

Curriculum-Vitae**Anne QUESNEL-BARBET****B.Sc., M.A., Ph.D, Qualified as Associate Professor in Geography***State Diploma of Nursing: 10 years at bedside**Researcher of medical informatics, in Health Geomatics and Geography**Invited / Associated researcher (CERIM) & (KASHMIR) laboratories***University Hospital of Lille II (CHRU), Catholic University Hospital of Lille (GHICL)****Haut-de-France region, FRANCE****PERSONAL DATA****Name:** Anne QUESNEL-BARBET

Date of birth: 1965

Place of birth: Lille

Married during 10 years, divorced in 2000, no child.

Citizenship: France**Home Address** 29, rue de l'Hôpital-Militaire, 59800 Lille, France**Office Address:** CHRU de Lille, Maison Régionale de la Recherche Clinique: Pôle de Santé Publique. 6 rue du Professeur Laguesse, CS 70001, 59037 Lille cedex, France

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SUMMARY OF QUALIFICATIONS & CAREER

SUMMARY OF ACADEMIC QUALIFICATIONS

PH.D. GEOGRAPHY

(QUANTITATIVE GEOGRAPHY)

December, 2002, Lille I and Lille II Universities, France

Title of Thesis: "Geography of Spatial Utilization of Health Services in the Nord - Pas-de-Calais Region: A Newtonian Modeling of Hospital Catchment Areas".

Supervisors: Pr Pierre-Jean THUMERELLE & Pr Régis BEUSCART

External Examiners: Pr Jean-Marie RODRIGUES, Jean-Pierre BESANCENOT

Jury members: PJ THUMERELLE, R BEUSCART, JP BESANCENOT, JM RODRIGUES, A DUHAMEL.

M.A. 2ND YEAR GEOGRAPHY

June, 1997, Paul Valéry University, Montpellier France

M.A. 1ST YEAR GEOGRAPHY (HONOURS)

May, 1996, USTL University-Lille I, Villeneuve d'Ascq, France

B.SC. GEOGRAPHY

June, 1995, USTL University-Lille I, Villeneuve d'Ascq France. L1, L2 and L3 include human and physical geography exams.

SUMMARY OF CAREER: HEALTH GEOGRAPHY, GEOMATICS

HOSPITAL SITUATIONS

- **1996-2004**, appointed as nurse, with health geographer and doctoral student functions. **Part-time Teaching & Research Assistant:** medical informatics, health geography, health geomatics, Lille University Hospital, France.
- **2006-present**, appointed as nurse, with health geographer functions. **Part-time consultant and research fellow** in medical informatics, health geography, health geomatics. Professor Régis BEUSCART reinstated me in the service of medical information, Lille University Hospital, France.

ACADEMIC SITUATIONS

- **1998-present**, I am a part-time lecturer, research fellow in universities, schools and hospitals.
- **2002**, I obtained a doctorate of quantitative geography at the age of 38 years old after a nurse career at bedside for 10 years. I was enrolled at the University of Lille I (USTL) and I was greeted at the University of Lille II in the Medical Informatics Laboratory (CERIM) as doctorate student.
- **2002-present**, I am qualified, enrolled on the list by the National University Board (CNU) section 23: (Physical, Human, Economical and Regional Geography) until 31th December 2016. I am authorized to apply for any university position **in France** as Associate Professor. I had auditions and was ranked several times without to be appointed on the associate professor position.
- **September 2004**, I was appointed to Temporary Lecturer and Research Assistant (ATER) in Grenoble II, University Pierre Mendes-France, Department of History and Geography.
- **2008**, I had been ranked in the postdoctoral competition. I was accepted to be appointed at Lisbon University (Portugal). A 5-year contract was to be signed. Sadly, the world financial crisis in 2008 stopped the recruitment process of many of the 14 appointed candidates.

1ST WAY OF RESEARCH AND TEACHING INTERESTS

- Medical informatics – Innovative geo-platform for decision making;

- Health Geography – Geo-epidemiology;
- Health Geomatics - Geographic Information Science – webmapping;
- Modelling – mobility- hospital attraction areas; geomarketing in health; Automation of algorithms – Matlab, R or other languages;
- Spatial Cognition; Spatial Analysis; Spatial classical and Bayesian Statistics;

2ND WAY OF RESEARCH AND TEACHING INTERESTS

- Geo-BI platform – SOLAP; Operational research; Agent Based model.
- Health 3D Geomatics - Sport and Well-being;

SCIENTIFIC PUBLICATIONS & PRESENTATIONS

- Around **90 works, publications** in: chapter in books, journals, conference proceedings, science popularization AND presentations, posters, workshops AND competitions

DETAILED CURRICULUM-VITAE

COMPETENCES IN GEOMATICS, COMPUTING SCIENCE

CURRENT INVESTMENTS

- GitHub environment
- LaTeX, open source
- Multi-agent system (MAS), Gama Platform of the development research institute (IRD), open source
- 3D softwares, digital elevation model (DEMs) - usage & development
- Bayesian statistics and spatio-temporal analysis

COMPETENCES AND EXPERIENCES

- **Use of 3D** software under QGis open source,
- **Use of Digital Elevation Model (DEM)** from the French national geographic institute (IGN- France) and National Aeronautics and Space Administration (NASA-USA), for 3D representation of a terrain's surface.
- **Test of MicMac**, open source, for 3D representation of a terrain's surface
- **Test of Orfeo tool box**, open source, for remote sensing images processing,
- **Modeling and Programming Languages used:** Python, FORTRAN, MySQL, PHP, HTML, Matlab, UML, SAS, DBMS, R + RStudio (programming language and environment statistics).
- **Automation of algorithms:** Matlab, R or other languages (thesis : modeling process of clinical heamatology catchment areas, online demonstration <http://quesnela.free.fr/Projets.html>)
- **WampServer platform:** software stack, installation and use.
- **Dynamic Web:** PHP, HTML languages, use in POLESAT project geo-platform in several versions.
- **Geo-platform:** implementation of different map servers running different operating systems :
 - ❖ Map servers (WebMapping): GCIS - GeoConcept server, QGIS server, GeoServer, Lizmap (Open Source solution),
 - ❖ Geographic Information Systems: ArcGIS, Geoconcept,
 - ❖ Database management systems (**DBMS**): PostgreSQL PostGIS-under windows and linux,
 - ❖ Oracle Virtual Machine + Ubuntu server + ODBC connection,
 - ❖ QGis Cloud, QGIS-Google Earth, Google Maps.
 - ❖ **Geo-platform** (online) <https://194.254.117.103/e-atlas-lizmap/>
 - ❖ <https://194.254.117.103/e-atlas3/>
 - ❖ <https://194.254.117.103/e-atlas/>
 - ❖ <https://194.254.117.103/e-atlas-MCCSIS> login: MCCSIS mot de passe: ptolemy, **1st version** english.
- **GIS commonly used** : MapInfo, ArcGIS & QGis

- **Other tested GIS, used:** SavGIS (epidemiology), Idrisi (raster)
- **VirtualBox commonly used:** Oracle VM VirtualBox installation with Ubuntu and windows OS, a free and open-source hypervisor
- **Design & Cartography Computer Assisted** (DAO & CAO): Corel Draw & Adobe Illustrators; Philcarto, SCAP, Cabral (Mac and PC), MS-Map in old excel version.
- **Technological survey** : investments in potential softwares for design: Processing, Unfolding, Java, Flex 4, ActionScript 3
- **Programming** of classification algorithms under SAS for mapping
- **Generate Series of maps** and dynamic maps made in various environments:
 - ❖ Batch mode matched with QGIS; <http://www.qgis.nl/2013/07/24/een-serie-kaarten-genereren-2-linux/?lang=en>
 - ❖ Python language and QGIS,
 - ❖ Macro language with SAS (statistical software),
 - ❖ Macro language with "Cabral for macintosh" (mapping software),
 - ❖ Use of Matlab (Mathematical software) and program creations (on GitHub in 2016), https://github.com/drfrangipane/PoleSat_2016
 - ❖ Tests & demonstration of Dynamic Mapping under SAS with the "SMAC package" interoperable programs with SatScan interface. <https://ij-healthgeographics.biomedcentral.com/articles/10.1186/1476-072X-6-6>

CAREER IN HEALTH GEOGRAPHY AND GEOMATICS

2006 - PRESENT: CURRENT HOSPITAL EMPLOYMENT

- Lille University Hospital (CHRU de Lille)
- **September 2004, appointed to the Public Health Service:** on the methodological support platform of the Regional House of Clinical Research (MRRC).
- Job description and the following status:
 - ❖ Job Profile: research and consultation, in medical informatics, health geography on the themes: Health Geography and health Geomatics.
 - ❖ Status: State Diploma of Nursing, in the public hospital service (category A).

1996 - 2004 – HOSPITAL EMPLOYMENT – (LILLE UNIVERSITY HOSPITAL)

Appointed, at the medical information department.

- **1996-2004:** Research fellow and teaching: in medical informatics, geomatics and health geography.
- **2002-2004:** PhD in quantitative geography, Health geographer and Geomatician, Teaching & research Assistant (full-time)
 - ❖ Health geographer: medical informatics, health geography, health geomatics, medical studies and geomatics consultant,
- **2000-2002,** health geographer (full-time)
 - ❖ Health geographer: medical studies and geomatics consultant,
 - ❖ Preparation of PhD in quantitative geography CERIM, scientific team 2694 - Doctoral school
 - ❖ Teaching assistant
- **1998-2000,** health geographer (part-time 80%)
 - ❖ Health geographer: medical studies and geomatics consultant,
 - ❖ Preparation of PhD in quantitative geography CERIM, scientific team 2694 - Doctoral school
 - ❖ Teaching assistant
- **1996-1998,** health geographer and nurse functions (full-time)
 - ❖ administrative nurse: medical data quality control, for diseases of the blood (hematology-oncology)
 - ❖ Health geographer: medical studies and geomatics consultant
 - ❖ Teaching assistant

UNIVERSITY AND SCHOOL EMPLOYMENT

- **2004-2006:** Temporary Lecturer and Research Assistant (**ATER**), assistant associate professor, two years, full-time.
 - ❖ **Grenoble II,** Pierre Mendès-France University, history and geography department, France.

- **1999-present** : Part-time lecturer,
 - ❖ National School of Geographic Sciences (ENSG), Marne-la-Vallée, France.
 - ❖ **Lille II** University, Health and Law. Faculty of medicine, France
 - ❖ **Paris X** University, Geography department, France.
 - ❖ **Paris XII** University, Geography and Geomarketing departments, France.
 - ❖ Nice Sophia-Antipolis University, Faculty of medicine, France.
 - ❖ **Montpellier II University – Telecom Bretagne**. French Grande Ecole, Engineering School & Faculty of sciences, France.
 - ❖ **Berck-sur-Mer Hospital**, Nord-Pas-de-Calais region renamed Haut-de-France region, France.
 - ❖ **COREDIM**, regional association of medical information departments (DIM) of Haut-de-France, France

VOLUNTEER EMPLOYMENT

- **February 2016-present**, Elected as secretary of the Open Source Geo-spatial France Association (OSGEO-FR).
- **2004-2005**, Participation in the implementation of the Health Geography Master (M1, M2) of Paris X – XII Universities. **M1 training**: Geography of care system. Responsible: Jeanne-Marie AMAT-ROZE. **M2 training**: Health Geomatics: Methods and tools. Responsible: Stéphane RICAN.
- **2001 – 2003**, Beta tester of the SCAP software (Laurent Jegou), Toulouse III University.
- **1986-1990**: Voluntary blood donors. French Blood Establishment, Lille, Haut-de-France, France.

CAREER IN PARAMEDICAL JOBS: AS NURSE

HEALTHCARE STUDIES AND DIPLOMA IN HEALTH

- **1984-1987**: Valentine Labbé Nurse School, La Madeleine, Haut-de-France region, France.
- **1986** : Internship student, 3 months, as 3rd year nurse student, nutritional rehabilitation center and general service of Dabou protestant hospital, Ivory Coast, West Africa.
- **1985-1987**: Degree Blood "59A231042" France.
- **1987**: State Diploma of Nursing, Valentine Labbé Nurse School, Haut-de-France region, France.
- **1988**: Certificate of nursing aviation specialization, French Red Cross, Roubaix, France.
- **1988**: University Diploma (DU) in Tropical Medicine, Université de Lille II, Lille, France.
- **1988-1989**: au-pair, 4 months, around Bath, Great Britain, UK.

PUBLIC HOSPITAL NURSE CAREER

- **1989**: Appointed as nurse (State diploma) at the Lille University Hospital.
- **1990**: Hospital functionary: granting of tenure of the hospital public service, Lille University Hospital.

DETAILED ACTIVITY IN HEALTH CARE AS NURSE (1986-1997)

- Appointed in hospital at the Lille University Hospital (public service)
 - ❖ Care Center for the Elderly (CSPA)
 - ❖ Resuscitation unit of cardiac surgery (day and night)
 - ❖ Heart Surgery service, (day and night),
 - ❖ Endocrinology service,
 - ❖ Department of Medical Information (DIM), part-time.
- Appointed in a residential home (private service)
 - ❖ clos fleuri's residential home, Saint-André lez Lille (day & night shifts 24/24)
- Appointed in a medical analysis laboratory (private service)
 - ❖ Guadeloupe, overseas department (DOM), France.
- Appointed in a health clinic, general and obstetric care (private service)
 - ❖ Guadeloupe, overseas department (DOM), (day and night).
- Home care (salaried and liberal activities)
 - ❖ Liberal replacement activity in mainland France and Guadeloupe.
 - ❖ Appointed at Wazemmes care center, Lille France.

UNIVERSITY QUALIFICATIONS, DIPLOMAS AND TITLES

- **2003 – 2011: Qualified**, enrolled on the list of associate professor, **CNU section 23:** (Physical, Human, Economical and Regional Geography) and **& CNU section 24-** (Spatial planning, urban planning).
- **De 2012 à 2016: Qualified**, enrolled on the list of associate professor, CNU section 23: (Physical, Human, Economical and Regional Geography).
- **2002: Doctorate of quantitative geography**, mention "Men, Cities and Territories". Supervisors thesis: director, Pierre-Jean Thumerelle (Lille I Geography), co-director, Régis Beuscart (Lille II Medical Informatics). Thesis referees: Jean-Marie Rodrigues (Medical Informatics, Saint-Etienne University) & Jean-Pierre Besancenot (Geography, Dijon University). Obtaining high honors, University of Lille, Villeneuve d'Ascq, France.
- **1997: M.A.**, Diploma of Advanced Studies in **Geography**-Master 2: "Development, Space and Health": **with honors**, University of Montpellier III - UM3, Montpellier, France.
- **1996:** Human Geography Degree - Master 1: with high honors, Lille I University (USTL), Villeneuve d'Ascq, France.
- **1995: BSc**, L3 in Human and Physics Geography, Lille I University (USTL), Villeneuve d'Ascq, France.
- **1994: L1-L2**, Diploma of General University Studies of **Human and physics Geography**, **Lille I University** (USTL), Villeneuve d'Ascq, France.

OTHER QUALIFICATIONS, DIPLOMAS AND SCHOOLS

- **1994**, L1, Psychology, **32 validated European Credit Transfer System (ECTS)**, Lille III University, Villeneuve d'Ascq, France.
- **2005**, English Diploma, Wall Street Institute, advanced (320h), Lille, France.
- **2011-2013:** Scientific Training English, **TOEIC level, Lille II University**. Lille, France.
- **July 2016 :** Summer school Micmac (photogrammetry/3D) & **Orfeo Tool Box** (remote sensing images processing) (GNU / Linux), satellite image processing softwares, organized by the French Society of Photogrammetry and Remote Sensing, National Centre for Space Studies (**CNES**) and the French national geographic institute (**IGN**) **ans its school the ENSG**. **Place:** ENSG school: Marne-la-Vallée, France.
- **2014:** MCDA School, Multicriteria Analysis & Operational Research, University of Perugia, Italy.
- **2011 & 2014:** Geomatics Schools, GDR-MAGIS, Aussois and Sète, France.
- **2013:** Biobayes School: Bayesian Statistics. Organized by INRA institute, Place: Mandelieu-la-Napoule, France.
- **2008:** School of modeled spatial risks, Le Havre University, France.
- **2007:** School of Modeling and multi-agent simulation in social sciences, organized by ISCPIF-Paris and other universities. Place, Mèze, France.

TEACHING - ACADEMIC - SERVICES

TEACHING EXPERIENCE

COURSES TAUGHT, DISCIPLINES

Since 1999, as a PhD student or a Temporary Lecturer and Research Assistant (ATER)), or as a part-time lecturer, I taught the geographical sciences, most of time applied in health to the universities, schools and health professional associations. Teaching methods were traditional and audio-visual. **I have accumulated approximately 710 hours of courses** in full time equivalent (HETD).

Disciplines:

- Public Health; Medical informatics; e-Health; Geographic Information Sciences, Health Geography; Geomatics

Courses:

- Geo-Marketing, Modelling mobility, hospital attraction areas, hospital attraction catchment.
- Innovative e-geoplatform of health: decision making, hospital management-geomarketing.

- Geographic Information Systems (ArcGIS and MapInfo); Mapping (Philcarto, adobe Illustrator, MS-Map, SCAP),
- Designing of base map, data processing, spatial analysis and statistics.
- TIC/TICE: Information Technology and Communication for Education. Basic computer sciences. EndNote bibliography software.
- C2: Computer and Information Technology, File transfer protocol (FileZilla).

Teaching levels:

- 1st, 2nd, 3rd University cycles
- Bachelors: L1, L2, L3; Masters: M1, M2;
- Training of engineer; Continuing education; University Diploma (DU).

2014 - 2015 – TEACHING (ENSG – MARNE-LA-VALLEE)

- **Lecturer assistant**, Training - University career "GIS & Cartography Design" and "Geomatics: option: GIS & Mapping).
- Co-authorization of the University Paris 1 Panthéon-Sorbonne (Department of Geography) and National School of Geographic Sciences (ENSG). **Teaching place:** ENSG School of Marne-la-Vallée, France.
- **Courses:** statistics, data processing, mapping, graphical semiology, health geography, Oracle virtual box support.
- **Academic levels:** students of Bachelor (L3) and Professional Master (M2).

2014 - 2015 – INDIVIDUAL TEACHING (POLYTECH – LILLE)

- **Teaching assistant**, computer science & statistic engineering (GIS).
- Polytech Lille: Empowered by the Engineering titles Commission and member of the *conférence des grandes écoles*. **Teaching places:** CERIM (Lille), Polytech (Villeneuve d'Ascq), Haut-de-France, France.
- **Courses :** Health geography, graphical semiology, Geomatics : QGis, MapInfo GIS
- **Academic levels:** students of Internship and Final year project of 4th & 5th years.

2010 - 2015 – TEACHING (MONTPELLIER II – UM2)

- **Lecturer assistant**, Training: «Information Technology and Communication (TIC) & Health, South of France».
- Federation of School of Mines, Telecom Bretagne, French Grandes Ecoles, Faculty of Medicine (UM1) & Faculty of Sciences (UM2). **Teaching place :** Montpellier II, France
- **Courses:** Health geography, Health geomatics: GIS ArcGis, Geography and modeling for decision support.
- **Academic levels:** students of Masters M1 & M2, Engineers, and doctoral education, University Diploma (DU).

2006 - 2007 – TEACHING (PARIS XII)

- **Lecturer assistant**, Training: urban planning and territories, section: geography and geomarketing. **specialty:** health geography.
- **Courses:** health geography, modelling of hospital attraction, geomarketing in health
- Paris XII University. **Teaching place:** Créteil (Paris), France
- **Academic levels:** students of Masters (M2). Research purpose.

2006 - 2007 – TEACHING (PARIS XII)

- **Lecturer assistant**, Training: urban planning and territories, section: geography and geomarketing.
- **Courses:** health geography, modelling of hospital attraction, geomarketing
- Paris XII University. **Teaching place:** Créteil (Paris), France.
- **Academic levels:** students of Masters (M2). **Specialty:** geomarketing and territorial strategies of companies and public institutions. **Professional purpose.**

2004 - 2006 – TEACHING (GRENOBLE II- UPMF)

- **Temporary Lecturer and Research Assistant (ATER)**, full-time, two years.
- Grenoble II University, department of history and geography.
- **Teaching place:** Saint-Martin-d'Hères. **Research Place:** CERIM, Lille II. France.
- **Courses:** TIC/TICE and C2: Computer and Information Technology. File transfer protocol. Word, excel. Geomatics: Geographic Information Systems (MapInfo); Mapping (Philcarto), Basic computer sciences. Spatial analysis, statistic, data processing, designing of base map. Health geography initiation.

- **Academic levels:** Students of Bachelor L1, L2 & L3.

2006-2007 – TEACHING (BERCK-SUR-MER)

- **Teaching assistant.** Trainings: continuing education.
- **Courses:** health geography initiation. Geomatics training: mapping software and processing hospital database for mapping.
- Medical Information Department (DIM). **Teaching place:** Berck-sur-Mer, France.
- **Academic levels:** medical and paramedical staffs, continuing education.

2004 - 2007 – TEACHING (NICE SOPHIA-ANTIPOLIS)

- **Lecturer assistant.** Training: health systems engineering and Autonomy (**I2SA**). Responsible: Pascal STACCINI, Medical Doctor (MD), Professor, Practitioner of Nice University Hospital (MCU-PH).
- **Courses:** health geography, modelling hospital attraction areas and hospital management. **Online support course.**
- Sophia Antipolis Nice University, Faculty of medicine. **Teaching place:** NICE town, France.
- **Academic levels:** students of Master (M2) old name “DESS”, Professional Purpose.

2003 - 2007 – TEACHING (PARIS X-XII)

- **Lecturer assistant,** Training, Health Geography. Responsibles : Gérard SALEM & Jeanne-Marie AMAT-ROZE, University Professors.
- **Courses:** health geography, modelling hospital attraction areas and hospital management
- Paris X-XII Universities. **Teaching places:** Nanterre & Créteil (Paris), France.
- **Academic levels:** students of Masters (M1 & M2), specialty: health geography. Research purpose.

2003 - 2005 – TEACHING (LILLE II)

- **Lecturer assistant.** Training: Medical informatics, Computer sciences and network cares, Public Health (medicine).
- Lille II University, Faculty of medicine: **Teaching place:** Lille.
- **Courses:** introduction to health geography and hospital management & geomarketing.
- **Academic levels:** professional Master (M2), Medical resident students.

2001 - 2002 – TEACHING (LILLE II)

- **Teaching assistant.** Training: medicine. Option: Computer sciences and medical informatics. Responsible, Nathalie SOUF, Associate Professor.
- **Courses: Module 1** – basic computer sciences & **module 5** – health geography, geomatics: mapping software and health data processing.
- Lille II University, Faculty of medicine. **Teaching place:** Lille
- **Academic levels:** University Diploma (DU) opens to students with at least a master level equivalent.

2001 - 2002 – TEACHING (LILLE II)

- **Teaching assistant.** Training: medicine. Option: medical informatics. Responsible, Nathalie SOUF, Associate Professor in computer sciences.
- **Courses: module 1** – basic computer sciences.
- Lille II University, Faculty of medicine. **Teaching place:** Lille.
- **Academic levels:** PCEM2/DCEM1: students of 2nd & 3rd year in medical studies.

1999 - 2003 – TEACHING (LILLE UNIVERSITY HOSPITAL)

- **Teaching assistant.** Bi-annual, in-house training:
- **Courses:** health geography initiation; geomatics: mapping softwares and health data processing, EndNote bibliography software.
- Lille University Hospital. **Teaching place:** Lille.
- **Academic levels:** medical resident students; medical and paramedical staffs of medical information units, continuing education.

1999 - 2002 – TEACHING (LILLE II, COREDIM)

- **Teaching assistant:** Trainings: continuing education and medicine
- **Courses:** health geography initiation; geomatics: mapping softwares and health data processing and **online support courses**.
- Lille II University, Faculty of medicine & regional association of medical information departments, **COREDIM**, Haut-de-France. **Teaching place:** Lille.
- **Academic levels:** medical resident students; medical and paramedical staffs

1999 - 2001 – TEACHING (LILLE II)

- **Teaching assistant.** Training- Health and Law “*Assessment of medical activity*”.
- **Courses:** health geography initiation & specific case presentations of research.
- Lille II University, Faculty of medicine. **Teaching place :** Lille.
- **Academic levels:** professional Master (M2) students.

TEACHING PROJECTS**DISTANCE TEACHING PROJECT**

- **April 2013 :** presentation of the educational project « Health geomatics», A Quesnel (Lille University Hospital), Thierry Pagès (industrial, innovation research center, Montpellier (CR2I))

TEACHING SUMMER UNIVERSITY PROJECT

- **May 2015: Summer University Project** "in geo-spatial statistics. Goals: **1-**"Processing of health data and spatial processing means"; **2-** Strongly associate geography to the spatial statistics, **3-** Fill the gap between spatial data in health and treatment methods.
- **Partners:** Hassina LEFEVRE (DIM & Epidemiology units, Erstein), Pascal HANDSCHUMACHER (Geography & urban planning, Strasbourg), Jean GAUDART (Public Health, Marseille), Erik-André SAULEAU (Biostatistics, Strasbourg), Anne QUESNEL (Lille University Hospital).
- **Process:** Being examined.

TEACHING PROJECT GHICL

- **April 2016:** educational project with the Cathololic University Hospital. Under consideration

TEACHING PROJECT – NEW MONTPELLIER UNIVERSITY

- **January 2015,** geomatics education project proposal in health following the creation of the New University of Montpellier (UM1 and UM2). Failed project, inconclusive results.

SUPERVISION OF GRADUATE STUDENTS & INTERNAL STAFF**SUMMARY: SUPERVISION OF STUDENTS SINCE 2000**

- ❖ Students in Computer science & statistic engineering (GIS), **Polytech Lille** – Polytechnical and academic school of Lille, France
- ❖ Student in sociology **Lille III University**, France
- ❖ Student in medicine, public health, **Lille II University**, France
- ❖ Students in history, **Grenoble II university**, France
- ❖ Student in civil engineering & geomatics, **Indian Institute of Technologies (IIT)**, ROORKEE, India
- ❖ Student in engineering of health, **Nice Sophia-Antipolis University**, Nice, France.
- ❖ **COREDIM** regional association of medical information departments (DIM). Professional staff: Medical student (Public Health resident) & medical staffs & technician of medical information.

EXHAUSTIVE SUPERVISION OF STUDENT

- **2015-2016:** Paul MONTTOYA, internship, 4th GIS (computer science & statistic engineering), 3 months, between May-August 2016 **Polytech Lille**. Subject: Spatial statistics on meningitis. Place of internship: Lille University Hospital and CERIM University of Lille II.
- **2015-2016:** Ismahane BEN GAYED & Alexis EBRARD, internships, 4th GIS (Computer science & statistic engineering), 3 months & (2 months- without compensation job), between May-August 2016, **Polytech Lille**. Subject: Medical informatics POLESAT platform. Place of internship: Lille University Hospital and CERIM University of Lille II.
- **2014-2015:** Fatou NDIAYE internship, 4th GIS (Computer science & statistic engineering), 3 months, between May-August **Polytech Lille**. Subject: Spatial statistics on meningitis. Place of internship: Lille University Hospital and CERIM University of Lille II.
- **2014-2015:** Rémi BRUYERE, Final year project, 5th year, between October 2014 – February 2015, **Polytech Lille**, (Computer science & statistic engineering), Subject: Spatial statistics on meningitis. Place of internship Lille University Hospital (regional house of clinical research: MRRC) and **Polytech Lille**, Villeneuve d'Ascq.
- **2010-2011:** Olivier DECELLE internship, 4th year, computer science & statistic engineering (GIS), **Polytech Lille**. Subject: geo-epidemiology, spatial statistics on childhood acute leukemia. Place of internship: Lille University Hospital and CERIM University of Lille II. 2 months, no compensation, May-August 2011.
- **2010-2015:** Online support course for students of ENSG, Montpellier II (UM2), IIT Roorkee.
- **2009-2010:** Nalin SHARMA & Abhishek RUHELA, summer internship **IIT Roorkee of India:** civil engineering & geomatics. Place of internship, CERIM, Lille II University. Subject: POLESAT Platform.
- **2008-2009:** One medical resident, Karine WYNDELS, Public Health, medical information unit of Lille University Hospital and Medical informatics **Lille II University**. 6 months, internship subject: e-atlas of health & bibliography. Place: Lille.
- **2006-2007:** Online support course, <http://essquad.unice.fr/>, Nice Sophia-Antipolis University, Training responsible: Pr Pascal STACCINI.
- **2004-2006:** Training permanence insured: 4 hours / week. Students of L1, L2, L3 in trainings of communication and information technologies (TICE) and the certification in computer science (C2). Grenoble II University. **Place:** Saint-Martin-d'Hères, Grenoble. **And Online support course.**
- **2004:** Trainee of sociology, 5th year, two months, enrolled at Lille III University, co-supervised by the Lille Regional Hospitalization Agency (ARH). Place: CERIM - Lille II University.
- **2000-2006:** Online support course, Health geography, intranet site of the regional association of medical information departments COREDIM. Haut-de-France region. Responsible, Dr Claude Courouble.

ACADEMIC HONORS

INVITED SPEAKER (SCIENTIFIC SEMINARS - COLLOQUIUM, PROFESSIONAL MEETINGS)

- **October 2016:** invited by Amélie LANSIAUX, Arnaud HANSSKE, to present our project: Geomatics and Geo-BI platform. Steering committee of medical research (COPIRM), Catholic Lille University Hospital, Lille, France.
- **6th April 2015:** invited by Shahin GELAREH, Maxime OGIER, Frederic SEMET (professor & associates professors). Presentation: some issues of Operations Research in the fields of Health and Society. Scientific Team, OPTIMA EC-CRISTAL laboratory. Grande Ecole "Centrale", USTL -Lille1, France.
- **6th October 2014:** invited by Pr Alain VENOT (MD-PhD, co-director of LIMICS laboratory), to present: POLESAT an innovative geo-platform of e-health for decision making, Paris, France.
- **September 2014,** invited by Igor CREVITS, Saïd HANAFI (professor & associate professor (HDR). Scientific Team, LAMIH laboratory – Scientific team: Decision, Interaction and Mobilities; scientific team: Automatic & Human-Computer, Valenciennes University, France.
- **2012:** invited by Pr Bruno SALGUES, scientific seminar called « Medicine and Technologies of Information & Communication (METIC) ». Presentation: Health geography and geomatics and Hospital management. Montpellier 1 & 2 Universities, France.
- **2009,** invited by Dr Frank FUCHS. Internal meeting: to present all my researches on hospital management: modeling attraction areas and others studies applied on health geography and medical informatics. F Fuchs: Head department of innovative applications and services, Saint-Mandé, France.

- **2008:** invited by **Pr Régis BEUSCART**, scientific seminar « Journée de Recherche en Santé Publique / Research day of Public Health », Lille University Hospital, December, **Lille, France**.
- **2003-2005:** invited by **Pr Gérard SALEM & Pr Jeanne-Marie AMAT-ROZE**, Research seminar of health geography, Paris X-XII, Universities, France.
- **2006:** invited by **Pr M.-C. Dinet-Lecomte**. To present a historical approach of hospital planning in the Nord – Pas-de-Calais region. History colloquium on the French Hospital Administration meeting, Amiens, Haut-de-France region, France.
- **2001-2004:** invited by **Pr Régis BEUSCART**, scientific seminar « Technologies of Information & Communication and Health », Lille 2 University, France.
- **2003:** A. Quesnel. Invited by Secretary of ARH, **Mr Bernard DELAETER** to present thesis results about health planning. ARH, November, Lille, France
- **2002:** invited **with Arnaud Hansske** by a regional board of the Hospital Federation of France (FHF) to present communication on thesis results March, Lille, France.
- **2002:** invited by **PRED A Cristian** to present communication on thesis results, Lille, France.
- **2001** invited by **VAGUET Alain** (Associate Professor of geography department) to present communication on thesis results, April, Rouen, France

SCIENTIFIC & ADMINISTRATIVE MANAGERMENTS

STUDENT MANAGEMENT AND HOSTING

- **May-June 2016**, several communication and administrative procedures have been carried out. I have got **one financing granted** for one summer fellowship of 3 months, amount of donation is **1700 euros**. Three training agreements were carried out.
- **November 2015**, one common proposal of internship subject, **with Thierry PAGES** of Live inSport-Montpellier, to Bruno Salgues, School of Mines of Saint-Etienne, France.
- **September 2015**, presentation of two topics at Polytech Lille, section: computer science & statistic engineering (GIS), before getting three 4th year students in summer internships from May 2016. Duration (2-3 months) with compensation if > 2 months.
- **September 2015**, diffusion of internship topics to the laboratory CRISTAL- central school, USTL Lille1.
- **April 2015**, Presentation of topics at Polytech Lille, section: computer science & statistic engineering (GIS), before getting one 4th year student in summer internship from May 2015. Duration of 3 months with compensation.
- **September 2014**, Presentation of topics at Polytech Lille, section: computer science & statistic engineering (GIS), before getting one student 5th year. **Project Study End (PFE)** with no compensation. Collaborative continuous work with the student, five months, from October- February, period 2014-2015.
- **Mars 2011**, several communication and administrative procedures have been carried out. One training agreement carried out, from May to August 2011. Polytech'Lille computer science & statistic engineering (GIS).
- **October 2010**, **Meenal AGGARWAL** a student of the IIT Roorkee of India was scheduled for a summer internship. Administrative procedures were taken for her coming to France. Finally, her arrival in internship was canceled in May-June 2011 due to health problem.
- **October 2009**, for two students **Nalin SHARMA & Abishek RUHELA** of the Indian Institute of Technology (IIT) of Roorkee, several administrative procedures were taken to accommodate students in internship between **May to July 2010**. It concerns specific training agreements for each student (English / French) integrating benefits in kind for accommodation by the University Hospital of Lille, as compensation.

ORGANISATION OF COMPUTER ROOMS FOR EDUCATION

- **2014-2015**, At the National School of Geographic Sciences (ENSG) school, in coordination with the IT service for loading a virtual machine Oracle Virtual Box.
- **2004-2006**, At Grenoble II University, in coordination with the computer service for the software installations.

OTHER ACADEMIC SERVICES

EXAMEN SURVEILLANCES

- **2005-2006**, exam surveillance of medicine competition, PCEM1, **Lille II University** (replacing Cristian Preda)
- **2004-2006**, exam surveillance, **Grenoble II University**, in computer room, L1, L2, L3.
- **2014-2015**, exam surveillance, **ENSG**, Marne-la-Vallée, in the computer room, Master 1, 2.

ORGANIZER OF CERTIFICATION IN COMPUTER SCIENCE (C2)

- **2006**, Co-organizer of the certification in computer science: the **C2 Grenoble II University**.

JURY MEMBER FOR GIS STUDENTS – POLYTECH LILLE

- **September 2016**, Jury member for 3 sessions, examination sessions, Polytech Lille, Computer science & statistic engineering (GIS), Master 1.
- **February 2015**, Jury member for '1 session, examination session, Polytech Lille, Computer science & statistic engineering(GIS), Master 2.
- **September 2015**, Jury member for 1 session, examination session, Polytech Lille, Computer science & statistic engineering(GIS), Master 1.
- **September 2013**, Jury member for 1 session, examination session, Polytech Lille, Computer science & statistic engineering (GIS), Master 1.

RESEARCH AND DEVELOPMENT ACTIVITIES

RESEARCH ACTIVITIES: INTRODUCTION

MAIN WAY OF RESEARCH

- **Tele-health: Medical informatics** – Innovative geo-platform for decision making;
 - ❖ E-Geo-platform from project "**POLESAT project**: e-platform e-atlas, consultation and decision support". **POLESAT versions**: V1 (2004), V2 (2005-2009) and in 2010 V3 (dynamic-web, private and open source web mapping).
 - ❖ **2011**, POLESAT re-oriented biotechnology with CR2I-Kyomed collaboration project.
- **Hospital management;**
 - ❖ **Health Geography**: Modelling – mobility- hospital attraction areas; geomarketing in health; distances; segmentation, optimization, decision support
 - ❖ **Health Geomatics** — webmapping; visualization
 - ❖ **Automation of algorithms**: Matlab, R or other languages
- **Geo-epidemiology;**
 - ❖ mobility, vulnerability, flow, scan statistic (data mining), modeling
- **Geographic Information Science and Spatial Cognition**
 - ❖ Spatial Analysis methods; Spatial classical and Bayesian Statistics; health open-data

2ND WAY OF RESEARCH

- **Geo-BI platform, complex system modeling & visualization**
 - ❖ SOLAP; Operational research; Agent Based model, multi-agent system
- **3D medical informatics & Geographic Information Science**
 - ❖ 3D Health Geomatics
 - ❖ Health Sport and Well-being;
 - ❖ Remote sensing, photogrammetry

LOGIC OF THE RESEARCH

- At the University Hospital of Lille, our goal was to develop the geography of health in the hospital and get parallel recognition of the profession as new trade. Thus, for 14 years, we are pursuing our goal of integrating spatial analysis and digital mapping to the hospital. 'Digital Hospital' with tele-health is the agenda; too, we work in the development of Health geography and geomatics through the research activity and the research projects. We communicate regularly inform and carry out a continuous scientific watch on spatial analysis and geomatics.
- Our health research is mainly focused on spatial analysis, modeling and GIS and to a lesser extent on complex systems analysis and modeling of spatialized risks. In particular, they fall within the health geography and health geomatics, geomarketing and spatial planning in Health, Medical Informatics and Epidemiology.
- Specifically, it should be retained the following topics: 'health geography and hospital modeling of spatial utilizations ' Health geomatics and the POLESAT project: "an innovative e-geoplatform and its puppet "PiNokio"" created from the Medical Knowledge Visualization Language (VCM)'. And Geo-epidemiology studies of chronic myeloid leukemia (CML) and meningitis by scan statistics and other statistical spatial methods'.
- Our research, concerning POLESAT project, were selected by the Scientific Committees of the French national geographic institute (IGN - Paris) and (CR2I - Kyomed, Montpellier). **POLESAT** was ranked "orange" in May 2011: POLESAT had been reoriented as a biotechnology project for submission to industrial, innovation research center (CR2I), Montpellier.
- POLESAT was the subject of a research and development partnership project between the Division of Public Health, the University Hospital of Lille, the **IGN** "services and Innovative applications", the biotechnological platforms (CR2I -Kyomed), the Bethune hospital & Catholic Lille University Hospital. This project was not directly productive for us (negative result of partnership project, February 2015), but the idea was recovered by **IGN** and health ministry "AtlaSanté project".
- **Our recent scientific presentations and new scientific direction** are going through new projects of geomatics including open-source, prospective geomatics and mapping adding multi-criteria analysis, methods from Operational Research (OR). Our papers under review and in process concern 'Geo-Epidemiology of Chronic Myeloid Leukemia, meningitis'; 'and the summary articles on Geography and Geomatics Health' for decision support.

RESEARCHER FELLOW, POSTDOCTORAL POSITION

INVITED OR ASSOCIATED RESEARCHER SINCE 1996

- **2004-2006:** associated researcher to **CERIM**, a medical informatics laboratory of University Lille II and to the scientific team 2694 of "Public health, epidemiology and chronic diseases modeling", and its doctoral school.
- **2004-2006:** invited researcher to **SEIGAD** laboratory: Environmental systems, geographic information and decision support. Scientific team: Spatial analysis and geomatics, Grenoble I University, France.
- **2009-2016:** invited researcher to **CERIM**, a Medical Informatics Laboratory of University Lille II, France.
- **January 2017:** associated researcher to the department of medical research (**DRM**) and **KASHMIR laboratory** of the catholic Lille University Hospital, France.

POSTDOCTORAL POSITION

- **2008,** selected and ranked with a 14th place, for a postdoctoral job during 5 years, at Lisbon University. Canceled recruitment, no funding, economic crisis of 2008 in Europe.

COLLABORATIVE RESEARCH

HAUT-DE-FRANCE REGION

- **2000-present, Cristian PREDA, PhD,** Professor of Mathematics and Modeling, Lille I University (USTL) – Polytech Lille.
- **2006-present, François DUFOSSEZ, MD,** Head of medical information systems department (**DIM**), Béthune Hospital.
- **2009-present, Ariane LEROYER, MD-PhD,** Lille University Hospital: Epidemiology.
- **2009-present, Sélim CORM, MD-PhD,** Lille University Hospital & Chambéry Hospital, clinical Hematology adult.
- **2002-present, Julien SOULA, PhD,** Lille 2 University, medical informatics laboratory **CERIM**.

- **2002-present, Arnaud HANSSKE, MD**, Catholic Lille University Hospital, Head of **DIM** & medical information systems (**DSIO**) departments.
- **2015-2016, David DELERUE**, « ALICANTE » health informatics enterprise, Seclin. France.
- **2015, Saïd HANAFI, PhD**, LAMIH laboratory - Professor of Decision, Interaction & Mobilities, Valenciennes University.
- **2015, Igor CREVITS, PhD**, LAMIH laboratory – Assistant professor of Automatic & Human-Computer, Valenciennes University.
- **2009, Brigitte NELKEN, MD**, Lille University Hospital, clinical Hematology pediatrics.
- **2009, Bruno QUESNEL, MD PhD**, Professor at Lille University Hospital, clinical Hematology adult.
- **2006, 2015, François HOUYENGH, MD**, Head of Medical Information Unit (**DIM**) of Dunkerque hospital.

PARIS & PARIS REGION

- **2002-present, Bruno SALGUES, PhD**, Health management, Director of CRITICS laboratory, Grande Ecole Télécom, Evry, Paris.
- **2013-present, Isabelle PARENT DU CHATELET, MD & Daniel LEVY-BRUHL, MD**: French Institute for Public Health Surveillance (InVS), renamed "Santé publique France".
- **2015-2016, Alain VENOT, MD PhD**, retirement as Professor, Co-director of LIMICS laboratory, medical informatics, Paris.
- **2011-2015, Frank FUCHS, PhD**. The French national mapping institute (IGN), department of innovative applications and services, Saint-Mandé, France.
- **2009, 2014-2015, Yannick LOUIS KERGOSIEN, MD PhD**, Paris 13, Professor of Cergy-Pontoise- (School of Medicine), LIMICS laboratory, medical informatics & computer sciences, France.
- **2015, Arnaud GRIGNARD, PhD**: Artificial Intelligence, Multi-Agent Simulation for visualization of complex systems applied in physical & health geography, Gama platform: Research & Development Institute (**IRD**), Paris. France.

OTHERS FRENCH REGIONS

- **2015-present, Samuel SOUBEYRAND: PhD**, Researcher, Construction of models and statistical inference in spatial epidemiology. BioSP – INRA, Avignon, France.
- **2015-present, Eric SAULEAU, MD PhD**, associate lecturer & professor (MCU-PH), Strasbourg University Hospital, Biostatistics, Bayesian statistics, classical and space, France.
- **2015-present, GDR-Magis** members, Team: Prospective action. Epistemic uncertainty: from the data, to construction of geomatics models, France.
- **2013-present, Sélim CORM, MD**, Chambéry Hospital: clinical hematology, France.
- **2013-present, Dominique BICOUT, PhD**, biomathematics, epidemiology, environmental and predictions for population health - TIMC UMR 5525, CNRS-UJF Grenoble I University.
- **2011-present, Thierry PAGES, PhD**: SANOFI & representative of industrial innovation research center (**CR2I**).
- ❖ **2016** General Director of "LiveInsport" industry, Pignan, Montpellier, France.
- 2002-present, Bruno SALGUES, PhD
- ❖ Information Technology and Communication (TIC) & Health, South of France, Grande Ecole Télécom, Montpellier.
- ❖ **2016**, Professor of Health Management, Health engineering Centre (CIS), Grande Ecole Mines-Télécom, Saint-Etienne, France.
- **2013, Jean Marc ZANINETTI, PhD**, University of Orleans, Professor of Geography Department, Orleans.
- **2000, 2006, Laurent JEGOU, PhD**, associate professor, geomatichian, Toulouse University.
- **2011-2015, Daniel LAUNE**, manager of « Kyomed », created enterprise from (CR2I association), Montpellier, France.

FOREIGN COUNTRIES

- **2013-present, Marc SOURIS, PhD**, Research Director; in computer sciences, epidemiologist, Institute for Research and Development (**IRD**), Vientiane, Laos PDR, Laos., Laos, France.

- **2015-present, Jean-Paul KASPRZYK, PhD**, Researcher in Geomatics, decisional geography, geo-Business Intelligence & SOLAP Data Warehouses applied to criminology. Geographical Sciences & computer sciences thesis. Study department of Fundamental Economic Geography and Applied (**SEGEFA**) of Liège University, Belgium.
- **2013, Sake WAGENAAR, PhD**, Geography, senior researcher, Geomatician, animator of Dutch QGIS Forum, Kenteq, Netherlands.

RECENT COLLABORATIONS

- **2016, Éric KERGOSIEN, PhD**, associate professor, **Team:** extraction and knowledge management (**EGC-Group**). Workshop: organization of the management and spatial data analysis and temporal (**GAST**). GERiiCO laboratory, Lille III University, France.
- **2016, Thierry GARAIX, PhD**, operational research, and health, (**ROSA Group**) Grande Ecole- "Mines" - Saint-Etienne, France.
- **2016, Jean-Jacques BOREUX, PhD**, physicist and Bayesian statistical modeling Professor, Faculty of Sciences of Liege-Arlon, Belgium.
- **2016, Amélie LANSIAUX, MD PhD**, Medical Research Direction (**DRM**), Catholic Lille University Hospital (**GHICL**), France.
- **2016, Paul BOURGINE, PhD**, Professor, epistemology research center (**CREA**), École Polytechnique / CNRS (UMR 7656), France.
- 2016, Nicolas & Patrick STAELEN, Altense Consulting, health geomarketing society, Paris, Landes, France.
- **2016, Vincel HOANG-NGOC-MINH, PhD**, Professor of computer sciences, Lille II, Paris 13, France.

PROFESSIONAL SERVICES

COORDINATION OF WORKS

- **2014-2016**, invited by Bruno SALGUES to coordinate articles around “Geomatics in health” for the Publisher *“Techniques de l’Ingénieur”* which is specialized in information for the technical and scientific professionals. Four papers were under-coordination and referenced n° Med4000”. The first, was published on June 2016 “Geomatics in health and applications in the north of France”- Med4000-V1. The three others are following: one about “Geomatics in epidemiology (M SOURIS)”, another is about “Geomatics and animal health and zoonotic (D BICOUT et al)”, another is about “Geomatics in health and Scan statistics (C PREDA)”.

INTERVIEWS FOR DECRYPTAGEO JOURNAL

- **2015, phone** interview by Françoise de BLOMAC (Editor in Chief of Decryptageo: geographic information) and organized by Anne Quesnel at the Catholic Lille University Hospital (GHICL) with Arnaud HANSSKE, France.

REVIEWS IN REFEREED JOURNALS

- **2000-2001, review**, in « spaces, populations and societies journal » /Espace, Populations et sociétés revue, eds. by USTL Lille I – Flandres, France.

SESSION CHAIRMAN

- **2009**, session chairman, IADIS e-Health, Multi Conference on Computer Science and Information Systems (MCCSIS), Algarve, Portugal.

STEPS TO MENINGITIS DATA ACCESS

- **Mars 2012**, 1st meeting with epidemiologists of the French Institute for Public Health Surveillance (**InVS, Paris**), renamed “Santé publique France” after merging with two other institutions. Isabelle PARENT du CHATELET, Daniel LEVY- BRUHL. **Meeting place:** Lille University Hospital.
- **January 2013**, 2nd Meeting with Isabelle PARENT du CHATELET and Thierry PAGES, PhD in chemistry (industrial, innovation research center “**CR2I**”, Montpellier, France).
- **February 2013**, steps: prepared dossier for declarations to the National Commission on Informatics and Liberties (CNIL) and to the Advisory Committee for Information Processing in Research in the field of Health (**CCTIRS**).

- **June 2013**, acquisition of InVS database: invasive meningococcal infection also called « *Neisseria meningitidis* » (bacterial meningitis).

PUBLIC PLATFORM OF GEOGRAPHICAL INFORMATION (PPIGE)

- **2013**, Referent and team integration to manage and evolve the "address database". 2 meetings a year, public information geographic platform (**PPIGE**), Haut-de-France region, Lille.
- **2006**, Referent for the **PPIGE** institution of the Haut-de-France region, Lille.

CO-ORGANIZATION: "CODE SPRINT" & "FOSS4G-FR"

- **March 2016**, two days devoted to the code sprint logistic, as representative of the OSGEO-FR association, Code Sprint 2016, **workshop place**: Paris, France.
- **January-May 2016**, several online meetings for organizing the symposium with specific tasks for the organizing members. FOSS4G-FR 2016, Paris, France: <http://osgeo.asso.fr/foss4gfr-2016/>

NEW HOSPITAL TRADES: HEALTH GEOGRAPHY & GEOMATICS

- **August 2016**, the human resource service answers that "the profession of geographer and health GIS specialist (geomatician)" is not a priority in terms of new trades to recognize by Lille University hospital. Engineering positions could be eventually filled.
- **April 2015**, an article dedicated to "Geomatics applied to health" posted by AFIGEO with "copy of the employment form filled of 2012, online:" <http://afigeo.asso.fr/12-news/news/1173-g%C3%A9omatique-appliqu%C3%A9e-au-domaine-de-la-sant%C3%A9-recherche-et-d%C3%A9veloppement.html>
- **December 2014**, pending for evaluation of the dossier "new profession" by the human resource department of the public hospital service.
- **2012**, in order to promote the new hospital crafts (jobs), I have filled a specific form for the human resource service taking into account the results of survey (entitled: "geomaticians of France") conducted in 2011 by the representative association of geographical information "**AFIGEO**", (Paris).
- **2012, filing date in June 2012** at human resource service. Here you can find a copy of the employment form filled, entitled: "Health Geography and Geomatics applied to research. Architect of Geographic Information System 'and' quantitative geography and geo-epidemiology " http://www.afigeo.asso.fr/images/BD-DernieresNouvelles/2015/Fiche_metier_geo_sante_chru.pdf

GRANTS AND CONTRACTS AWARDED

- **November 2016**: Lille University Hospital and GHICL, Lille, part-time research assistant proposal, contract signature in process.
- **September 2016**: partnership between Lille University Hospital and GHICL and SEGEFA - University of Liège. A confidentiality agreement signed & collaboration agreement in progress.
- **September 2016**: Lille University Hospital and « LiveInSport » Montpellier. A confidentiality agreement signed & collaboration agreement in progress.
- **May 2016** : One donation from "Altense consulting society: <http://www.altense.fr/Accueil.html>" to the public health department of Lille University Hospital, for one fellowship, an internship compensation of three months (1700 euros), computer science & statistic engineering (GIS), 4th year, from Polytech Lille.
- **February -September 2016**: Lille University Hospital and "Altense Consulting". A confidentiality agreement signed & collaboration agreement in progress.
- **October 2000**: Travel and accommodation paid by the International Festival of geography (FIG), Saint-Dié-des-Vosges, France (500 euros).
- **1998-2002**: One part of my nurse salary (full time-job 100% and 80%) in the Lille University Hospital is the source of funding during 3 years of my PhD in quantitative geography.
- **1996**: One half-fellowship by the Lille University Hospital employer, including schooling and housing for one year, during the Master 2 training at Montpellier III, Paul-Valéry University (around 15 000 euros).
- **1996**: One regional half-fellowship by the Nord - Pas-de-Calais region, including schooling and housing for one year, during the Master 2 (MA) training at Montpellier III, Paul-Valéry University, France (around 15 000 euros).

RESEARCH PROJECTS AT THE LILLE UNIVERSITY HOSPITAL

PROSPECTIVE STEPS IN PROGRESS

- **June 2016:** POLESAT prototype, evolving, business plan study.

CATHOLIC LILLE UNIVERSITY HOSPITAL & GEOGRAPHY DEPARTMENT OF LIEGE

- **January 2016 :** contracts of confidentiality & international collaboration
- **Partners:**
 - ❖ Arnaud HANSSKE, MD, Head Department of medical information (**DIM**) and information systems (**DSIO**), **GHICL**, **KASHMIR** laboratory, Lille, France.
 - ❖ Jean-Paul KASPRZYK, PhD, (Geographical & computer sciences), research assistant in Geomatics, décision making applied geography, geo-intelligence "Business Intelligence & SOLAP", Data Warehouses applied to criminology. **SEGEFA** - University of Liège, Belgium.

LIVEINSPORT SOCIETY- MONTPELLIER

- **January 2016 :** contracts of confidentiality & collaboration
- **Partners:** Thierry PAGES, PhD, General Director of « **LiveinSport** », Pignan-Montpellier, France.

CATHOLIC LILLE UNIVERSITY HOSPITAL (GHICL)

- **April 2016 :** Other research subjects, underway study
- **September-october 2016:** one day per week, research assistant, 1 year contract (renewable).

ALTENSE CONSULTING SOCIETY- PARIS REGION - LANDAS (NORTHERN FRANCE)

- **January 2016 :** contracts of confidentiality & collaboration
- **Partners:** Patrick & Nicolas STAELEN, (general director and co-director), **Altense Consulting** society.

CR2I – KYOMED, MONTPELLIER

- **March 2011:** New version of the POLESAT project, oriented biotechnology, submitted to industrial, innovation research center (**CR2I**),
- **May 2011, Ranked « orange »:** with mentoring by Thierry PAGES for the maturing process of this project.
- **2011 – 2015,** partners: **CR2I-Kyomed**, the French national mapping institute **IGN**, **Béthune Hospital**, Lille University Hospital (**CHRU**), Catholic Lille University Hospital (**GHICL**). (Aborted project, political reasons).

CR2I – KYOMED, MONTPELLIER

- **2011-2014,** CR2I's Internal development project : to develop platform of geomatics and health services

UDAF-59, ASSOCIATION OF FAMILY, LILLE

- **May 2005 :** Project: e-GIS, Health and Sustainable Development, first part: **POLESAT**
- **Partners:** **CERIM – EA 2694** – Lille II University ; departmental force of family north associations (**UDAF- 59**), health regional agency (**ARS**)
- **Correspondent:** M. BISIAUX, Haut-de-France region. Mr Pasquier COGNACQ, UDAF director. (Aborted project, political reasons).

MONTAIGNE GROUP, EURASANTE-LILLE

- **March-May 2004:** consulting - research collaboration project. "Study of hospital attractions: activity analysis of establishments of catchment area of Montdidier, France.
- **Partners:** **CERIM – EA 2694** - Lille II University; Montaigne Group.
- **Correspondents:** Patrick LE JEUNE, Health Manager: strategy, planning, patient, managerial innovation, management. (unfinished project, reason: no access data)

STIC-NTIC (UNIV NICE) & CRITIC-GET (EVRY) & UDAF-59 & ESRI

- **September 2004 :** POLESAT project (scalable e-health atlas)

- **2nd** call for proposals: information , communication technologies (**TIC**) & Health «Internet uses», Ministry for Research, Inter-ministerial Delegation of Land Planning and Regional Attractiveness (**DATAR**), mentored by Deposits and Consignments Fund (**CDC**), France.
- **Partners:** Nice SA University, Télécom Evry, UDAF-59, ESRI-France, Université Lille 2.
- **Official:** unsuccessful project: good rating but no funding.

LILLE II UNIVERSITY – CERIM LABORATORY

- **December 2003:** Project: Health territories and "projects of medicalized territories", project based on the circular of the 3rd Scheme of regional sanitary organization (**SROS**) generation.
- **Partners:** SROS 3rd generation, duration 21 months, overall budget: **25 K euros**.
- **Official:** unfinished project, political reason.

PITNEY BOWES SOFTWARE INC. - MAPINFO GIS CORPORATION

- **November 2003:** Geomatics Research Project (GIS) - with the company Claritas (Map Info) updated (PBS). Integration study of a mathematical model and geographical environment in Geographical Information System (GIS).
- **Official:** unfinished project: business reason.

SCIENTIFIC, ECONOMICAL AND INDUSTRIAL PROMOTION

RESEARCH VALORISATION - INNOVATION PROTECTION

- **September 2016:** Protection of programs, POLESAT project, in progress, health research direction (**DRS**) of Lille University Hospital.
- **2013: PiNoKio puppet** → Registered Trade Mark: Trade or Service (by Anne Quesnel). **INPI** N°13/4005791
- **2003:** Registered Trade Mark, **IDDN-FR.001.090019.000.R.P.2003.000.30000/**
- **2002:** Protection by **sealed envelopes**: two SOLEAU envelopes with a deposit numbers of 148736 and 148737 at the French National Industrial Property Institute (**INPI**). Methodology and main results of the modeling spatial processes of hospital utilization of Health Services.

RESEARCH VALORISATION - OPEN-SOURCE PORTAL - GITHUB

Definition: A GitHub platform is a web-based Git repository hosting service. <https://en.wikipedia.org/wiki/GitHub>

- **8 May 2016** : File of thesis, with MatLab source code of POLESAT, model in hematology and traumatology :
- **link** : https://github.com/drfrangipane/PoleSat_2016

EXPERT ASSESSMENT - CONSULTANT

MARS 2016 – CONSULTANT (AVERROES GROUP)

- **Consultant:** methodology proposal of geographical definition of territory hospital groups (**GHT**).
- **Partner:** Patrick LEJEUNE, Health Manager, Prof. Jean-Pierre JOUET, Consultant as hematology expert (Non achieved project).

2016 – CONSULTANT (SOFT-TELEMONITORING - MONTPELLIER)

- **Consultant:** 3D health geomatics, sport and well-being.
- **Partner:** Thierry PAGES, General Director of Soft Telemonitoring Services, Pignan - Montpellier, France.

2015 – CONSULTANT (LIVEINSPORT - MONTPELLIER)

- **Consultant:** 3D health geomatics, sport and well-being.
- **Partner:** Thierry PAGES, General Director of LiveinSport Services, Pignan - Montpellier, France.

2011 - 2014 – CONSULTANT (CR2I - MONTPELLIER)

- **Consultant** for the industrial, innovation research center (**CR2I - Kyomed**)
- Internal development study of the geomatics platform and health services

- **Partners:** Thierry PAGES, Daniel LAUNE, Montpellier, France.

2006 - CONSULTANT (BERCK-SUR-MER HOSPITAL)

- **Consultant** for the Berck-sur-Mer hospital, Nord - Pas-de-Calais, France.
- **Partner:** Head of Berck-sur-Mer's medical informatics service.
- **Geomatics service:** Designing and producing of updated base maps of Nord - Pas-de-Calais and Picardie regions, which are renamed Haut-de-France Region.

2004 – CONSULTANT – ARH: UPDATED HEALTH REGIONAL AGENCY (ARS))

- **Consultant, geomatics services:** proximity zones definition & mapping services at different scales carried out for the Regional Hospitalization Agency (ARH) in the framework of 3rd generation SROS.
- **Participation** as geographer expert to the 3rd generation of health management at variable geometry (MSGV), ARH.

1999-2000 – CONSULTANT (SROS OF CLINIC HEMATOLOGY)

- **Consultant:** Scheme of regional sanitary organization (SROS) of clinical hematology:
- **Participation** to the SROS as expert.

2001 - 2003 BETA-TESTER (TOULOUSE III UNIVERSITY)

- **Consultant:** geomatics, **beta-tester** on SCAP mapping software (author: Laurent JEGOU).

2001 – 2003 - BETA-TESTER (LILLE UNIVERSITY HOSPITAL)

- **Consultant:** geomatics, **beta-tester** on CapGemini mapping software editor.

1999 - 2002 – CONSULTANT (COREDIM)

- **COREDIM:** Regional association of medical information departments (**DIM**) of the Nord-Pas-de-Calais region, updated in 2016: Haut-de-France region.
- Web-animation of the « Health Geography » section on intranet website of **COREDIM**.
- **Consultant, data manager:** hospital data base treatments for mapping.

THESIS & ACCREDITATION TO SUPERVISE RESEARCH (HDR)

I attended several thesis defenses and accreditation to supervise research (HDR).

ACCREDITATION TO SUPERVISE RESEARCH (HDR)

Computer sciences & geographic information & mapping visualization & social sciences

- **May 2016,** David CHAVALARIAS, Reconstruction and modeling of the social dynamics and of cultural evolution: one major development of Humanities and Social Sciences of the XXI century. **HDR** defense: Complex system institute (ISC-PIF), Paris.
- **November 2015:** Sandro BIMONTE, Data warehousing and online analysis of spatial data: applied on agri-environmental data, **HDR**, IRSTEA. Computer Sciences, France. HDR defense: Clermont-Ferrand, France.
- **March 2014:** Sébastien MUSTIERE, integration of geographic data, **HDR**, Paris-Est University, Science and Geographic Information Technologies. *French national mapping agency (IGN); object design and generalization of topographic information laboratory (COGIT); national school of geographic sciences (ENSG)*. HDR defense: ENSG, Paris, France.
- **February 2014:** Paule-Annick DAVOINE, Geomatics contributions to the Natural Risk Management. Modeling, geo-visualization, acquisition, computer sciences, **HDR**. Team: Steamer. HDR defense: **Grenoble University**, France.

Medical sciences

- **March 2013,** David SEGUY, Screening, diagnosis and care to the malnourished patients or at risk of under-nutrition. **HDR**, medicine, Lille II University. Thesis defense: Lille II University, France.

THESIS**Computer sciences & geographic information & mapping visualization**

- **October 2015**, Arnaud GRIGNARD: Visualization models based on agents, Research Institute and Development (IRD), computer sciences Thesis, (IRD), thesis defense: Pierre & Marie Curie, Paris 6, Jussieu University, Paris 6, France.
- **July 2015**: Jean-Paul KASPRZYK, Integration of spatial continuity in the multi-dimensional structure of a raster SOLAP data warehouse. Geography, Computer sciences Thesis. Thesis defense, Liège, Belgium.
- **June 2015**: Bin YANG, *Memory Island: Visualizing Hierarchical Knowledge as Insightful Islands*. Computer sciences Thesis. Thesis defense: Pierre & Marie Curie, Paris 6, Jussieu University, France.
- **2008**, Bahman SOHEILIAN, 3D Roadmark reconstruction from stereo-image couples from vehicle-mobile mapping system and its application in centimeter accuracy positioning in urban areas. Photogrammetry (3D), computer sciences Thesis, Paris-Est University /MATIS- IGN, thesis defense: IGN, Paris, France.

SCIENTIFIC AND PROFESIONAL SEMINARIES

I attended and I evolved several scientific and professional meetings

HUMAN & SOCIAL SCIENCES

- **May 2015**: participating meeting. Area of research: "Health territories", organized by the scientific team: interdisciplinary field of territory sciences (CIST), Paris, France.
- **May 2015**: Tuesday seminar of IRDES. Social inequalities in health and immigration: obesity immigrants in France and Spain, Dourgnon P, Y. Moullan (IMI University – Oxford), Paris.

GEOMATICS, ARTIFICIAL INTELLIGENCE, OPERATIONAL RESEARCH**Geomatics**

- **2013-present**, attending annual meetings: "Geom@tice days" organized by Pascal Barbier, ENSG, Marne-la-Vallée, Paris region.
- **December 2015**: attending meeting: Geomatics: crafts & competences, research, vocational training, AgroParisTech, AFIGEO - Paris.
- **November 2015**: Roundtable: Geo- Business-Intelligence, its challenges and future prospects, National Conservatory of Arts and Crafts (CNAM), French Grandes Ecoles ENSG & Ponts, Paris, **Meeting place**: Paris-CNAM.
- **November 2015**: « INSPIRE day: Data sharing resulting from territorial reform policy, national commission of geographic information (CNIG), Place: Paris.
- **March 2015**: involved meeting & workshops, as PPIGE referent. "BANO Tour open-data days", organized by the Nord-Pas-de-Calais region (PPIGE), the French national mapping institute IGN, La Poste & Etalab.
- **March 2015**: attending meeting: SILAT day of geomatics and intelligent territories, AgroParisTech-Engref & Montpellier SupAgro.
- **March 2015**: attending meeting 24th Research Days IGN, ENSG, Marne-la-Vallée, Paris region.
- **2014**: involved meeting (presentation) and workshop, FOSS4G-FR, ENSG, Paris.
- **November 2014**: attending meeting, "INSPIRE's Directive: assessment for fresh impetus, CNIG, Paris.
- **2014**: attending meeting, Quality and data sharing, SupAgro, Montpellier.
- **2014**: attending meeting 23rd Days of research IGN, ENSG, Marne-la-Vallée, Paris region.
- **2013**: attending colloquium "SIG la Lettre" on GIS scientific activity & involving workshop: Qgis workshop, ENSG, Champs-sur-Marne, Paris region.
- **June 2013** : attending meeting, Francophone Open-source Geomatics (FROG) Day , IGN, Saint-Mandé, Paris
- **2013 & 2014**: attending meetings Days of the French national mapping institute (IGN), Saint-Mandé, Paris.
- **2012**: attending colloquium: "SIG la lettre", geomatics days, ENSG, Champs-sur-Marne, Paris region.
- **2012**: involving workshop: PostgreSQL PostGIS, Oslandia, ENSG, Champs-sur-Marne, Paris region.

Geomatics (non-academic)

- **April 2015:** involved workshop, Open Day Isogeo, collaborative platform for geographic data management, **ISOGEO**, Paris.
- **2014:** attending meeting, Workshop: Automatic inventory maps and data (**Talend, GeoNetwork**), Paris.
- **2013 :** attending meeting Research Seminar for users, **Exelis, ENVI**-editor, Paris
- **2012 :** Geomarketing days, to a new tectonic of territories, Paris
- **2004-2005:** "GEO événement", geo events, the 15th and 16th European Meeting of geomatics, Paris

Medical informatics & Operational research & Artificial intelligence

AFIA, MCDA, ROADEF, EGC

- **October 2016:** Attending meeting: **PDIA Day 2016**, Future prospects and Challenges of artificial intelligence (AI). Scientific theme: "Social Impact of the AI", French association of AI (**AFIA**), France. **Meeting Place**: Paris.
- **October 2015:** Attending meeting: **PDIA day 2015**, for the Promotion and Development of Artificial Intelligence: Theme: Learning, French association of AI (**AFIA**), Paris Dauphine.
- **June-July 2015:** Attending colloquium: The days of Artificial Intelligence platform, **AFIA** colloquium, Rennes.
- **March 2015:** Attending meeting: The 81st meeting of the European working group (**EWG**) on multicriteria decision aiding (**MCDA**), University of Savoie & **Polytech Annecy-Chambéry**.
- **2014:** Attending meeting: e-Health day: complex data-mining & massive data-mining & Health", **GDR STIC-Santé**, **EGC & AFIHM**, Lille 2 University.
- **25-27 February 2015:** evolving colloquium (presentation): **ROADEF**, Marseille, <http://roadef2015.lsis.org/articles/148.pdf>
- **February 2014:** attending colloquium: **ROADEF**, Bordeaux, France.

ISC-PIF & LIMICS & PDIA

- **October 2014,** involving meetings (presentation): medical informatics, **laboratory of LIMICS**, Les Cordeliers- Paris.
- **May 2014:** attending meetings: medical informatics, **laboratory of LIMICS**, Les Cordeliers- Paris.
- **2013-2014:** attending meeting, Social and human sciences meeting, **ISC-PIF**, Paris.
- **May 2014:** attending meeting, Day of inauguration, new premises of the **ISC-PIF**, March, Paris.
- **February 2016:** involving meeting, JEDI Workshop, training, Open Mole day, **ISC-PIF**, Paris. <https://iscpif.fr/allservices/formationsjedi/>
- **June 2016:** involving meeting, JEDI Workshop, training, Text mining day, **ISC-PIF**, Mars, Paris. <https://iscpif.fr/allservices/formationsjedi/>

STATISTIC / COMPLEXES SYSTEMS

Bayesian statistics meetings (<http://genome.jouy.inra.fr/applibugs/applibugs.rencontres.html>)

- December **2016:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, Paris
- June **2016:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, **Lyon**.
- December **2015:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, Paris
- June **2015:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, Paris
- **November 2014:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, Engref-Paris & CNRS, Montpellier.
- **June 2014:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, Engref-Paris & CNRS, Paris
- **December 2013:** attending meeting, AppliBUGS, bi-semesterial meeting on bayesian statistics, Engref-Paris & CNRS, Paris.

IRDES meetings <http://www.irdes.fr/recherche/seminaires-les-mardis-de-l-irdes-en-economie-de-la-sante.html>

- **29 May 2015:** attending meeting: use of Markov chains (semi-Markov) for the treatment pathway analysis presentation of Saint-Pierre P (assistant professor-Paris VI), in Tuesdays from **IRDES**, Paris.

INSEE meetings

- **2015:** attending meeting: Seminar Statistics and Geography, **INSEE**, Paris.

MEMBERSHIP OF LEARNED SOCIETIES, PROFESSIONAL BODIES

SCIENTIFIC ASSOCIATIONS

- Member (Geographic information association (**AFIGEO**))
- Member & elected secretary in 2016 (Open Source Geospatial France (**OSGEO-FR**))
- Member (French National Committee of Geography (**CNFG**))
- Ancient member (Association of American Geographers association (**AAG**)).
- Member (Artificial Intelligence association (**AFIA**))
- Member (Operational research and decision making association(**ROADEF**))
- Member (International Francophone association of knowledge management and retrieval (**EGC**))

OTHER PROFESSIONAL CONTACTS: TEAMS & WORKSHOPS

- Complex systems Institute of Paris Ile de France (**ISC-PIF**).
- Methods and Applications for Geographic Information Systems - GIS (**GDR- Magis**)
- Management and spatio-temporal data analysis (**GAST workshop**)

SCIENTIFIC PUBLICATIONS

- Around **90 published articles** in: chapter in books, journals, conference proceedings, science popularization AND presentations, posters, workshops AND competitions

PAPERS UNDER REVIEW (1)

- 1) A Quesnel, F Dufosse, R Beuscart, A Hansske "Health Geomatics: decision support for innovative management", **medical informatics and decision making journal** (submitted September 2016).

BOOK & CHAPTERS IN BOOKS (5)

- 1) A. Quesnel-Barbet, B. Aublet-Cuvelier, P-J. Thumerelle, R. Beuscart, **2004** "Geography of of Spatial Utilization of Health Services in the Nord - Pas-de-Calais Region: a Newtonian modeling of hospital catchment areas *"l'Géographie des pratiques spatiales hospitalières dans la région Nord-Pas-de-Calais: un modèle gravitaire de calcul d'aires d'attractions hospitalières"*, p. 3-15. in **Réseaux de soins, Télémedecine, Applications médicales sur Internet/Intranet**, eds. P. Dégoulet, M. Fieschi, Paris: **Springer Verlag**
- 2) A. Quesnel-Barbet, **2002** "Geography of spatial utilization of the health services in the Nord - Pas-de-Calais region: a Newtonian modeling of hospital catchment areas", number 3215G, pp 34. In **Thesis synoptic eds.** Lille University of Sciences and Technologies (USTL), France. <https://ori-nuxeo.univ-lille1.fr/nuxeo/site/esupversions/14db0958-52a4-4baf-9540-37e3aaf81482>
- 3) Anne Quesnel-Barbet, **2002** "Geography of spatial utilization of the health services in the Nord-Pas-de-Calais region: a Newtonian modeling of hospital catchment areas"*Géographie des pratiques spatiales hospitalières dans la région Nord - Pas-de-Calais: un modèle gravitaire de calculs d'aires d'attractions hospitalières* / Thesis, ref 02LIL10147, social and human sciences: in **Thesis catalog of Lille University of Sciences and Technologies (USTL)**, Villeneuve d'Ascq, p.649, France. <https://tel.archives-ouvertes.fr/tel-00009622>
- 4) A. Quesnel, F. Bauters, H. Picheral, R. Beuscart, B. Quesnel **1999**, "Morbidity Approach on Clinical Hematology in the Nord – Pas –de-Calais Region, with the medical information system program (PMSI) / *Approche de la morbidité en hématologie clinique en région Nord - Pas-de-Calais au moyen du Programme de Médicalisation des Systèmes d'Information (PMSI)* In **Days of French Hematology Society (SFH)**, Hematology, March, eds. **John Libbey Eurotext**, volume 5, special issue: (283) pp. 172, Paris, France.
- 5) A Quesnel., B Quesnel., F Bauters., E Vigneron., R Beuscart **1998** « Health geography and health care planning with the PMSI information system - 'American DRGs' », Volume 10: '**Computing and Health**', pp. 98 – 106, In **Health and Computing Network**, Eds. P. Degoulet, M. Fieschi, **Springer Verlag**, Paris, France. <http://www.cybermed.jussieu.fr/Broussais/InforMed/InforSante/Volume10/Volume10.html>

INTERNATIONAL REFEREED PAPERS (5)

- 1) Quesnel A, Soula J, Dufosse F, Beuscart R, POLESAT an Innovative e-Geoplatform in Health Management. **Journal of Studies in health technology and informatics**, **225**, 907-908, 2016. **Pubmed**. <https://www.ncbi.nlm.nih.gov/pubmed/27332403>
- 2) Quesnel A, Soula J, Dufosse F, Beuscart R, POLESAT an Innovative e-Geoplatform in Health Management. **Journal of Studies in health technology and informatics**, **225**, 791-792, 2016. **Pubmed**. <https://www.ncbi.nlm.nih.gov/pubmed/27332343>
- 3) Anne Quesnel-Barbet, J. Soula, F. Dufosse, N. Sharma, A. Ruhela, R. Beuscart. POLESAT, an innovative e-health geomatics platform in decision-making based on: Geographical approach, medical knowledge visualization and geographic information system & web-mapping architecture (Original Research Article), **Journal of BioMedical Engineering and Research (IRBM)** 34(4-5), pp. 267-273, 2013. (**open-access journal**), http://www.academia.edu/5859136/POLESAT_an_innovative_e-health_geomatic_platform_in_decision-making_based_on_Geographical_approach_medical_knowledge_visualization_and_geographic_information_system_and_web-mapping_architecture
- 4) Anne Quesnel, J. Soula, K. Wyndels, R. Beuscart. POLESAT: e-Atlas of Health, Planning and Sustainable Development, **BioMedical Engineering and Research (IRBM)**, Doi: 10.1016/j.irbm.2009.05.005, Eds. Elsevier Masson SAS, 30 (4) pp. 201-204, May 2009. (**open-access journal**) <http://www.em-premium.com/article/226573/>
- 5) Anne Quesnel-Barbet, Marie-Christine Nuttens, Bruno Aublet-Cuvellier, Henri Warembourg, Alain Prat, Pierre Jean Thumerelle, Regis Beuscart, "Modelling a regional reorganization of cardiovascular surgery provision", **Health and Place**, DOI: 10.1016/j.healthplace.2004.06.007, n° 11, p. 283-292, 2005. **Pubmed**. <https://www.ncbi.nlm.nih.gov/pubmed/15774334>

NATIONAL REFEREED PAPERS (4)

- 1) Anne Quesnel-Barbet, François Dufosse, Marc Souris, David Delerue, Arnaud Hansske, Geomatics in health and applications in the north of France / *Géomatique en santé et applications dans le nord de la France*. **Biomédical – Pharma | Technologies biomédicales. Techniques de l'Ingénieur**, Paris. Ref Med4000 V1. pp. 1-41, June 2016. https://www.researchgate.net/publication/308359965_Geomatics_in_health_and_applications_in_the_north_of_France_Geomatique_en_sante_et_applications_dans_le_nord_de_la_France
- 2) Anne Quesnel-Barbet, François Dufosse, David Delerue, Arnaud Hansske. Geomatics in health : innovations, visualization and modeling of sanitary and geographic informations / *Géomatique en santé : innovations, visualisations et modélisations des informations géographiques et sanitaires*. Hospital of the future / *L'hôpital du futur*, **Gestions Hospitalières**, n° 555, p233-238, April 2016. <http://www.gestions-hospitalieres.fr/fr/article/geomatique-en-sante>
- 3) Anne Quesnel. Health geography modeling : a decision making tool / *La modélisation en géographie de la santé, outil d'aide à la décision*, **Synergie Journal - University of Lille II : Law & Health**. p. 6-9. Winter term, 2006.
- 4) Anne Quesnel-Barbet, M.C. Nuttens, B. Quesnel, H.A. Hansske, P.J. Thumerelle, R. Beuscart. Health geography and the PMSI at the Lille University Hospital / *La géographie de la santé et le PMSI au CHRU de Lille*, **Gestions Hospitalières**, n°. p417 : 457-459, June-July 2002.

INTERNATIONAL REFEREED CONFERENCE PROCEEDINGS (16)

- 1) A Quesnel, J Soula, F Dufosse, R Beuscart. "POLESAT: an innovative e-geoplatform in health management. Panels and Workshops: demonstration, **Proceedings of the 13th Nursing Informatics (NI) 2016 Geneva, theme: eHealth for all**, pp 791-792, June 25th –29th, Eds. W. Sermeus et al. IMIA and IOS Press (Open Access), doi:10.3233/978-1-61499-658-3-791. **Geneva-Switzerland 2016**.
- 2) A Quesnel, J Soula, F Dufosse, R Beuscart. "POLESAT: an innovative e-geoplatform in health management. Ehealth: poster-presentation, **Proceedings of the 13th Nursing Informatics (NI) 2016 Geneva, theme: eHealth for all**, pp 907-908, June 25th –29th, Eds. W. Sermeus et al. IMIA and IOS Press (Open Access), doi:10.3233/978-1-61499-658-3-907, **Geneva-Switzerland 2016**.
- 3) A. Quesnel, S. Corm, A. Leroyer. Regional Geo-epidemiology of chronic myeloid leukaemia (CML) in the Nord – Pas-de-Calais region : spatial & spatio-temporal analysis (18 years) / *Géo-épidémiologie régionale des leucémies myéloïdes chroniques (LMC) dans le Nord – Pas-de-Calais : analyses spatiale et spatio-temporelle sur 18 ans*. **Proceeding of the 1st Health and Space international colloquium**, September, **Marseille, France 2010**
- 4) A. Quesnel, J. Soula, R. Beuscart. e-Atlas of Health, Planning and Sustainable Development: for information society development. **Proceedings of the Spatial Analysis and GEomatics Colloquium (SAGEO)**, 25th & 26th November **Paris, France 2009**. http://sageo09.univ-pau.fr/index.php?option=com_content&view=article&id=53&Itemid=58

- 5) A. Quesnel, J. Soula, R. Beuscart. e-Atlas of Health, Planning and Sustainable Development. **Proceedings of the 16th European Colloquium on Theoretical and Quantitative Geography (ECTQG => ECQTG09)**, 4th - 8th September, Maynooth, Ireland, 2009.
- 6) A. Quesnel, J. Soula, R. Beuscart. e-Atlas of Health, Planning and Sustainable Development. **Proceedings of the IADIS e-Health 2009 - Multi Conference on Computer Science and Information Systems (MCCSIS)** 21st-23rd June, Algarve, Portugal 2009.
- 7) A. Quesnel-Barbet, e-Atlas of Health, Planning and Sustainable Development for Information Society Development. **Proceedings of the 14th European Colloquium on Theoretical and Quantitative Geography ENRGHI'09**, 6th -7th April, **Durham University, UK, 2009**.
- 8) A. Quesnel-Barbet, Geography of spatial utilization of the health services: a Newtonian modelling of hospital catchment areas. **Proceedings of the 14th European Colloquium on Theoretical and Quantitative Geography ENRGHI'09**. 6th -7th April 2009 **Durham University, UK, 2009**.
- 9) A. Quesnel-Barbet, A Mathematical model for hospital attraction area, geography of spatial utilization of the health services: a Newtonian modeling of hospital catchment areas, **Proceedings of the 15th European Colloquium on Theoretical and Quantitative Geography (ECTQG'07)**. 7th -11th September, **Montreux, Switzerland 2007**, (CD-ROM support).
- 10) A. Quesnel-Barbet, P-J. Thumerelle, R. Beuscart. E-Health GIS and sustainable development: POLESAT, Geography of spatial utilization of the health services: a Newtonian modeling of hospital catchment areas / *Modélisation des pratiques spatiales hospitalières: POLESAT ou e-SIG Santé décisionnel pour le management et le recours aux soins*. **Proceedings of the Spatial Analysis and GEOMatics (SAGEO) 2005**, 20 - 23 June, **Avignon, France, 2005**.
- 11) A. Quesnel-Barbet, B. Aublet-Cuvelier, P.J. Thumerelle, R. Beuscart. *Geography of spatial utilization of the health services : a Newtonian modeling of hospital catchment areas*, **Proceedings of the 11th world congress of medical informatics Medinfo 2004**, Eds. Marius Fieschi, Enrico Coiera and Yu-Chan Jack Li, **IOS press, IMIA**, part 1, September, **San Francisco, California, USA. 2004**.
- 12) A. Quesnel-Barbet, P-J Thumerelle, R. Beuscart. Géographie des pratiques spatiales hospitalières : modélisation des aires d'attractions hospitalières pour une meilleure politique de santé, **Proceedings of the Geomatics 2004**, October University Laval, **Montreal, Canada 2004**. <http://www.geomapgis.ca/geomatique/2004/>
- 13) A. Barbet-Quesnel, A. Cuvelier P-J. Thumerelle, R. Beuscart. Geography of spatial utilization of the health services in the Nord - Pas-de-Calais Region: a Newtonian modeling to the health care management / Géographie des pratiques spatiales hospitalières dans la région Nord – Pas-de-Calais : un modèle gravitaire de calcul d'aires d'attraction hospitalière pour la planification sanitaire, **Proceedings of the Journées Francophones en Informatique Médicale (JFIM) September, Tunis, Tunisia 2003**. <http://www.stim.org/jfim2003/>
- 14) A. Quesnel-Barbet, A. Duhamel, B. Quesnel, P.J. Thumerelle, R. Beuscart. *A mathematical model of hospital attraction area* ». **Proceedings of the world congress of medical informatics Medinfo 2001**. Eds. V. Patel et al. Amsterdam: IOS Press, © 2001 IMIA. All rights reserved, October, **London, UK. 2001**.
- 15) A. Quesnel, B. Quesnel, F. Bauters, E. Vigneron, R. Beuscart. Health geography and health care planning with the PMSI information system - 'American DRGs' / *la géographie de la santé et la planification sanitaire avec le système d'informations médicales*. **Proceedings of Journées Francophones en Informatique Médicale (JFIM)**, April, **Liège, Belgium, 1998**.
- 16) Quesnel, B. Quesnel, H. Picheral, R. Beuscart. *Town and country planning with a medical information system*. **Proceedings of the IXth world congress of medical informatics Medinfo'98**, August, **Seoul, Korea, 1998**

INTERNATIONAL REFEREED CONFERENCE WITHOUT PROCEEDINGS (1)

- 1) A. Quesnel, J. Soula, R. Beuscart. POLESAT: e-atlas of health, planning & sustainable development / POLESAT e-Atlas Santé, Planification et Développement Durable, **19th International festival of geography (FIG). Competition & workshop: Participation to the demonstration and display of the dynamics mapping 'Geovisualization & dynamics mapping session' – October, Saint-dié-des-Vosges, France, 2008**. <http://www.reseau-canope.fr/fig-st-die/archives-ancien-site/2008.html>

NATIONAL REFEREED CONFERENCE PROCEEDINGS (12)

- 1) A. Quesnel-Barbet, I. Crévits, S. Hanafi. Decision making tools : e-geo-platform in health of innovative management / *Outils d'aide à la décision: e-géoplateforme en santé du management innovante*. **Proceedings of ROADEF colloquium, presentation, 25th -27th february Marseille, France, 2015**. <http://roadef2015.lsis.org/articles/148.pdf>
- 2) A. Quesnel-Barbet, J. Soula, F. Dufosse, R. Beuscart. POLESAT, an innovative geo-platform of ehealth, for decision making / *POLESAT, une innovante géo-plateforme de e-santé, pour l'aide à la décision*. **Proceedings of**

CEDETE colloquium: Geomatics and mapping: a prospective vision, Poster, oral presentation, July, **Orléans, France, 2014.**

- 3) A. Quesnel-Barbet, J. Soula, F. Dufosse, R. Beuscart. POLESAT : an innovative geo-platform of ehealth for decision making / *POLESAT : une innovante géo-plateforme de e-santé pour l'aide à la décision*. (online access) **Proceedings of FOSS4G-FR**, ENSG, presentation, 20-22 May, **Paris, France 2014.** https://osgeo-fr.github.io/presentations_foss4gfr/2014/J2_B_16_00_POLESAT_GEO_PLATEFORME_INNOVANTE_E_SANTE_AIDE_DECISION_CHRU_LILLE/foss4gfr_2014_polesat_quesnel.pdf
- 4) A. Quesnel, J. Soula, F. Dufosse, N. Sharma, A. Ruella, R. Beuscart. POLESAT : an ehealth geomatics platform / *POLESAT: plate-forme géomatique en santé*. **Proceedings of Imagery and technology research days (RITS)**, April, **Bordeaux, France, 2013.**
- 5) A. Quesnel, J. Soula, K. Wyndels, R. Beuscart. POLESAT: e-Atlas of health, Planing & sustainable development / *POLESAT: e-Atlas de santé, Planification et développement durable* **Proceedings of Imagery and technology research days (RITS)** / Journées de Recherche en Imagerie et Technologies (RITS)/, 18th - 20th March, *Poster*, **Lille II, France, 2009.**
- 6) A. Quesnel, R. Beuscart. New challenges in the 21st century: Hospitals Facilities Base map in the Nord-Pas-de-Calais region, Supervision of hospitals in Northern France and Belgium in the XIIIe-XXe centuries. Continuity and Ruptures, **Proceedings of the history of the Belgium and the northern of France's Hospitals between XII-XXIe centuries**, March 31th, **Amiens, France, 2006**
- 7) A. Quesnel-Barbet, P-J. Thumerelle, R. Beuscart. Geography of spatial utilization of the health services in the Nord - Pas-de-Calais Region: a Newtonian modeling of hospital catchment areas / *Géographie des pratiques spatiales hospitalières dans la région Nord - Pas-de-Calais: un modèle gravitaire des aires d'attraction hospitalière*. **Proceedings of Géopoint- Groupe Dupont**, June, **Avignon, France 2004.**
- 8) A. Quesnel-Barbet, P.J. Thumerelle, R. Beuscart. Aires d'attraction hospitalière et modélisation, vers un modèle général pour la planification sanitaire. **Proceedings of the Days of Public Health / Journées de Santé Publique**, January, **Lille, France, 2002.**
- 9) A. Quesnel, M.C. Nuttens, H. Warembourg, A. Prat, P.J. Thumerelle, R. Beuscart. **Modeling a regional reorganization of cardiovascular surgery provision** / Modélisation de l'impact sur les structures sanitaires existantes de l'implantation d'un service de chirurgie cardio-vasculaire. **Proceedings of EMOIS-99 days, XIIth national colloquium**, March, **Nancy, France 1999.**
- 10) A. Quesnel, F. Bauters, H. Picheral, R. Beuscart, B. Quesnel "Morbidity Approach on Clinical Hematology in the Nord - Pas -de-Calais Region, with the medical information system program (PMSI)/ *Approche de la morbidité en hématologie clinique en région Nord - Pas-de-Calais au moyen du Programme de Médicalisation des Systèmes d'Information (PMSI)*, **Proceedings of French Hematology Society days (SFH)**, March, **Paris, France, 1999.**
- 11) A. Quesnel, B. Quesnel, F. Bauters, R. Beuscart. Health geography for health care management with medical information system (DRGs) / *La géographie de la santé dans le cadre de la planification sanitaire avec le système d'informations médicales*. **Proceedings of des EMOIS-98 days, XIth national colloquium**, May, **Nancy, France, 1998.**
- 12) A. Quesnel, B. Quesnel, F. Bauters, H. Picheral, R. Beuscart. « Morbidity Approach on Clinical Hematology in the Nord - Pas -de-Calais Region and the PMSI Information System (American DRGs) / *Approche de la morbidité en hématologie clinique en région Nord - Pas-de-Calais et le Programme de Médicalisation des Systèmes d'Information (PMSI)*, **Proceedings of Vth colloquium of geography and socio-economy of the health geography (CREDES)**, n°1242, April, **Paris, France, 1998.**

NATIONAL REFEREED CONFERENCE WITHOUT PROCEEDINGS (1)

- 1) A. Quesnel, D. Delmotte, R. Beuscart. Clinical hematology in the Nord - Pas-de-Calais region: example of the regional attraction of the Lille University Hospital / *Hématologie clinique en région Nord - Pas-de-Calais : exemple de l'attraction régionale du CHRU de Lille*, Regional Sessions of health colloquium / colloque des *Sessions régionales de la santé*, **Invited speaker with Didier DELMOTTE hospital manager**, November **Valenciennes, France, 1997**

OTHERS PRESENTATED PAPERS & POSTERS & COMPETITION AT PROFESSIONAL MEETINGS (12)

- 1) A Quesnel, J Soula, F Dufosse, R Beuscart. "POLESAT: an innovative e-geoplatform in health management. **NI2016GENEVA**, **Poster - oral presentation**. June, **Geneva, Switzerland, 2016,**
- 2) A Quesnel-Barbet, R Beuscart. Geography of spatial utilization of the health services: A Newtonian modeling of hospital catchment area, **Multicriteria Analysis & Operational Research (MCDA) School**, **Poster session**, May, **Perugia, Italy, 2014.**

- 3) A Quesnel-Barbet "ICT and Health" quantitative geography and health geomatics: from human geography to medical informatics IT / *TIC et Santé* » *Géographie quantitative et géomatique en santé: de la géographie humaine à l'informatique médicale* Medicine and technologies of information and communication (METIC) meeting, Universities of Montpellier 1 & 2, "TIC et Santé sud de France", **oral presentation**, November **Montpellier, France, 2011**.
- 4) A. Quesnel, J. Soula, K. Wyndels, R. Beuscart. POLESAT: e-Atlas of health, Planing & sustainable development. *POLESAT: e-Atlas de santé, Planification et développement durable.*, GIS-2012 colloquium organized by ESRI-France, **Poster session & competition**, **Versailles, France 2012**.
- 5) A. Quesnel. New challenges in the 21st century: Hospitals Facilities Base map in the Nord-Pas-de-Calais region, Supervision of hospitals in Northern France and Belgium in the XIIe-XXe centuries. Continuity and Ruptures / *Les nouveaux défis du XXIe siècle. Hôpitaux et Carte Sanitaire du Nord – Pas-de-Calais. L'encadrement des hôpitaux dans la France du Nord et en Belgique du XIIe au XXe siècle. Permanences et ruptures. Actes of young researchers in health geography colloquium*, Paris XII University, 23-24 May, **Créteil, France, 2007**.
- 6) A. Quesnel-Barbet, P-J. Thumerelle, R. Beuscart. E-Health GIS and sustainable development: POLESAT, Geography of spatial utilization of the health services: a Newtonian modeling of hospital catchment areas, Géoforum 2005 colloquium, 10 - 11 June, Lille I University (USTL), **Poster session**, **Villeneuve d'Ascq, France, 2005**.
- 7) A. Quesnel-Barbet, P-J. Thumerelle, R. Beuscart. E-Health GIS and sustainable development: POLESAT, Geography of spatial utilization of the health services: a Newtonian modeling of hospital catchment areas / *Modélisation des pratiques spatiales hospitalières: POLESAT ou e-SIG Santé décisionnel pour le management et le recours aux soins. Spatial Analysis and GEomatics SAGEO 2005*, 20 - 23 June, **Poster - oral presentation**, **Avignon, France, 2005**.
- 8) A. Quesnel-Barbet, B. Aublet-Cuvelier, P.J. Thumerelle, R. Beuscart. *Geography of spatial utilization of the health services: a Newtonian modeling of hospital catchment areas*, **Proceedings of the 11th world congress of medical informatics Medinfo 2004**, **Poster session, presented by Nathalie SOUF**, Eds. Marius Fieschi, Enrico Coiera and Yu-Chan Jack Li, IOS press, IMIA, part 1, September, San Francisco, **California, USA. 2004**.
https://books.google.fr/books?id=bS2xdT7uifgC&pg=PR23&lpg=PR23&dq=medinfo+2004,+September,+San+Francisco,+California,+USA.+2004+poster&source=bl&ots=6RBLBJXUx&sig=NtJrmcGh28xkSeVHi718NpOtZA&hl=fr&sa=X&ved=0ahUKEwirnfiD86_PAhUDthoKHTwKDjQ6AEIMTAH#v=onepage&q=medinfo%202004%2C%20September%2C%20San%20Francisco%2C%20California%2C%20USA.%202004%20poster&f=false
- 9) A. Barbet-Quesnel, R. Beuscart, P.J. Thumerelle. Geography of spatial utilization of the health services in the Nord – Pas-de-Calais region: a Newtonian model of hospital catchment areas. **11th The International Planning History Society (IPHS) July, Barcelona, Spain, 2004**. **Abstract online**, <http://www.planninghistory.org/>
- 10) A. Barbet-Quesnel, R. Beuscart, P.J. Thumerelle. « Geography of spatial utilization of the health services in the Nord-Pas-de-Calais Region / *Géographie des pratiques spatiales hospitalières dans la région Nord – Pas-de-Calais*. **EMOIS-2003, XVI^e national congress**, **Poster session**, March, **Nancy, France, 2003**.
- 11) A. Quesnel-Barbet, A. Duhamel, B. Quesnel, P.J. Thumerelle, R. Beuscart. *A mathematical model of hospital attraction area* ». **Medinfo 2001**. **Poster session**, October, **London, UK. 2001**.
- 12) Quesnel, P.J. Thumerelle, R. Beuscart. Modeling and health care management / *Modélisation et planification sanitaire*. **International Festival of Geography (FIG)**, **Poster session**, October, **Saint-dié-des-Vosges, France, 2000**. http://archives-fig-st-die.cndp.fr/actes/actes_2000/index.htm http://archives-fig-st-die.cndp.fr/actes/actes_2000/quesnel/article.htm
- 13) Quesnel, B. Quesnel, H. Picheral, R. Beuscart. *Town and country planning with a medical information system*. IXth world congress of medical informatics Medinfo'98, **Poster session**, **presented by Nathalie SOUF of CERIM, associate professor**, **August 1998, Seoul, Korea**.

OTHER PROFESSIONAL MEETINGS - INFORMATION & SCIENTIFIC POPULARIZATION ACTIONS (20)

- 1) Quesnel Anne, Hansske Arnaud.: **Interview in November 2015 for Decryptagéo: geographic information (online journal) and published article in January 2016**, Good geo-health: Statistical mapping and geomatics have become inescapable aids for health professionals. Exploring the latest developments / *Bonne géo-santé: cartographie statistique et géomatique sont devenues des aides incontournables pour les professionnels de la santé. Exploration des dernières évolutions*. **France, 2016**
- 2) Rémi Bruyère, A. Quesnel, Cristian Preda, Geo-epidemiology of meningitis in France: methods and applications in spatial statistics and geomatics / *Géo-épidémiologie de la méningite en France: méthodes et applications en statistiques spatiales et géomatiques*, **Professional meeting: presentation of internship results** French Institute for Public Health Surveillance (InVS) June, **Paris, France, 2015**
- 3) A. Quesnel, **Communication on scientific and published works and the profession of geomatician** / article dédié à la « Géomatique appliquée au domaine de la Santé : recherche et développement »: **Online communication by AFIGEO association**, April **Paris, France 2015**, <http://afigeo.asso.fr/12-news/news/1173-g%C3%A9omatique-appliqu%C3%A9e-au-domaine-de-la-sant%C3%A9-recherche-et-d%C3%A9veloppement.html>

- 4) A. Quesnel, Tools for decision making: innovative e-geoplateform for health management / *Outils d'aide à la décision : e-géoplateforme en santé du management innovante*. **Invited speaker in Research seminar**, Ecole Centrale de Lille, laboratoire CRISAL, OPTIMA Team, 16th April, **Lille, France 2015**.
- 5) A. Quesnel, J. Soula, R. Beuscart. POLESAT: e-Atlas of Health, Planning and Sustainable Development / *POLESAT : e-Atlas Santé, Planification et Développement Durable*. **Journée de Recherche en Santé Publique, invited speaker in Research seminar**, Lille University Hospital, **Décember 2008, Lille**.
- 6) Quesnel Anne The health geography at University Hospital of Lille, modeling in health geography, decision support tools / *La géographie de la santé au CHRU de Lille, modélisation en géographie de la santé, outil d'aide à la décision*. **Interview for the Lille II University Journal and published article in "Synergy"**, p. 6-9, **Winter term, 2006**
- 7) A. Quesnel-Barbet **Invited speaker, research seminar**, Hospital Catchment Area Analysis with Mapping (map model) for the Master2 of "Health System Engineering: information systems, mapping and risk management", Nice Sophia Antipolis University, responsible **STACCINI Pascal** (2004 to 2007)
- 8) A. Quesnel-Barbet. Modeling spatial utilizations of hospital, geography of health care systems / *Modélisation des pratiques spatiales hospitalières et géographie des systèmes de soins*. **Invited speaker, research seminar** for the Master1 (Maîtrise) of health geography, Paris X-XII, Pr Jeanne-Marie AMAT-ROZE, December, **Paris, France 2005**.
- 9) A. Quesnel-Barbet. Modeling spatial utilizations of hospital, geography of health care systems / *Modélisation des pratiques spatiales hospitalières et géographie des systèmes de soins*. **Invited speaker, research seminar** for the Master2 (DEA)) of health geography, Nanterre -Paris X, Pr Jeanne-Marie AMAT-ROZE, December, **Paris, France 2004**.
- 10) A. Quesnel-Barbet. Modèles mathématiques et géographiques pour la planification sanitaire. Modèles d'attractions hospitalières. **Invited speaker, research seminar** for the Master2 (DEA) of health geography, Nanterre -Paris X, directed by Pr SALEM Gérard, December, **Paris, France, 2003**.
- 11) **FORUM HÔPITAL**: Geography of spatial utilizations, a Newtonian model. Proximity zone, attraction areas. / *Géographie des pratiques spatiales. Modèle NEWTON. Proximité aires d'attraction*. **November 2003**. <http://www.medito.com/article.php?sid=490>. (online abstract)
- 12) A. Quesnel. Presentation to the Regional Agency for Hospitalisation (ARH), of a modeling and decision making tool: for health planning / *Présentation à l'Agence Régionale de l'Hospitalisation (ARH) de notre outil de modélisation et d'aide à la planification sanitaire*. **Invited speaker, Professional seminar**, November, **Lille, France 2003**.
- 13) A. Quesnel-Barbet. Information, Communication, Technology and Health (STIC & Health), Geography of Health, Health Geomatics / *STIC et santé, géographie de la Santé, géomatique en santé* : [Géographie de la Santé au CHRU de Lille : projets de recherche axés sur la géographie médicale et la planification sanitaire](#). **Invited speaker** « STIC et santé colloquium ». Lille II University, Faculty of medicine, May 15th **Lille, France, 2003**.
- 14) A. Quesnel-Barbet. Modeling process: spatial utilizations of health services in the Nord - Pas-de-Calais region: a gravity model calculation of hospital catchment areas / *Processus de modélisation : les pratiques spatiales hospitalières en région Nord – Pas-de-Calais : un modèle gravitaire de calcul d'aires d'attraction hospitalières*, **invited speaker research seminar, Actes of « Circle e-Health /Cercle e-Santé »**, Faculty of medicine & Lille II University Hospital, 18th June, **Lille, France 2003**.
- 15) **A. Quesnel-Barbet**. A. Quesnel-Barbet. Modeling process: spatial utilizations of health services in the Nord - Pas-de-Calais region: a gravity model calculation of hospital catchment areas, **invited speaker research seminar, Actes of « Circle e-Health /Cercle e-Santé »**, Faculty of medicine & Lille II University Hospital, 12th Mach, **Lille, France 2003**.
- 16) A. Quesnel, A. Hansske. Communication on thesis results to the regional board of the Hospital Federation of France (FHF). **Invited speaker, Professional meeting**, Lille University Hospital, **March, Lille, France 2002**.
- 17) A. Quesnel-Barbet, P.J. Thumerelle, R. Beuscart. Modélisation des pratiques spatiales hospitalières, en hématologie clinique – région Nord – Pas-de-Calais », **Invited speaker, Research seminar** of CERIM laboratory, **February 2002, Lille**.
- 18) A. Quesnel, B. Quesnel, P.J. Thumerelle, R. Beuscart, Modeling of Hospital catchment areas, in the way to a general model for health planning / *Aires d'attraction hospitalière et modélisation, vers un modèle général pour la planification sanitaire*. Specialties of heamatology & traumatology-orthopedia – total hip prosthesis (PTH), seminar in CERIM laboratory, organised by PREDA Cristian, University of Lille II, **invited speaker** - January , **Lille, France 2002**.
- 19) A. Quesnel, B. Quesnel, P.J. Thumerelle, R. Beuscart. Hospital attraction areas and modeling, towards a general model for health planning, e.g. in clinical hematology / *Aires d'attraction hospitalière et modélisation, vers un modèle général pour la planification sanitaire, exemple en hématologie clinique*. **Invited speaker, Research seminar** of the Geography department of Rouen University, organized by VAGUET Alain, April **Rouen, France, 2001**.

- 20) A. Quesnel, B. Quesnel, P.J. Thumerelle, R. Beuscart. Hospital attraction areas and modeling, towards a general model for health planning. **Invited speaker Research seminar**. Actes of the Ganymède Day: young researchers, **June, Lille, France, 2000.**

PAPERS IN PROGRESS (3)

- 1) **A. Quesnel-Barbet**, A. Leroyer, S. Corm, R. Beuscart, M. Souris. "Geo-epidemiology of Chronic Myelogenous leukaemia (CML) in Northern France (1990-2007): spatial description and modelling of cluster detection".
- 2) P Montoya, R. Beuscart, C. Preda, **A. Quesnel-Barbet**: Geo-epidemiology of meningitis in France: methods and applications in spatial statistics & geomatics.
- 3) S. Soubeyrand, **A. Quesnel-Barbet**, J-J Boreux: A Hierarchical Bayesian Model for probabilistic prediction of periodic counts of the *Neisseria meningitidis* meningitis, *Statistical methods in medical research (SMMR)*, 4e trim 2016.

REPORTS FOR LILLE UNIVERSITY HOSPITAL, GRAY LITERATURE (7)

- 1) **October 2008**: communication campaign.
- 2) **February - June 2004**: Scheme of regional sanitary organization (**SROS**) 3rd generation: definition of new territorial limits (creation of base maps in various scales and in a number of data exchange formats), made for the Health Regional Agency (**ARS**) of Lille, Haut-de-France.
- 3) **Cardiac surgery**: study for hospital directors and other decision makers.
 - ❖ **1999**: analysis of the activity of the Surgical Clinic of cardiovascular diseases
 - ❖ **1999**: modeling the impact on existing health facility (Lille University hospital) after implementation of a new service in the Haut de France region.
- 4) **1998: geomarketing**: Analysis of hospital activity by "Diagnosis related groups (**DRG**)", or "the French **PMSI** system of disease classification: *catégorie majeure de diagnostic CMD*". Study report for members of the Medical Committee of Establishment (**CME**) of the Lille University Hospital.
- 5) **1998**: activity analysis in "Medicine, Surgery and Obstetrics (**MCO**)" for the Medical Establishment Committee.
- 6) **1998**: for the hospital direction (**Managing Director**) report on
 - ❖ 1- The role of geography of Health.
 - ❖ 2- Summary of the regional study on hospital attraction in clinical hematology (adult/pediatrics).
 - ❖ 3- Studies and Research in health geography at University Hospital of Lille.
- **June 1997**: The geopolitics of health: an analysis concept of health geography. Montpellier III University, p24.

OTHERS PRESENTATED STUDIES AND GRAY LITERATURE (4)

- 1) A. Quesnel. **Attraction of heamatology services and healthcare needs for haematological inpatients; an inventory of the regional situation of demand and supply in the Nord - Pas-de-Calais and Picardie regions. A central place theory of christaller?** Human Geography Memory, Master2 - option: spaces, development and health, Montpellier III University, 1997.
- 2) A. Quesnel. **Attraction of heamatology services and healthcare needs for haematological inpatients; an inventory of the regional situation of demand and supply in the Nord - Pas-de-Calais region. A central place theory of christaller?** / *Attraction des services des maladies du sang et recours aux soins des malades hématologiques hospitalisés ; un reflet de la région Nord - Pas-de-Calais. Un modèle CHRISTALLERIEN?* Human Geography Memory Master1, USTL, Villeneuve d'Ascq, France, 1996.
- 3) A. Quesnel., **1- A literature review in health geography: presentation of methodology used** / Une synthèse bibliographique en géographie de la santé, **2- Presentation of the methodology used in the initiation dossier for Research** / *Présentation de la méthodologie employée dans le dossier initiation à la recherche* (DIR), Master1 of Human Geography, USTL, Villeneuve d'Ascq, France, 1996.
- 4) A. Quesnel., **Malnutrition in Ivory Coast, an example of nutritional rehabilitation: the feeding center of the Protestant Hospital of Dabou** / La malnutrition en Côte-d'Ivoire, *un exemple de réhabilitation nutritionnelle*: le centre de nutrition de l'hôpital protestant de Dabou", End memory third year of nursing school, June, La Madeleine, France, 1987.

SUMMARY TABLE OF SCIENTIFIC ACTIVITIES

International Audience	Geography / geomatics	Medical informatics	Interdisciplinary
Journal (5)	Health and Place, Pubmed (2005)	Stud Health Technol Inform, Pubmed (2016) Stud Health Technol Inform, Pubmed (2016)	IRBM (2013) IRBM (2009)
In progress (3)		SMMR, (2016)	Plos 1, (2016) Plos 1 (2016)
Under submission (1)		MIDM, September-october (2016)	
Chapters in books (2)		Health network, telemedicine, Springer Verlag (2004) Computing & health, Springer Verlag (1998)	
Congress + proceedings, actes (17)	Health & Space international colloquium (2010) FIG, St Dié des Vosges (2008) ENRGHI, UK (2009) ENRGHI, UK (2009) ECQTG'09, Ireland (2009) ECTQG'07, Switzerland (2007) SAGEO, Paris (2009) SAGEO, Avignon (2005) Géomatique, Canada (2004)	Nursing Informatics, Switzerland (2016) Nursing Informatics, Switzerland (2016) JFIM, Tunisia (2003) JFIM, Belgium (1998) Medinfo, SF, USA (2004) Medinfo, London, UK (2001) Medinfo, Seoul, Korea (1998)	E-Health-Iadis, MCCSIS Portugal (2009)
Posters / Abstract online (10)	SAGEO, Avignon (2005) SAGEO, Paris (2009) RITS, Bordeaux (2009) FIG, St Dié des Vosges (2000)	NI2016GENEVA, Switzerland (2016) Medinfo, SF, USA (2004) Medinfo, London, UK (2001) Medinfo, Korea (1998)	MCDA, Perugia, Italy (2014) IPHS (2004)
Demonstration (2)	St Dié des Vosges (2008)	NI2016GENEVA, Switzerland (2016)	
Competition participations (3)	AFDG (2011) API géoportail, IGN (2010) Geomatics session, FIG - St Dié des Vosges (2008)		
National Audience	Geography / geomatics	Medical informatics	Interdisciplinary
Journal (4)		Gestion Hospitalière (2016) Gestion Hospitalière (2002)	Synergie, Lille II (2006) Techniques de l'ingénieur (juin 2016)

Book, Chapters in Book (4)	JLE (2008) Thesis catalog, USTL (2002) Synoptic of thesis, Lille I (2002)		SFH, John Libbey Eurotext (1999)
Congress + Proceedings & Actes (14)	FOSS4G-FR, ENSG (2014) Young Researchers, Paris (2007) GEOPOINT, Avignon (2004) CREDES, Paris (1998) CEDETE, Orléans (2014)	RITS, Lille (2009) RITS, Bordeaux (2013) EMOIS, Nancy (1999) EMOIS, Nancy (1998) STIC santé, Lille II (2003)	ROADEF, Marseilles (2015) Histoire des hôpitaux, Amiens (2006) SFH (1999) JSP (2002)
Congress-no actes & professional meeting (2)			SRS valenciennes (1997) InVS, Paris (2015)
Competition participation (1)	GIS – ESRI France (2012)		
Posters / abstract online (5)	CEDETE, Orléans (2014) ESRI, Versailles (2012) Géoforum (2005)	EMOIS, Nancy (2003)	FORUM Hospital (2003)
Scientific popularization actions (5)	AFIGEO, Paris (2015) Decryptagéo, Interview (2015) Synergy, Interview (2006)		ARH, Nord (2003) ARH, Nord (2002)
Invited speaker (24)	Paris X-XII (2005) Paris X (2004) Paris X (2003) Rouen University (2001) GDR MAGIS, Sète (2014)	LIMICS, Paris XIII (2014) Univ SA Nice (2007) Univ SA-Nice (2006) Univ SA Nice (2005) Univ SA Nice (2004) ARH, Lille (2003) Cercle e-santé, Lille II (2003) Cercle e-santé, Lille II (2003) Lille II, May (2003) CERIM, Lille II, (2002) CERIM, Lille II, (2002) STIC & health (2003) Ganymède, Lille (2000)	CRISAL, Lille (2015) METIC, Montpellier (2012) JRSP, Lille II (2008) Forum hospital (2003) JSP, Lille II (2002) FHF, Lille UH (2002)
Research projects	Interdisciplinary		
POLESAT Partners	Fuchs F, Ign, St mandé (2011) Preda C, Lille (2011) Laune D, Kyomed, Montpellier (2011) Hansske A, GHICL, Lille (2014) Dufossez F, CH bethune (2011) Salgues B, IT, Montpellier (2011) Dray G, EMA, Alès (2011) D Lefebvre, UM3, Montpellier (2011) Pagès T, Softelem, Montpellier (2011)	Ranked project “orange” (2011) CR2I, Kyomed, Montpellier	Years : (2006-2014) Versions 1, 2, 3 & 4 (open-source)

GeoBI- SOLAP Plateform (1)	GHICL (France) & University of Liège (Belgium)	International partnership	Contract in progress 2016
Automatisation of POLESAT (1)	Altense consulting Landas- Nord	National partnership	Contract in progress 2016
Health/Sport (1)	LiveInsport - Montpellier	National partnership	Contract in progress 2016
Research valorization – innovation protection (5)	Pantin PiNoKio (2013) PôleSat, Inpi (2003) PôleSat, Inpi (2005) Enveloppe SOLEAU N°1 (2002) Enveloppe SOLEAU N°2 (2002)		