

## Dr Didier G. Leibovici

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French Nationality



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**Interests** geocomputational data analytics / statistical machine learning / geolocated information modelling / interoperability for data and processes / scientific workflows & web services

**Features** interaction & association / fusion / meta-information / quality & error propagation

**Applied in** agro-ecological modelling / epidemiology & public health / crowdsourcing & Volunteered Geographical Information (VGI) for environment & society domains

**My research profile** in geocomputational data analytics of spatial information with data modelling and statistical analysis has developed from my academic experiences in France and in the UK dealing with spatio-temporal data from different situations such as: spatial epidemiology, brain medical imaging, agro-ecological monitoring, dynamics of population studies, location based citizen crowdsourcing of environmental information, etc.

**My approach draws** from my dual competency in statistics and computing science with a focus on providing tools to manage and analyse large datasets from various heterogeneous sources.

**My research themes** are at the intersection of geospatial information science, data mining, computing methodologies and open technologies, particularly challenging the potential of interoperability developments. The computing science linked to semantic modelling (e.g. ontologies) or computational architecture (e.g. workflow architectures) supports the data analysis methods including multiway methods and spatial statistics of geo-located information for environmental and social studies which in return can be used in information modelling and retrieval.

**My focus** is on data information interaction, extraction and associations existing in spatio-temporal multi-attribute analysis within integrated modelling approaches. I also consider as essential the meta-information (e.g. provenance, uncertainty and data quality) with conflation and fusion models within these contexts and its role in the design of the architecture of systems using geocomputational analytics.

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### Qualifications

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#### Masters in Information Technology at the University of Montpellier II (awarded 2002)

grade 77%

**Project:** *'Metadata Structure relative to Data and Protocols'* in the CIRAD-Forest Department CIRAD-Montpellier spring 2002

**Industrial placement:** *'Developing a GIS extension for a Local Environmental Information System'* IRD/Maison de la Télédétection, Montpellier summer 2002

#### PhD in Applied Mathematics at the University of Montpellier II (awarded 1993)

**Speciality in Biostatistics:** grade 'très honorable'

*'Multidimensional and Multiway Methods for Repeated Measures Factors Analysis: Applications in Longitudinal Epidemiological Studies'*

#### Master of Research in Mathematics, University of Montpellier II (awarded 1988)

**Option:** Statistics & Data Analysis, dissertation: *'Data Analysis with covariates structure'*

#### Undergraduate and Master's Degree in Mathematics –4 years French 'Maitrise', University of Montpellier II (awarded 1987)

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## *Professional Experience*

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### **2013 - now Senior Research Fellow in Geocomputational Modelling & Geospatial Statistics**

**Nottingham Geospatial Institute/ school of Geography, University of Nottingham, UK**

Crowdsourcing /error propagation/ spatio-temporal pattern analysis / integrated modelling / cross-scales and multi-scale problems / data quality, OGC (Open Geospatial Consortium) and web services issues related to these interests / UNOTT scientific lead for an FP7 project (COBWEB) and a BBSRC project (GRASP-GFS)

### **2012- 2013 Research Fellow in Geocomputational Statistical Analysis**

**Centre for Computational Geography/ School of Geography, University of Leeds , UK**

Pursuing previous activities in the context of social simulation modelling

### **2006 - 2012 Research Fellow in Geospatial Modelling & Analysis**

**Centre for Geospatial Science/Nottingham Geospatial Institute/ school of Geography, University of Nottingham, UK**

Spatio-temporal modelling / integrated modelling / cross-scales and multi-scale problems / data quality, OGC (Open Geospatial Consortium) and web services issues related to these interests / teaching on MSc in GIS / UNOTT scientific co-lead on FP7 EuroGEOSS

### **2002 - 2006 Researcher in Geoinformatics & GIS Modelling**

**'Desertification' Unit, IRD- (Research Institute for Development, France)**

Analysis of prospective modelling / statistical contributions to satellite images clustering / conception and implementation of exploratory and prospective GIS ecological landscape modelling to build desertification risk indicators / teaching and training in GIS

### **1999-2001 Research Fellow in Statistics & Image Analysis**

**FMRIB centre, University of Oxford, UK**

Image and time series analysis of functional MRI data / linear and smooth modelling for multi-subject multi-group studies / mixed GLM and exploratory multiway data analysis / random fields theory, permutation and bootstrapping testing / re-writing of PTAk multiway method (Leibovici 1997) in R language, optimisation with non-identity metrics and smooth components

### **1996-1999 Statistician Researcher**

**Sanofi-Recherche, Division of Biostatistics, Montpellier, France**

Modelling multiway data in quantified-EEG pharmaco-dynamic phase IIa studies / Partial Least Squares approaches to include pharmaco-kinetic measures / packaging SAS functions with macro SAS/macro, SAS/IML, SAS/Stat and SAS/Graph for PCA with constraints generalisations and extensions

### **1995-1996 Research Fellow**

**Department of Computing and Mathematical Sciences, University of Greenwich, UK**

Theoretical aspects of multiway data modelling in 'smooth' spaces / analysis of multiway contingency table methods / teaching of statistics using SAS/Stat

### **1994-1995 Post-Doctorate Researcher**

**Department of Epidemiology and Public Health, University of Leicester, UK**

Grant from INSERM (l'Institut National de la Santé et de la Recherche Médicale, France)

longitudinal analysis and cognitive decline risk factors / clustering methods, logistic regression, ordinal data and cognitive measures / SAS/Stat, S-plus, SPSS

### **1990-1994 Associate Researcher**

**'Epidemiology of ageing and disability' INSERM Montpellier, France** and within the 'Ageing and Cognition' team.

*HIV+* follow-up study, analyses using tensorial extension of PCA, repeated measures ANOVA/MANOVA combined with multidimensional analysis / health indices properties (quality of life, disability index) / spatial statistics for asthma time series / cognitive decline analyses using correspondence analysis, clustering methods and logistic regression / using SAS/Stat, SAS/Graph, Excel macros.

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## Research Activities

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### Methodologies

- Geographic Information Systems & Spatial Data Infrastructure
- Integrated Spatial Modelling, spatial algorithms, *e.g.* in agro-ecology
- Geospatial workflow modelling
- Data quality, error propagation, metadata
- Change of scale, cross-scale, multiscale
- Statistics for geospatial interactions (attributes, geometries)
- Interoperability in geospatial modelling, *e.g.* use of OGC standards
- Multivariate (Spatial) statistics, *e.g.* in epidemiology and medical research
- GeoSpatio-temporal data mining & statistics
- Longitudinal studies and multidimensional and/or multivariate analysis
- Extension of information theory from co-occurrences distributions
- ensemble type estimation, *e.g.* bagging, random forest with CART
- Multiway tensorial analysis for discrete or continuous data

### Key research projects

#### at the University of Nottingham

- 2016-** EU H2020 SC5-17-20151 A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring, 'LandSense'  
**My Role:** Researcher (work from COBWEB into LandSense)
- 2012-2016** EU FP7 ENV 2012.6.5-1 Developing community-based environmental monitoring and information systems using innovative and novel earth observation applications, 'COBWEB: Citizen Observatory WEB'  
**My Role:** Researcher col & WorkPackage leader
- 2013-2014** BBSRC TRDF call 2 Support for Development of Bioinformatic Tools and Computational Approaches to the Biosciences 'Geospatial Resource for Agricultural Species and Pests with integrated workflow modelling to support Global Food Security (GRASP-GFS): a prototype'  
**My Role:** Researcher-PI writing up the whole proposal
- 2009-2012** EU FP7 ENV.2008.4.1.1.1: 'EuroGEOSS', European Environment Earth Observation system supporting INSPIRE (INfrastructure for SPatial InfoRmation in the European community) and compatible with GEOSS (Global Earth Observation System of Systems).  
**My Role:** Researcher & participating in writing –up proposal as co-PI
- in 2009** EU FP7 e-content+ project 'GIS4EU': GIS data harmonisation for Europe.  
**My Role:** participating as internal consultant
- in 2009** EU FP7 collaborative 'GIGAS': 'GEOSS, INSPIRE, GMES, Action in Support' for convergence of the initiatives',  
**My Role:** Researcher as internal consultant
- 2008-2011** EU FP7 ENV-2007-1: 'eSoTer', Regional pilot platform as EU contribution to a Global Soil Observing System.  
**My Role:** Researcher-PI, including managing the Nottingham workload

#### at the University of Leeds

- 2012-2013** ESRC –NCRM project TALISMAN (Univ of Leeds, UCL CASA) on Geospatial Data Analysis and Simulation,  
**My Role:** Researcher

#### at the IRD

- 2005-2006** EU FP6 'Global Change and Ecosystems', DeSurvey: a surveillance System or Assessing and Monitoring Desertification', IRD-US166, Montpellier.  
**My Role:** col Researcher doing GIS coupling-models integration, training of partners
- 2002-2006** Programme ROSELT/OSS (*Réseau d'Observatoires de Surveillance Ecologique à Long Terme*), IRD- Institut de Recherche pour le développement-: modelling and development of desertification monitoring tool using GIS.

- My Role:** Researcher GIS modelling development co-leader, training of partners in GIS at the INSERM
- 1993-1997** Project 'Eugéria, Memory in older people' led by K.Ritchie, INSERM-Montpellier.
- My Role:** Research Associate (statistical epidemiological analysis)
- 1993-1994** Asthma mortality evolution in France, project led by Dr Cadet, INSERM-Montpellier.
- My Role:** Research Associate (statistical epidemiological analysis)
- 1990-1991** Project 'Elderly Service Needs indicators', 'Epidemiology of Ageing and handicap', INSERM, Montpellier.
- My Role:** Research Associate (statistical epidemiological analysis)

### Grants and funding

- 2016-2022** EU H2020 SC5-17-20151 'LandSense', Nottingham partner, €343k (€5.6M 18 partners)
- 2012-2016** EU FP7 ENV.2012.6.5-1 'COBWEB', Nottingham partner, €486k (€6.5M, 13 partners)
- 2013-2014** BBSRC TDRF call 2 'GRASP-GFS', Nottingham, £150k
- 2009-2012** EU FP7 ENV.2008.4.1.1.1: 'EuroGEOSS', Nottingham partner €620k (€7M, 23 partners)
- 2008-2011** EU FP7 ENV-2007-1: 'eSoTer', Nottingham partner €81k (€2.7M, 14 partners)
- 2011** University of Nottingham /Global Food Security Projects, 'GRASP' project (Open Source based Geospatial Resource for Agricultural Species and Pests) £10k
- 2009** University of Nottingham / Bridging the Gaps Awards 'Geospatial mash-up technologies in Health and disease mapping', £3k
- 2005-2010** EU FP6 Global Changes & Ecosystem DeSurvey, IRD €250k (€10.3M, 39 partners)
- 2002-2006** ROSELT -funding from UNCCD (UN Convention to Combat Desertification) and OSS (Observatoire du Sahara et du Sahel)
- 1994-1995** Post-Doctoral Training fellowship INSERM (France)-Dept Public Health University of Leicester, UK
- 1994-1994** Visiting Fellowship 4months, Dept of Statistics, University of Montreal, Canada
- 1990-1993** Doctoral grant from ANRS (National Research Association on AIDS)

### Consultancies

- 2012-2015** FP7 CNECT- ICT project reviewer (each year) *Dem@care* (AAL, patients with Dementia)
- 2001- ...** Regular reviewer for journal articles and conferences (SDI, GIS, Statistics, GeoInformation and Geosciences), e.g. *Computers & Geosciences*, *Environmental Modelling & Software*, *IEEE Geosciences & Remote Sensing* (journal and IGARSS), *Remote Sensing of the Environment*, *Sensors*, *Applied Statistics*, *Land Degradation & Development*, *journal of LBS and GIS/UK conferences*, *FOSS4G conferences*
- 2001- ...** Regular reviewer for project funding bodies, e.g. RCUK (ESRC, MRC, EPSRC), European FP7 SME for Health, Fond National de la Recherche (Luxembourg) and Research Office Cyprus & Regional European Fund (CYP)
- 1996-1999** 'Dietary Habits and the Heartbeat Scheme', project led by Dr M Holdsworth University of Leicester, UK
- 1995-1999** 'Clinical and epidemiological approaches to neurodegenerative disease', Longitudinal analysis and risk factors in clinical epidemiology of cognitive decline, INSERM Montpellier, France,
- 1994** Contribution to the study 'The secret of Centenarians' laboratory IPSEN
- 1992-1993** 'Migraine questionnaires on causes and consequences of migraine for the Interdisciplinary group on Migraine', GRIM, France

### Member of Board of Editors & programme committee

- 2013- ...** SAGEO 2014, OSGIS 2010-13, FOSS4G 2013, ISSDQ 2015, AGILE 2013-2015  
International Journal of Geomatics and Spatial Analysis,

### Prizes & Awards

- 2012** Best paper award 2011 in *International Journal of Image and Data Fusion*
- 2011** GIS/UK 2011 Southampton, best Spatial Analysis conference paper award (Co-Author)
- 2010** GIS/UK 2010 London, best Spatial Analysis conference paper award (1<sup>st</sup> Author)
- 1994-1995** Post-doctoral training award, INSERM
- 1994** Visiting Fellowship at the Department of Mathematics & Statistics, University of Montreal, Canada (4 months during 1994)

1994 IPSEN Prize for Young Researcher on Alzheimer's disease

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### *Teaching activities*

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#### *Teaching qualifications*

**2008 & 2011** ILTP (Intensive Learning and Teaching Programme) certificate: *Foundations of Teaching in HE, Lecturing for learning, small group Teaching, Presentation Skills, Assessment and Feedback, Teaching a Diverse Audience*, obtained at the University of Nottingham

#### *Lectures/Seminars/Training sessions*

**2007-2011** Lectures and practical sessions within the 'Management of geospatial data & modelling' module, for an MSc in GIS, University of Nottingham

**2004-2006** Lectures and tutorials in GIS on the Masters at University of Montpellier: spatial analysis and spatial operators; theory and applications with ArcGIS and PostGIS

**2003-2005** Training sessions for ROSELT network researchers: modelling using GIS and the extension to ArcGIS developed for the network, Montpellier

**1999-2001** Training Seminars for PhD students and post-doctoral researchers in neurosciences: linear model and fMRI (functional imaging) multi-subjects, University of Oxford

**1995-1996** Lectures and practical session on the MSc Applied Statistics, module on Multivariate methods, University of Greenwich

#### *Student Supervision*

**2013- 2013** Co-supervision of MSc student in *Health Geography*  
'Scarlet fever and children evacuations WWII '  
Abel Kusemererwa

**2013-** Co-supervision of PhD student in *Geospatial Science*  
'Quality assessment in crowdsourcing for agriculture'  
Chi Dai Huynh

**2014-2017** Co-supervision of PhD student in *Agriculture Science*  
'Modelling crop diseases for food security'  
Masoud Al-Azri

**2014-** Co-supervision of PhD student in *Geospatial Science & Geography*  
'Geospatial genetic-trait variations in agriculture'  
Roberto Santos

**2010-2013** Co-supervision of PhD student in *Geospatial Science*  
'Geospatial Architecture for LBS surveying (application in Health & Environment'  
Sergiusz Pawlowicz

**2005-2006** Co- supervision of Masters student in *Environment Management*  
'Contribution to Pastoral activity modelling within LEIS'  
Sarah Perdutre

**2005** Supervision of Masters student in *Computing Science*  
'A migrating tool for the ROSELT/LEIS database'

**2004-2005** Co- supervision Masters student in *Geomatics*  
'ROSELT observatories representativeness in the circum-saharian zone: ecoregion clustering'. Gilles Quillevere

**2004** Co-supervision for Masters student in *Geomatics*  
'Automatic metadata profile specific production with ArcCatalog for XML'

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### *Software Skills*

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- *Geomatic/GIS/web services*  
R, OSGeo suite (OGC services), ArcGIS (ArcObjects Programming)
- *Computational Statistics*  
R, SAS, and S-plus

- *Information Systems*  
UML, BPMN, Merise; SQL on DBMS Oracle, PostGres/PostGIS, MySQL, O2, Access; XML
- *Programming*  
R, Python, Perl, C++, Java, javascript, VB and php
- *Systems (OS)*  
Mac OS X and Unix/Linux, Windows

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### *Other skills and interests*

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- Native French, fluent English (written and spoken), basic in Spanish
- Cinema, jazz music, chess
- Hiking, tennis, sailing, golf

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### *Publications*

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**39 peer reviewed articles (15 in the last 5 years)**

**19 extended abstracts**

**7 book chapters**

**38 academic conferences**

**25 lay press, reports, workshops and software**

[Google Scholar link to Dr Didier G. Leibovici](#)

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#### **Peer reviewed articles**

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- 39** Leibovici DG, Anand S, Santos R, Al-Azri M, Mayes S, Ray R, Baten A, King G, Karunaratne AS, Azam-Ali S, and Jackson MJ (2017) Geospatial binding for transdisciplinary research in crop science: the GRASP-GFS initiative (Geospatial Resource for Agricultural Species, pests and Pathogens with integrated workflow modelling to support Global Food Security). ***Open Geospatial Data, Software and Standards (accepted June 2017)***
- 38** Leibovici DG, Rosser JF, Hodges C, Evans B, Jackson MJ, and Higgins C (2017) On Data Quality Assurance and Conflation Entanglement in Crowdsourcing for Environmental Studies. ***ISPRS International Journal of Geo-Information, special issue on 'Volunteered Geographical Information', 6(3), 78***
- 37** Rosser JF, Leibovici DG and Jackson MJ (2017) Rapid flood inundation mapping using social media, remote sensing and topographic data. ***Natural Hazards, 87.1 (2017): 103-120***
- 36** Higgins CI, Williams J, Leibovici DG, Simonis I, Davis MJ, Muldoon C and O'Grady M (2016) Citizen OBServatory WEB (COBWEB): A Generic Infrastructure Platform to Facilitate the Collection of Citizen Science data for Environmental Monitoring. ***IJSDIR, 11: 20-48***
- 35** Meek S, Jackson MJ and Leibovici DG (2016) A BPMN solution for chaining OGC services to quality assure location-based crowdsourced data. ***Computers & Geosciences, 87: 76-83***
- 34** Leibovici DG, Brosset D, Claramunt C and Jackson MJ (2015) k-Co-occurrences Density Map Estimation. ***Spatial Statistics 2015: Emerging Patterns, Procedia Environmental Sciences. 26, 105-109***
- 33** Stock K, Leibovici DG, DeLazari L and Santos R (2015) Discovering Order in Chaos: Using a Heuristic Ontology to Derive Spatio-Temporal Sequences for Cadastral, Roads and Parks Data. ***Spatial Cognition & Computation, 15(2): 115-141***
- 32** Leibovici DG and Birkin MH (2015) On Geocomputational Determinants of Entropic Variations for Urban Dynamic Studies. ***Geographical Analysis, 47 (3): 193-218***
- 31** Clonan A, Wilson P, Swift JA, Leibovici DG and Holdsworth M (2015) Red and Processed Meat Consumption and Purchasing Behaviours and Attitudes: Impacts for Human Health, Animal Welfare and Environmental Sustainability. ***Public Health Nutrition, 18 (13), 2446-2456***
- 30** Loireau M, Sghaier M, Guerrero B, Chouikhi F, Fétoui M, Leibovici DG, Debard S, Desconnets J-C and Ben Khatra N (2015) SIEL : système pour l'évaluation du risque de désertification. ***Revue d'Ingénierie des***



**Systèmes d'Information :Special issue 'Nouvelles avancées en Systèmes d'Information pour l'Environnement: nouvelles avancées, 20 (3): 117-142**

- 29 Samarasundera E, Hansell A, Anand S, Leibovici DG, Oppenheimer C and Horwell C (2014) Geological Hazards: from Early Warnings Systems to Public Health Toolkits. *Health & Place, 30: 116-119*
- 28 Leibovici DG, Claramunt C, Le Guyader D and Brosset D (2014) Local and global spatio-temporal entropy indices based on distance-ratios and co-occurrences distributions. *International Journal of Geographical Information Science, 28(5): 1061-1084*
- 27 Leibovici DG, Pourabdollah A and Jackson MJ (2013) Which Spatial Data Quality can be meta-propagated? *Journal of Spatial Sciences, 58(1): 3-14*
- 26 Pourabdollah A, Leibovici DG, Simms DM, Tempel P, Hallett SH and Jackson MJ (2012) Towards a Standard for Soil and Terrain Data Exchange: SoTerML. *Computers & Geosciences 45: 270-283*
- 25 Du H, Anand S, Alechina N, Morley J, Hart G, Leibovici DG, Jackson JM and Ware JM (2012) Geospatial Information Integration for Authoritative and Crowd Sourced Road Vector Data. *Transactions in GIS, 16(4): 455-476*
- 24 Leibovici DG and Jackson MJ (2011) Multi-scale Integration for Spatio-Temporal Ecoregioning Delineation. *International Journal of Image and Data Fusion, 2(2): 105-119*
- 23 Clonan A, Holdsworth M, Swift J, Leibovici DG and Wilson P (2011) The dilemma of healthy eating and environmental sustainability: the case of fish. *Public Health Nutrition*, (Available on CJO 2011)
- 22 Leibovici DG, Bastin L, Anand S, Hobona G and Jackson MJ (2011) Spatially Clustered Associations in Health related geospatial data. *Transactions in GIS, 15(3): 347-364*
- 21 Leibovici DG, Bastin L and Jackson MJ (2011) Higher-Order Co-occurrences for Exploratory Point Pattern Analysis and Decision Tree Clustering on Spatial Data. *Computers & Geosciences, 37(3): 382-389*
- 20 Leibovici DG (2010) Spatio-temporal Multiway Decomposition using Principal Tensor Analysis on k-modes: the R package PTAK. *Journal of Statistical Software, 34(10), 1-34.*  
<http://www.iostatsoft.org/v34/i10/>
- 19 Leibovici DG (2009) Defining Spatial Entropy from Multivariate distribution of Co-Occurrences. *In: Lecture Notes in Computer Science, Spatial Information Theory Volume 5756/2009, 392-404*
- 18 Loireau M, Sghaier M, Fetoui M, Ba M, Abdelrazik M, d'Herbès J-M, Desconnets J-C, Leibovici DG, Debard S and Delaître E (2007) Système d'Information sur l'Environnement à l'échelle locale (SIEL) pour évaluer le risque de désertification : situations comparées circum-sahariennes (réseau ROSELT) *Sècheresse, 18(4): 328-35*
- 17 Leibovici DG, Quillevere G and Desconnets J-C (2007) A method to Classify Ecoclimatic Arid and Semi-Arid Zones in Circum-Saharan Africa Using Dynamics of Multiple Indicators. *IEEE Transaction in Geoscience And Remote Sensing, 45(12), 4000-4007*
- 16 Loireau M, d'Herbès J-M, Leibovici D, Desconnets J-C and Granouillac B (2006) An ICS for desertification monitoring in Africa Circum-Saharan zone: focus on one of its components, the SIEL-ROSELT. *In Seminar Proceedings: Role of Information Circulation Systems in scientific and practical approaches to combat desertification / AIDCCD Windhoek and Ondangwa, Namibia, 2-7 April 2006: pp 81-92*
- 15 Loireau M, Leibovici DG, Desconnets J-C and d'Herbès J-M (2005) LEIS, a Tool for Diagnosis and Prevision of Antropogene Pressure on Natural Vegetation. *In: RGLDD (Remote Sensing and Geoinformation Processing in the Assessment and Monitoring of Land Degradation and Desertification) 2005, Trier (Germany)*
- 14 Estienne F, Matthijs N, Ricoux P, Leibovici DG and Massart DL (2001) Multi-Way Modelling of High-Dimensionality Electro-Encephalographic Data. *Chemometrics and Intelligent Laboratory Systems, 58, issue 1: 59-72*
- 13 Leibovici D, Ritchie K and Touchon J (1999) The effects of alcohol and tobacco consumption on different aspect of cognitive performance in the elderly: a longitudinal study of relative risk *International Journal of Epidemiology 28:77-81*
- 12 Leibovici D and Sabatier R (1998) The Singular Value Decomposition of a k-ways array for a Principal Component Analysis of multi-way data, the PTA-kmodes. *Linear Algebra and its Applications 269: 307-329*
- 11 LeiboviciD and El Maache H (1997) A Singular Value Decomposition of an element belonging to a Tensor Product of K Separable Hilbert Spaces. *Compte Rendus de l'Académie des Sciences tome 325, série I, Statistiques (Statistics) /Probabilités (Probability Theory) : 779-782*
- 10 Ritchie K, Touchon J, Ledesert B, Leibovici D and Dupuy-Gorce A-M (1997) *Establishing the limits and characteristics of normal age-related cognitive decline. Revue d'Épidémiologie et de Santé Publique 45*

n°5 :373-381

- 9 Holdsworth M, Haslam C, Raymond NT and Leibovici D (1997) An Evaluation of the Heartbeat Award Scheme in Public Eating Places : the Customers Perspective. *Journal of Nutrition Education* **29,5, Sept-Oct: 231-236**
- 8 Ritchie K, Leibovici D, Ledesert B and Touchon J (1996) A typology of sub-clinical senescent cognitive disorder. *British Journal of Psychiatry*, **168:470-476**
- 7 Leibovici D, Ritchie K, Ledesert B and Touchon J (1996) Does Education Level Determine the Course of Cognitive Decline? *Age and Ageing* **25:392-397**
- 6 Leibovici D, Curtis S and Ritchie K (1995) Application of disability data from epidemiological survey to the developpement of indicator of service needs for the dependant elderly. *Age and Ageing*, **24:14-20**
- 5 Ritchie K, Leibovici D, Ledesert B and Touchon J (1995) Changement cognitif léger chez des personnes âgées normales : vieillissement normal ou pathologie sous-clinique. *Nervure*, **VIII(9),11-19**
- 4 Leibovici D and Ritchie K (1995) Heterogeneity in senile dementia and cognitive ageing. *Alzheimer's Research* **1,17-22**
- 3 Cadet B, Robine J-M and Leibovici D (1994) Dynamique de la mortalité Asthmatique en France : Fluctuations saisonnières et Crise de mortalité en 1985-1987. *Revue d'Épidémiologie et de Santé Publique*, **42 no2, 103-118**
- 2 Bucquet D, Deveau C, Belanger F, Boufassa F, Desmoulin C, Jadand C, Carre N, Leibovici D, Vilde J-L, Rouzioux C, Spira A and the SEROCO committee (1993) Cohorte Française multicentrique d'adultes infectés par le VIH : Description et évolution après 4 ans de suivi. *Presse Médicale de France*, **23 (27):1247-1251**
- 1 Cadet B, Robine J-M and Leibovici D (1993) Le passé et le présent de la mortalité asthmatique : vers une rupture de la tendance séculaire? *Revue d'Épidémiologie et de Santé Publique*. **41 no5, 363-373**

## Extended abstracts

- 19 Gardner Z, Leibovici DG, Basiri A, and Foody G (2017) Trading-off location accuracy and service quality: privacy concerns and user profiles. in: **IEEE proceedings of the International Conference on Location and GNSS, ICL-GNSS 2017 conference, 27-29 June 2017, Nottingham, UK.**
- 18 Santos R and Leibovici DG (2017) On a Mantel-Test Extension for k Series of Distances and Related k-Way Multivariate Methods. **2017 International Conference on GeoComputation: Celebrating 21 Years of GeoComputation, 4th-7th September 2017, Leeds, UK**
- 17 Rosser J, Pourabdollah A, Brackin R, Jackson MJ and Leibovici DG (2016) Full Meta Objects for Flexible Geoprocessing Workflows: profiling WPS or BPMN? **19th AGILE Conference, Helsinki, Finland, 14-17 June 2016.**
- 16 Higgins CI, Williams J, Leibovici DG, Simonis I, Davis MJ, Muldoon C and O'Grady M (2016) Citizen OBServatory WEB (COBWEB): A Generic Infrastructure Platform to Facilitate the Collection of Citizen Science data for Environmental Monitoring. **European Citizen Science Association, ENVIP'2015 workshop, 8 pages**
- 15 Wiemann S, Meek S, Chapman C, Leibovici DG, Jackson M and Lars B (2015) Service-based combination of quality assurance and fusion processes for the validation of crowdsourced observations. **AGILE 2015, Lisboa, Portugal, 9-12 June 2015.**
- 14 Leibovici DG, Evans B, Hodges C, Wiemann S, Meek S, Rosser J and Jackson MJ (2015) On Data Quality Assurance and Conflation Entanglement in Crowdsourcing for Environmental Studies. **International Symposium on Spatial Data Quality (ISSDQ 2015), 29-30 September 2015, La Grande Motte, France, 4 pages' abstract\_ IPRS archive**
- 13 Leibovici DG, Daras K and Turner AGD (2014) Competing Spatial Optimisation using the k-spatial entropy. **GIScience 2014, Eight International Conference on Geographical Information Science, Vienna 23-24 September**
- 12 Huynh Chi D, Vu T, Jackson M, Leibovici DG and Mayes S (2014) Towards a User-Centric Approach for Assessing Quality of Crowd-Sourced Data, an Application in Agriculture. **Role of Volunteered Geographic Information in Advancing Science: Effective Utilization: Workshop GIScience 2014, Eight International Conference on Geographical Information Science, Vienna 23-24 September**
- 11 Hodges CJ, Leibovici DG and Ties SF (2014) Building confidence in crowdsourced data for biological monitoring and policy making as part of FP7 Project COBWEB. **Role of Volunteered Geographic**



**Information in Advancing Science: Effective Utilization: Workshop, GIScience 2014, Eight International Conference on Geographical Information Science, Vienna 23-24 September**

- 10 Meek, S. Jackson, M. and Leibovici, DG. (2014) A flexible framework for assessing the quality of crowdsourced data. **AGILE conference, 3-6 June 2014, Castellon, Spain**
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- 8 Leibovici DG and Birkin MH (2012) Entropic variations of urban dynamics at different spatio-temporal scales: geocomputational perspectives. **NARSC-RSAI November 2012, Ottawa, Canada**
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