



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 conference is an opportunity of encounter among researchers interested in sharing two levels of considerations about cartography: the epistemic one, concerning the communicative role it is playing actually; the empiric one, regarding the production of maps, able to face globalization challenges.

About the first one, assuming that the information technologies and the world wide web have undermined the elaboration and the basic assumptions of the map, it comes out the need to 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. Currently, the cartographic scenario shows a fragmentation of agencies producing maps, which discourages any claim to intervene technically, by coding a multiplicity of languages or elaboration systems. At the same time, it is urgent to define in a semiotic way the hybridity, to which the map is subjected in a multimedia environment, in order to think about its communication results. Our goal is to get awareness of the cognitive limits of our measurement instruments in order to create others, able to cope with new social needs.

About the second level of consideration, we focus our attention on globalization, that has radically changed communication, ideas, scientific and artistic culture, just like life styles, making us re-think and re-conceptualize the idea of *space* and how it can be transmitted cartographically. In fact, cartography is called to represent types of space – as the one with net asset, requiring metrics able to point out a dimension of flexibility and to reproduce the dynamics of exchange, the pluralism of actors, the time factor in problem solving inside risk situations. The exponential spreading and use of cartographic representations in the contemporary world feed the awareness that spatial dimension constitutes the ineluctable data of globalization and that its interpretative models will come out just from its capacity to represent it. Then, the map seems to be the place where we can obtain the knowledge of a World set on flows and networks that, while connecting or disconnecting points on the Earth surface, show a net-shape spatiality able to evocate values and mechanisms of the way society works and, then, of the people inhabiting places. Therefore, movement is the conceptual category to be investigated in its most different and distant meanings, among which the one of *virtuality of movement*. In fact, the management of complex societies, like the urban ones, needs some cartographic instruments able to represent moving spatialities of their citizens and inhabitants, whose existence is grounded in movement. Then, we need to project appropriate ways of transportation and systems to face the case of connection interruption in real time, due to traffic jam, to a terroristic attack or a natural catastrophe. Furthermore, city-users become, because of their own interests, a complex of subjects, which need to be involved in urban management practices and in decision making through different kinds and *governance* practices.

In conclusion, the dimensions, both referential and quantitative, for which the map was used during the modern age, increase nowadays and need to cope with new scenarios. Then, it seems to be urgent contributing to the founding act of a “reflexive cartography”, able to consider and manage the contemporary world spatialities.

The conference is going to be a moment for thinking about these issues both under a theoretical and a practical profile. This is the reason why the organization of the event will be assured by both theoretical and empirical researchers. The institutions, which they belong to, have been adopting new approaches, languages and cartographic models, which we would like to insert in an intertwining dialogue between scientific research and social demands. More specifically, these institutions are academic research centres or laboratories - *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). They propose to realize a trans-disciplinary dialogue among researchers from different disciplines, connecting theoretical and methodological expertise and technical skills.

The conference gravitates around three levels of reflections: movement, participation and risk. They are the subjects, we have just considered above and that play a crucial role in the contemporary world processes. We propose a non-exhaustive list of issues and approaches about each one, in order to start a debate:

1. Movement Cartography - This issue deals with the necessity to think about the way of representing movement using topological metrics. Far from considering the most obvious and common (denotative according semiotics) meaning - i. e. moving things and people, movement is the conceptual category to think about in order to identify innovative analytical instruments to grasp the deep nature of globalization. In fact, by recovering its deeper sense (connotative, according to semiotics again), movement is today perceived in its highest meaning: *generating source, energy* able to assume a multiplicity of configurations, which are not possible to turn to a static form but, rather, are only definable in their own dynamism. Therefore, phenomena in current times have not to be represented in their final state but they should be investigated in their changing in progress, that is also their own goal. Then, in current times of “generalized mobility”, which constitutes the crucial aspect of our society, it is urgent wondering: what is the most appropriate cartographic system to represent movement? In urban context, is it possible to overcome the range between Euclidian representation and urban mass, determined by co-presence and interaction of a large number of social operators? And, even, is it possible to think about a way of a cartographic representation, assuming the influence of Earth curvature on movement at the global scale without vanishing it by using projections?

2. Participatory Mapping – This issue concerns the research of instruments to activate the dialogue and the participation between different actors, involved in territorial planning: we point out *governance* as the field of experimentation of participatory cartographic systems, since it constitutes the moment where a multiplicity of actors take part in discussion in order to find shared interests and positions, to be considered in decision making. We intend analyzing the role of participatory mapping in pointing out identity values of landscape, as a stake in negotiation process, but also 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». Both support the processes of collective thinking and decision making and they also are understandable by non-expert people, that can be involved. Then, the question is: what kind of information grant the participation and what kind of multimedia systems are able to activate the sharing of interests and, then, promote consensus in decision making process? And also, is participatory mapping able to build a dialogue between actors belonging to different cultural scenarios?

3. Cartography of risk - This context concerns decision support systems (DSS) in order to communicate the risk and face emergency in crisis situations. At this regards, we are going to face the subject of including the map, inside these situations, playing the role of *symbolic operator* able to act in such a decision making, characterized by urgency and criticality. Starting from Luhmann's proposal to distinguish between *risk and danger* and assuming the different role that decision has inside each one, it is possible to face the issue of cartographic communication in determining social perception and impress upon the time dimension of the event, i. e. preventing and managing the emergency. In order to prevent damages and, then, to face dangers and future situations of criticality, we need to investigate: the connection between decision and risk - which considerably depends on techniques of process control, the resources to be managed and the identification of errors. Concerning emergency, we need to assume the huge complexity of causal processes, which happen at the same time, thinking about not only the information to put on the map but also about the contexts created by different actors, and, even, about the prevention of the event evolution. In fact, the different aspects of emergency must be considered: the conditions which generated it, the actors involved, its impact and consequences, the possible actions able to manage it, negotiations, decision making, the revision process able to consider its dynamics. All these issues raise a multiplicity of questions: how can the map communicate prevention and, then, how can it impress upon the social dimension of risk? Which role can we give it inside DSS? How can we introduce the time factor and forecast variables created by emergency?

**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 Levy, Stéphane Roche, Horst Kremers.

**Programme and Schedule**

The conference will be articulated in three different moments: the first organised in two plenary sessions (introduction and conclusions); the second in three parallel workshops dedicated to the three conference issues; the third presenting an exhibition session (multimedia products 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 making 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 pc devices and a suitable space.

The schedule of the conference will be as follows:

April Thursday 23rd 9.30a.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)

<p>April Friday 24th 9.30 a.m. – 1.00 p.m.      <b>Third Session</b>  PARALLEL WORKSHOPS  1. <i>Cartography of Movement</i>    2. <i>Participatory Mapping</i>    3. <i>Cartography of risk</i></p>
<p>2.30 p.m. – 6.30 p.m.      <b>Fourth Session</b>  PLENARY SESSION – ROUND TABLE: <i>THE STAKES</i>  Conclusions: <i>Perspectives in Progress</i></p>

**Organization structure:**

**Length:** 2 days

**Place:** Bergamo (Italy)

**Languages:** English and Italian

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

**Conference Secretary:** Federica Burini: [fburini@unibg.it](mailto:fburini@unibg.it); Alessandra Ghisalberti: [aleghisa@unibg.it](mailto:aleghisa@unibg.it)

**Deadlines:**

The scientific committee will grant the participation to a limited number of participant only, after a careful selection, according to the following schedule:

February 15th – deadline for abstracts and a short *CV* for asking to participate in the conference;

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

Auditors can follow the conference works by sending their subscription by mail to the conference secretary within March the 30<sup>th</sup>.

**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 *CODATA Journal*.

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