



Università degli Studi  
di Bergamo



Université Laval  
Québec



Ecole Polytechnique  
Fédérale de Lausanne



CODATA-Germany

## International Conference

### Title:

***Cartographic Challenges: movement, participation, risk***

### Period:

April 23rd-24th 2009

The purpose of this conference is to gather different researchers interested in discussing about cartography and its two different aspects: the epistemic one which concerns the communicative role cartography is playing nowadays; and the empiric one which regards the production of maps and their ability to respond to the challenges presented by globalisation. As far as the epistemic aspect is concerned we must consider that computerization and the World Wide Web have undermined the assumptions involved in the creation of maps. This makes us wonder whether we are in front of a crisis of the “cartographic reason” or, rather, in front of a metric metamorphosis, which does not concern its iconizing result. As a matter of fact, the cartographic scenario shows a fragmentation of agencies producing maps and this discourages any claim to intervene technically by coding a multiplicity of languages or existing systems of construction. So, in order to think about the communicative results of multimedia maps, we consider of the utmost importance to define them from a semiotic point of view as hybrid systems. As far as the empiric aspect is concerned, we want to focus on globalisation that has radically changed the areas of communication, ideas, and scientific and artistic culture, making us re-think and re-conceptualise the idea of *space* and how it can be transmitted cartographically. As a matter of fact, maps are intended to represent types of space – i.e. space formed by net-like assets- which require metrics able to point out a dimension of flexibility and to reproduce not only the dynamics of exchange, but also the pluralism of individuals involved and the time factor in the problem-solving of risky situations. The exponential spreading and use of cartographic representations in the contemporary world enhance the awareness that spatial dimension constitutes the ineluctable factor characterising globalisation and that its interpretative models will derive from its ability to represent it. In other words, maps will show a World set on flows and networks in which movement is of the utmost importance. In these contexts, maps are called to play a role in the management of complex realities, like urban ones. There is a need of cartographic instruments able to represent mobile citizens and inhabitants whose existences are based on movement. These city-users become a complex of individuals which, according to their own interests, need to be involved in urban management practices and in decision making processes through different kinds of *governance* practices.

The conference gravitates towards three reflections: *movement, participation and risk*. For each one we propose a non-exhaustive list of issues and approaches in order to start a debate:

1. Movement Cartography - This deals with the necessity to think about how to represent movement using topological metrics. Far from considering its most obvious and common meaning – i. e. dislocation of people and things- *movement* is intended in its highest meaning – i.e. as a *generating source, energy* – able to assume a multiplicity of configurations which cannot be reduced to a static form but can be defined in its own dynamism. Therefore events characterising

our times cannot be presented at their final state but they must be investigated in their changing in progress which is also their goal. In conclusion, now that “generalized mobility” constitutes a crucial aspect of our society, it is of the utmost importance to ask the following questions: which is the best cartographic system that can represent movement? In urban contexts, is it possible to overcome the gap between the Euclidian surface and the urban mass determined by the co-presence and interaction of a large number of social operators? And, moreover, is it possible to think about forms of cartographic representations that assume the influence of the curvature of the Earth on movement at a global scale without cancelling it by using projections?

2. Participatory Mapping – This open issue concerns the research of instruments that can create both dialogue and participation between different individuals involved in territorial planning. We want to consider *governance* as the field of experimentation of participatory cartographic systems, since it constitutes the moment in which a multiplicity of individuals take part in discussions in order to find shared interests to be considered in decision making. Our aim is to analyse the role of participatory mapping in pointing out identity values of a specific landscape as a stake in negotiation processes. At the same time we want to investigate the development and the diffusion of Geographic Information Technologies thanks to the interactive processes promoted by the web - such as Public and Participatory GIS, and the last generation of «WikiGIS». They both promote the collective processes of thinking and decision making and they are also understandable by non-expert people who, therefore, can be involved. In conclusion, the question is: what kind of information can guarantee the participation and what kind of multimedia systems are able to activate the sharing of interests and, therefore, can promote consensus in decision making processes? And moreover, can participatory mapping build a dialogue between individuals belonging to different cultural scenarios?

3. Cartography of risk – This issue concerns decision support systems (DSS) that are able to communicate risks and face emergencies in extremely difficult conditions. The aim is to face the subject of including maps inside these systems as a *symbolic operator* able to intervene actively in the decision making process characterized by urgency and criticality. Considering Luhmann’s distinction between *risk and danger* and assuming the different roles that decisions have in each one of them, we want to investigate the role of maps for preventing and dealing with an emergency. In order to prevent risky situations, we need to investigate the connection between decisions and the social perception of risks. Concerning emergencies, we need to assume the huge complexity of causal processes, which happen simultaneously, thinking not only about the data that has to be represented on the map but also about the contexts created by different individuals and, also, about the forecast of the evolutionary phases of the event. All these issues raise a multiplicity of questions: how can the map communicate prevention and, therefore, how can it affect the social dimension of risk? Which role can it assume in DSS? How can we introduce the time factor and forecast variables created by emergencies?

### **Promoting institutions:**

The institutions promoting the event are: *Laboratoire Chôros*, Ecole Polytechnique Fédérale of Losanne; the *Centre de Recherche en Géomatique* – CRG, Université Laval, Québec; the *Laboratorio Cartografico Diathesis*, University of Bergamo– and an international body, which promotes scientific innovation - *Committee on Data for Science and Technology* (CODATA-Germany, Berlin).

### **Scientific Committee:**

Emanuela Casti (*Diathesis* Cartographic Laboratory - University of Bergamo), Greg Elmes (*West Virginia State GIS Technical Center* - West Virginia University), Horst Kremers (CODATA-Germany - Berlin), Jacques Lévy (*Chôros* Laboratory - EPFL Losanne), Stéphane Roche (CRG – University of Laval Québec).

**Organizing Committee:**

Emanuela Casti, Jacques Lévy, Stéphane Roche, Horst Kremers.

**Programme and Schedule**

The conference will be structured into three different moments: the first organised in two plenary sessions (introduction and conclusion); the second in three parallel *workshops* dedicated to the three conference issues; the third presenting an exhibition session (multimedia systems and posters) of the products already realised by the different institutions.

The *promoters* will open the event and point out the problematic nature of the three identified issues. Then, *discussants'* presentations will follow, giving suggestions and asking questions to which the three parallel workshops – with the participants' interventions – will have to deal with.

The workshop will be managed by two *coordinators* in charge of orienting the discussion and choosing a *reporter* for the last plenary session. In this final session, *discussants* and *reporters* will take part in a round table, followed by the *promoters'* conclusive notes. The exhibition session will be freely managed by participants that will be provided with computers and a suitable working area. The schedule of the conference will be as follows:

April Thursday 23rd	9.30 a.m. - 1.00 p.m.	<b>First Session</b> PLENARY SESSION: <i>CARTOGRAPHIC CHALLENGES</i> <i>Introduction to the three core issues</i> <i>Starting-points and questions for the workshops</i>
	2.30 p.m. – 6.30 p.m.	<b>Second Session</b> EXHIBITION SESSION (MULTIMEDIA PRODUCTS AND POSTERS)
April Friday 24th	9.30 a.m. – 1.00 p.m.	<b>Third Session</b> PARALLEL WORKSHOPS <i>1. Cartography of Movement    2. Participatory Mapping    3. Cartography of risk</i>
	2.30 p.m. – 6.30 p.m.	<b>Fourth Session</b> PLENARY SESSION – ROUND TABLE: <i>THE STAKES</i> <i>Conclusions: Perspectives in Progress</i>

**Organization:**

**Length:** 2 days

**Location:** Bergamo (Italy)

**Languages:** English and Italian

**Conference web site :** [www.unibg.it/geografia](http://www.unibg.it/geografia)

**Conference Secretariat:** [fburini@unibg.it](mailto:fburini@unibg.it); [aleghisa@unibg.it](mailto:aleghisa@unibg.it)

**Deadlines:**

The active participation to the conference is reserved to a limited number of participants that will be selected by the scientific committee, according to the following schedule:

February 15th – deadline for abstracts and for asking to request a place in the exposition;

February 25th – publication on the conference web site of the final list of participants in the three parallel workshops.

Before March the 30<sup>th</sup> – inscription as auditors. In fact the participation to the conference is free, but one has to send his/her subscription by mail to the conference secretariat.

**Aftermaths:**

The scientific results of the conference, after a careful selection and a thematic re-assemblage, will be published on the on-line journals *Espace-Temps* and *DATA SCIENCE Journal*.

Furthermore, these papers will be gathered in the first volume of the collection “Autrement dit: le discours cartographique” published by L’Harmattan Paris.