM
 Group Energy Conservation, IERSD, National Observatory of Athens, (ISBN 960-87905-4-9), Athens, March (2004).

2006

- ❶❶ C.A. Balaras, K. Droutsas, **Retrofit of Office Buildings, Hellenic Case Studies**, Group Energy Conservation, IERSD, National Observatory of Athens, (ISBN 960-88325-5-1), Athens, April (2006).

2007

- ❶❶ S. Kontoyiannidis, A.Gaglia, K. Droutsas, E. Dascalaki, C.A. Balaras, (Editors),

Energy Performance Assessment method for Non-Residential Buildings (EPA-NR) Dissemination Material & Software, Group Energy Conservation, IERSD, National Observatory of Athens, ISBN 978-960-88325-9-6, Αθήνα, Νοέμβριος (2007).

2010

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EDUCATIONAL NOTES

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|---|---|
|  <p>Educational Material for Training Energy Auditors</p> | <p>Material used for educational purposes and training of permanent energy inspectors throughout Greece. Published by the Technical Chamber of Greece (TEE), June (2011). Participation in volumes: AK1 – Legal Framework, Methodology for the Energy Performance of Buildings (44 p.), AK3 – Building Energy Audits (132 p.)</p> |
|  <p>EPIQR Refurbishment of Apartment Buildings – Energy & Environmental Audits & Construction Diagnosis for the Assessment of Apartment Buildings (Educational version 2.3)</p> | <p>Book (100 p.) & CDROM with the educational version of the EPIQR software (version 2.3). Used in the frame of the course «Building Energy Audits», Department Environmental Engineers, Demokritio University of Thrake (ΔΠΘ), March (2006).</p> <p>Authors: C.A. Balaras, S. Kontoyiannidis, K. Droutsas</p> |

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