

# HOUSING

AN HERITAGE  
FOR THE FUTURE

# PROCEEDINGS



VOLUME . . . . . 1



Edited by VÍTOR ABRANTES and OKTAY URAL



XXV IAHS WORLD HOUSING CONGRESS



SECÇÃO DE CONSTRUÇÕES CIVIS - DEPARTAMENTO DE ENGENHARIA CIVIL  
FACULDADE DE ENGENHARIA DA UNIVERSIDADE DO PORTO • PORTO • PORTUGAL

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*HOUSING: AN HERITAGE  
FOR THE FUTURE*



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## ***An Heritage for the Future***

Proceedings of the XXV IAHS World Housing Congress

Lisboa, Portugal  
29 June – 3 July 1998

**VOLUME 1**

Edited by

**VÍTOR ABRANTES**

Secção de Construções Civas – Departamento de Engenharia Civil  
Faculdade de Engenharia da Universidade do Porto, Porto, Portugal

**OKTAY URAL**

IAHS – International Association for Housing Science  
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	Preface	ix
	Committees	x
	<b>HOUSING POLICIES – FINANCING SYSTEMS</b>	<b>1</b>
<b>1</b>	<b>Housing policies, programmes and funding systems: The experience of the Kingdom of Saudi Arabia</b> A. Al-Nuaim	<b>3</b>
<b>2</b>	<b>Influence of environmental variables on housing market prices</b> B. Amarilla	<b>14</b>
<b>3</b>	<b>Application of the simulation techniques in finance and investment analysis to real estate enterprises</b> R. Camposinhos	<b>24</b>
<b>4</b>	<b>Identifying the requirements of English housing associations for appropriate maintenance cost forecasting systems</b> K. Chapman	<b>31</b>
<b>5</b>	<b>Housing options for Singapore’s ageing population</b> L. Chin	<b>38</b>
<b>6</b>	<b>Housing problems and solutions in South Africa</b> A. Killian and E. Delport	<b>46</b>
<b>7</b>	<b>A sustainable housing solution</b> A.B.Ngowi	<b>53</b>
<b>8</b>	<b>Urbanization and the shelter</b> R.K. Pandit	<b>60</b>
<b>9</b>	<b>Total life analysis, modelling and forecasting of the construction industry in Lithuania</b> B. Sloan, E. K. Zavadskas and A. Kaklauskas	<b>69</b>
<b>10</b>	<b>Housing for disadvantaged communities in South Africa: The promotion of an architectural contribution</b> J. De Villiers	<b>79</b>
<b>11</b>	<b>Assisted home-ownership in France</b> C. Zimmermann	<b>84</b>
	<b>ENVIRONMENTAL AND URBAN PLANNING – URBAN SERVICES</b>	<b>89</b>
<b>12</b>	<b>Sensitivity to resources</b> A. Germen	<b>91</b>
<b>13</b>	<b>Growth nausea II</b> A. Germen	<b>98</b>

<b>14</b>	<b>Sustainable urban development in Southeast Asia</b> O. Giok-Ling	104
<b>15</b>	<b>Spatial vulnerability in housing estates: The case of Chelas</b> T. V. Heitor	112
<b>16</b>	<b>Structure allowing the increase in number of parked cars in the existent ground parkings</b> A. Ionescu and T. Hodisan	123
<b>17</b>	<b>Sharing sustainable building knowledge</b> N. Maiellaro and V. Monno	128
<b>18</b>	<b>Planning for a sustainable housing future. What can we learn from the past?</b> T. Marat-Mendes and E. Scoffham	138
<b>19</b>	<b>Challenges of urban water in major Saudi cities: A case study of Mecca region</b> H. Mortada	145
<b>20</b>	<b>Recovery of historical centres</b> A. Notarangelo	156
	<b>ARCHITECTURAL DEVELOPMENTS – DESIGN AND CAD</b>	163
<b>21</b>	<b>Reflective practice and intelligent CAD systems for buildings</b> M. F. Farinha and J. Bento	165
<b>22</b>	<b>Getting it right : Housing design for an ageing society in a changing world</b> J. D. Harrison and K. J. Parker	171
<b>23</b>	<b>The traditional housing typology within morphological Eco-System concepts</b> C. Inceruh	182
<b>24</b>	<b>The development of the left/right typology in Lisbon´s pombaline area.</b> J. Mascarenhas	191
<b>25</b>	<b>Technology assisted dwellings</b> K. J. Parker and J. D. Harrison	197
	<b>PHYSICS – TECHNOLOGIES - MATERIALS</b>	205
<b>26</b>	<b>Building design with integration of the environmental relations between buildings and their immediate surroundings</b> G. Achard, C. Buhe and Y. Diab	207
<b>27</b>	<b>Thermal signature of the buildings</b> G. Achard, P. Eveno and B. Souyri	217

<b>28</b>	<b>Wooden houses - an adequate technical and financial solution for Romania</b>	225
	H. A. Andreica, D. Veres and I. Rus	
<b>29</b>	<b>The design of an impact hammer to be used on non-destructive testing</b>	229
	J. P. António, A. J. Tadeu and A. Ramalho	
<b>30</b>	<b>Public and professional perceptions of the effects of high voltage power lines and sub-stations on the value of residential property</b>	238
	P. Dent and S. Sims	
<b>31</b>	<b>Design of a lightweight partition system based on wood and derivatives</b>	250
	J. A. Faria	
<b>32</b>	<b>Influence of the vapour permeability of paintings and the hygroscopicity of the internal coating on the hygrothermal behaviour of walls</b>	256
	V. P. de Freitas	
<b>33</b>	<b>Implementation of water conservation program in buildings</b>	270
	O. Gonçalves and L. Oliveira	
<b>34</b>	<b>Flat roof waterproofing systems in Portugal. Present situation and actions for the future.</b>	281
	J. G. Lopes	
<b>35</b>	<b>Choice of timber technical solutions for early design of building</b>	285
	J. C. Mangin, M. Mommessin and L. Mussier	
<b>36</b>	<b>Acoustic behaviour of a single glazed opening</b>	297
	D. R. Mateus and A. J. Tadeu	
<b>37</b>	<b>Earth buildings in Baixo (Lower) Alentejo - Portugal: Appropriate material and technology for some rural areas</b>	307
	M. M. Motta and A. Canha da Piedade	
<b>38</b>	<b>Effective water saving in households</b>	317
	E. Renfordt-Sasse	
<b>39</b>	<b>A new sound absorbing lightweight concrete masonry block</b>	325
	H. Sousa and A. P. O. Carvalho	
<b>40</b>	<b>Improving the cracking resistance of rendering mortars. Influence of composition factors</b>	333
	M. R. Veiga and V. Abrantes	

## PREFACE

IAHS 98 – World Housing Congress was held in Lisboa, Portugal, between June 29 and July 03 1998.

IAHS 98 was intended to continue the IAHS Conference Series, which started with the First Symposium in Missouri, USA, 1970, and continued in several countries as Canada (Quebec 1974), Egypt (Cairo 1976), India (Madras 1977), Thailand (Bangkok 1977), Turkey (Istanbul 1977 and Ankara 1996), Austria (Vienna 1981 and Salzburg 1993), Chile (Valparaíso 1985), Germany (Berlin 1987), Singapore (1987 and 1995), United Kingdom (Birmingham 1992), France (Ales 1991), South Africa (Cape Town 1993), Romania (Sinaia 1997).

IAHS goals are: generate interest to improve every phase of housing technology and production; emphasise and foster interdisciplinary nature of housing problems; use integrated systems approach in the decision process associated with every phase of planning and construction; incorporate all possible scientific knowledge and methods in the housing industry; organise and sponsor meetings, courses and conferences concerned with housing problems; assemble, compile, publish and disseminate information of housing problems; co-operate with academic and research institutions, government and private organisations to sponsor and finance research related to housing; to search for and support innovations which have the potential to help solve the housing problems.

In 1989 the Congress was held in Porto, under the theme *Better housing through innovative technologies and financing*. For the second time, Portugal was honoured by the IAHS Board for the organisation of the 1998 World Congress. A great honour but also a large responsibility.

IAHS Lisboa Congress main theme has been *Housing: An heritage for the Future*, particularly through new urban planning, new designs, new materials, new technological and management developments and innovative financing.

In the dawn of a new century a great challenge faces us and that we may synthesise in the following questions, requiring the imagination, effort and dedication of all to be solved:

- How to grant the homeless with an adequate and dignifying shelter?
- What to do for giving people in poor housing conditions a quick and effective upgrade for their situation?
- What to do for achieving a sufficient durability with an adequate quality for the homes we build?

VÍTOR ABRANTES

OKTAY URAL

IAHS 98 – Chairmen