Project no. 34721

# TAGora

# Semiotic Dynamics in Online Social Communities

http://www.tagora-project.eu

Sixth Framework Programme (FP6)

Future and Emerging Technologies of the Information Society Technologies (IST-FET Priority)

---

# Plan and Final plan for using and disseminating the knowledge

---

Period covered: from 01/06/2006 to 31/08/2009
Start date of project: June 1$^{st}$, 2006
Due date of deliverable: October 15$^{th}$, 2009
Distribution: Public

Date of preparation: 15/09/2009
Duration: 39 months
Actual submission date: September 15$^{th}$, 2009
Status: Final

Project coordinator: Vittorio Loreto
Project coordinator organisation name: Sapienza Università di Roma
Lead contractor for this deliverable: Sapienza Università di Roma

---

# Contents

# Chapter 1

# Exploitable knowledge and its use

**REMARK: As in the second year report, this document refers to the whole three years of project activity, acting as both yearly and final report.**

In this section we present the exploitable results, defined as knowledge having a potential for industrial or commercial application in research activities or for developing, creating or marketing a product or process or for creating or providing a service. A list of these results is reported in the following tables:

**Current Activities**

| Exploitable Knowledge (description) | Exploitable product(s) or measure(s) | Sector(s) of application | Timetable for commercial use | Patents or other IPR protection | Owner & Other Partner(s) involved |
|---|---|---|---|---|---|
| **BibSonomy** | Web site (service) and Web server (software) | Public, especially researchers | Preliminary Service was online at the beginning of the project, improvements have been done according to project schedule. No commercial application planned. | – | **UNIK** |
| **Ikoru** | Web site (service) and Web server (software) | Internet Service Provider, Software Integrators, Consumer Electronics, Cultural Institutions | Version 1 of Web site online (2007), Demonstrations (2007) | Copyright on software | **SONY-CSL** |
| **Zexe** | P2P client application and MySQL database | Public, Academic and Cultural istitutions, Small communities | – | – | **SONY-CSL** |
| **NoiseTube** | Web site (service) and Web server (software) | Public, small communities, Academic and Environmental agencies | – | – | **SONY-CSL** |
| **Tagster prototype** | P2P client application | Academic institutions, small companies | – | – | **UNI KO-LD** |
| **MyTag** | Web site (service) | Public, Academic institutions, small companies | – | – | **UNI KO-LD** |
| **Live Social Semantics** | Web site (service) and application for social events | Academic institutions, medium to large companies | Currently working on v3 for a very large event in 2010. Commercialisation is planned for 2011, subject to further funding | – | **UNI-SOTON** |

Tagora

**Planned Activities**

| Exploitable Knowledge (description) | Exploitable product(s) or measure(s) | Sector(s) of application | Timetable for commercial use | Patents or other IPR protection | Owner & Other Partner(s) involved |
|---|---|---|---|---|---|
| **BibSonomy** | Web site (service) and Web server (software) | Public, especially researchers | Currently no commercial application planned | – | **UNIK** |
| **Ikoru** | Web site (service) and Web server (software) | Internet Service Provider, Software Integrators, Consumer Electronics, Cultural Institutions | Use for museum (2008) | Copyright on software | **SONY-CSL** |
| **Zexe** | P2P client application and MySQL database | Public, Academic and Cultural istitutions, Small communities | Currently no commercial application planned | – | **SONY-CSL** |
| **NoiseTube** | Web site (service) and Web server (software) | Public, small communities, Academic and Environmental agencies | Currently no commercial application planned | – | **SONY-CSL** |
| **Tagster prototype** | P2P client application | Academic institutions, small companies | Currently no commercial application planned | – | **UNI KO-LD** |
| **MyTag** | Web site (service) | Public, Academic institutions, small companies | Currently no commercial application planned | – | **UNI KO-LD** |

## 1.1 BibSonomy

The development of BibSonomy serves two purposes.

Firstly, the academic community benefits from it. Research groups world-wide struggle with the problem of publication and citation management and usually implement themselves an individual time consuming solution. With BibSonomy, instead, they can manage their internal and public lists of publications in a simple and efficient way. BibSonomy allows for the interaction across scientific groups and communities, being its stored entries public by default. Even though there is a large demand for this kind of web tools, a commercial exploitation will be rather difficult to realize, as there are similar competitors on the web (like Connotea and CiteULike), who also have been

offering their service free of charge.

Secondly, (and this is the main reason for our engagement in BibSonomy) the system allows us to collect valuable data about its complete usage. These data are an essential brick in our quantitative research, as only very few folksonomy benchmark data are available. The system allows us to implement and experiment our own algorithms, and to study their behavior in a living growing environment. BibSonomy helped us to achieve a significant position among the *Web 2.0* research community.

## 1.2   Ikoru

The Ikoru system consists of two parts: the Web site and the Web server, whose brief description follows.

### The Web site

The Web site is written in a mixture of HTML and Javascript. It was specifically developed to run experiments and gather data for the TAGora project. The web site currently handles photos and audio but might be extended to include video and other contents as well.

The current running version can be visited at http://www.ikoru.net. The Web site is constantly under development as new functionalities become necessary. It is open to the public and free of charge. Sony CSL shall continue to maintain this Web site for at least the duration of the TAGora project. There has been done little advertisement to promote the site and attract users, so far. In fact, the site is still undergoing a testing phase and we think that we must be able to offer a minimum of quality of service to the users before advertising it massively. Traditionally, partnerships within Sony have been in principle possible, but in this case they might be not trivial to set up because of the current tendency of Sony to outsource Web services.

### The Web server

The Web server is written from scratch in C++. That means that it handles the following tasks:

- handle HTTP and SOAP requests,

- manage persistent sessions,

- assure the security (login, validating user input),

- store/retrieve tagging data in a persistent storage,

- receive the uploaded files (testing file type, conversion to Web formats, feature extraction),

- search data based on the text and content (for images),

- generate pages dynamically using key/value substitutions, and

- run the analysis scripts

The reason for the development effort was to allow the Ikoru server to run on a wide range of platforms, from embedded devices and personal computer to full range servers.

This software component can be used by third parties and integrated in larger development projects, for example, as a basis of a Content Management System (CMS) for internal company Web sites. It is also available to consumer electronics and computing equipment businesses that would like to include tagging services on their devices or use it as a value-adding service. Contacts within Sony, in particular with the Sony Cybershot devision in Tokyo and the Digital Imaging Group in the

Tagora

United Kingdom, suggest that a transfer of technology may be feasible. Another possible outlet is in the cultural sector. Contacts with the Zentrum fur Kunst and Medientechnologien in Karlsruhe, Germany, showed that cultural institutions want to open up to a Web audience, in *Web 2.0* fashion. The Ikoru platform could be become a contender in this market.

Sony CSL has nor a precise planning nor a time-table to promote this technology. The current strategy is to increase the usability and reliability of the software through its effective use on the Web site and in small scale projects. In the long run, two options are available, either make it available as Open Source in the hope to attract a large user and developer base, or to seek a partnership for a commercial exploitation.

## 1.3 Zexe.net

The Zexe.net system is an online application consisting of a set of PHP scripts and a MySQL database. It is intended for usage by small-scale communities, which send tagged multimedia content (images, videos and sounds) directly from a mobile phone to the web. Although the system already existed before the beginning of TAGora, it has been completely re-written so that it can support folksonomies. The system has been used in different contexts and with different groups, with the aim of raising awareness about specific social issues. We believe that tagging can greatly increase the usefulness of the Zexe.net system, not only by providing a way to search for content, but also to represent the shared keywords which reflect a community's interests and to serve as a regulator for future activities by that community.

Additionally, the Zexe.net system incorporates the possibility of cross-referencing tags with geographical information. A special mobile application automatically embeds latitude and longitude information into the EXIF tags of JPEG images. This application obtains location information from the built-in GPS modules of certain phone models. This tool has already been used in the *GENEVE*accessible* project.

The web-based part of the Zexe.net system has proven to be stable, and thus can be exploited by the TAGora consortium, and also by external communities. It is available on demand, and the source code can be downloaded and reused under the GPL open source license.

## 1.4 NoiseTube

Noisetube is a continuation and consolidation of the Zexe.net project. Like Zexe.net, the focus remains on supporting offline communities with new applications of collaborative tagging in real world situations, in particular for sustainability-related issues, by using mobile phones. Concretely, the NoiseTube platform enables a new participatory approach to monitor noise pollution by turning mobile phones into noise sensors and making intensive use of tagging. By using off-the-shelf smart phones, we empower the general public to measure, annotate, geo-localise and share their personal exposure to noise to inform the community and build collaborative, semantically annotated noise maps. The NoiseTube platform and the underlying approach has been presented and published at several conferences and workshops and received a great deal of attention from environmental agencies (e.g. BruitParif in Paris, France and Awaaz Foundation in Mumbai, India).

## 1.5 Tagster prototype

The development of the peer-to-peer tagging system has two different purposes. The first one is to promote tagging as an easy way for personal data organization and metadata exchange. Therefore, the main goal behind Tagster is to implement a distributed folksonomy system in contrast

to the commonly centralized tagging services. We expect that this approach of using tagging for distributed data organization will also find substantial interest in the peer-to-peer community. Thus, the efficient sharing of tagging metadata, which is independent from the actual information objects, is one of the most important aspects.

On the other hand - being one of the main goals within Tagora - Tagster will be used to gather comprehensive tagging data from its users. Such information will be very valuable for further analysis and one question we would like to investigate is whether a different tagging behavior can be observed in a distributed tagging system. Due to the possibility to tag different types of multimedia data we expect to collect richer tagging data in terms of tag co-relations between the media types. This would otherwise only be possible if datasets from different tagging services were integrated which is not always doable in coherent manner. Furthermore, Tagster allows us to implement and test new algorithms in a real system.

At the end of the second year Tagster was distributed and used within the ISWeb research group. It turned out that there are still some issues with the network communication and firewalls that need to fixed before we can make Tagster available to a greater audience. The next step, however, is to make the software available to all project partners and finally also announce it publically. Nevertheless, we have already presented Tagster outside the Tagora project, for example at the ESWC 2008 conference demo session.

## 1.6   MyTag

MyTag[1] application has been developed to enable cross-media searching over images, videos, and social bookmarks. MyTag provides transparent search across multiple tagging platforms, each providing different media content. The current implementation covers Flickr, YouTube, and del.icio.us. Furthermore, it incorporates the notion of personalisation, allowing users to grow a profile that, in turn, ranks search results in more suitable and refined manner.

## 1.7   Live Social Semantics

Social interactions are one of the key factors to the success of conferences and similar community gatherings. LSS is a novel application that integrates data from the semantic web, online social networks, and real-world social contacts mined by means a third-party RFID platform (made available by the SocioPatterns.org project). Personal profiles of conference attendees were automatically generated using several Web 2.0 systems and semantic academic data sources, and integrated in real-time with face-to-face contact networks derived from wearable sensors. Integration of all these heterogeneous data layers made it possible to offer various services to conference attendees to enhance their social experience such as visualisation of contact data, and a site to explore and connect with other participants.

LSS was deployed at ESWC09 and ACM Hypertext 2009, and was a great dissemination activity for the project. We have ambitious plans for taking it much forward, to other bigger conferences, as well as to large corporate, business, and scientific events.

## 1.8   TAGnet

*TAGnet* is a prototype web-based application (htp://www.netr.it) designed to provide users with a reflexive tool to expose regularities and patterns in their own tag-based annotations. Tagging

---

[1]http://mytag.uni-koblenz.de

Tagora

patterns can reveal a lot about a user's experience, her interests and her emergent conceptualizations, but users are not aware of these patterns until these regularities are made explicit by means of data analysis and state-of-the-art visualization. TAGnet currently targets Flickr users and provides them with a view on their annotations (tags) that exposes actionable information. Visualizing the tag co-occurrence network and allowing the user to manipulate it provides her with a sort of "semantic mirror" that can be used for awareness, for navigation, and for re-organization of metadata.

# Chapter 2

# Dissemination of knowledge

**OVERVIEW OF DISSEMINATION PLAN**

To assure that knowledge generated within the project will be disseminated to a wider scientific and non-scientific audience we conducted and plan to conduct the following actions:

**Foster** publications through standard scientific and engineering communication channels. Publish results in the best scientific journals and communicate the results of the project at top conferences. Use all the possible existing communication media to touch the largest possible audience;

**Encourage** the partners to organize tutorials at major conferences in the different fields that are relevant to the present project. Encourage the partners to contribute to summer schools or other educational activities that touch in particular younger students. Tutorials on subjects related to the project activities will be given by the senior scientists of the network in occasion of international workshops;

**Foster** the organization of workshop and conferences on themes related to the project;

**Disseminate** results to the press at large in order to diffuse them as widely as possible;

**Establishing, maintaining, updating** the project web site and project mailing lists;

**Foster** the exhibition of demonstrators in industrial exhibitions or in other contexts where the public at large and a broad scientific/engineering audience can get exposure to the ideas of the project. These exhibitions may also represent a platform in which the results of the project are tested;

**Foster** the preparation of professional dissemination material;

**Maximize** the availability of tools and experimental platforms developed by the partners during the project to the scientific community as large;

**Disseminate** the results to the other projects of the Complex System Initiative and to foster synergies and possible joint activities.

The following table summarizes the dissemination actions performed during the third year of activity of the project and the actions planned to disseminate the results after the end of the project.

Tagora

**Overview table**

*The dissemination activities, in form of a table, include past and future activities.*

| Type | Type of audience | Countries addressed | Partner responsible/ involved |
|---|---|---|---|
| **1. White Paper** | Scientific Community | All | All |
| **2. Publications on International Journals** | Scientific Community | All All | All All |
| **3. Publications on Books and Conference Proceedings** | Scientific Community | All | All |
| **4. Posters** | Scientific Community | All | All |
| **5. Talks, lectures and conference presentations** | Scientific Community | All | All |
| **6. Tutorials** | Scientific Community | All | All |
| **7. Conferences, Workshop and Summer Schools** | Scientific Community | All | All |
| **8. Press, Radio and TV** | General public | All | All |
| **9. TAGora Project Website and Portal** | General public | All | PHYS- SAPIENZA |
| **10. Demonstrations in Industrial and Scientific Exhibitions** | Industrial Community | All | All |
| **11. Other dissemination actions** | Scientific Community and General public | All | All |
| **12. Dissemination actions toward the other projects of the Complex System Initiative** | Scientific Community | All | All |
| **13. Joint Publications** | Scientific Community | All | All |

## 2.1  The White Paper

Understanding the relation between the Web and the world involves learning about a complex cycle of interactions, which (to complicate things) occur at radically different scales. Technical developments which are basically to do with computer abilities to pass data between each other, turn out to have strong social effects; computational innovations at the micro scale feed into macro-level effects on the whole of society. An idea, say for an information-sharing protocol, needs a technical engineering design that encapsulates it within a particular social context. The design

in context produces a micro-level effect at the level of the individual user's control of his or her computer. But when the number of users of a design within a decentralized structure grows, macro-level effects can be detected, which raise social issues. In large part, these social issues are raised because the social effects were not only not predicted, but they were fundamentally unpredictable.

This is a scenario to which in the last decades scientists have devoted great attention, namely the study of collective phenomena and complex systems. Large systems made up of simple components (for instance atoms or molecules, animal, human or artificial agents) can in fact self-organize themselves, i.e. "acquire a functional, spatial or temporal structure without specific interference from the outside". More precisely, the constituents of such systems are able to develop a complex collective behavior not trivially deducible from the knowledge of the rules that govern their mutual interactions. We then need to analyses these effects in order to understand whether the social effects are good or bad, and to what degree, and also to help determine what new engineering designs might be capable of preserving or enhancing the good effects, or alternatively eliminating the bad. The result, therefore, is a cycle of micro-level engineering and macro-level analysis.

The Web was originally created as a means of two-way communication, writing as well as reading, but as it took off, publishing tools did not develop as strongly as browsers, and reading became more important than writing, a development deplored by many of the more idealistic who looked back to the plain text of the early Internet days with nostalgia. But the recent arrival of tools allowing more information-passing has led to a rebalancing of the Web, and the invention of so-called Web 2.0.

There are micro-level effects of providing tools allowing someone, e.g. to blog, which affect the individual author. However, as the blogosphere, content-hosting sites or recommender systems grow, there are macro-level effects to be noted.

An initial state when writing, editing and publishing were difficult prompted the development of form-based editors, and the individual phenomenon of the wiki. As more users are recruited, increasingly large groups can put together something totally unpredictable such as the extraordinary Wikipedia. Wikipedia is now the first port of call for anyone needing basic information. It is therefore an important rival to traditional undemocratically edited encyclopedias, but also now it is so widely used, its accuracy and veracity are now an issue. The social question is now about how democratic Wikipedia can afford to be.

Blogs, Wikis, and Social Bookmark Tools have rapidly emerged on the Web creating a new scenario that radically change the knowledge production process. We have virtually unbounded storage capabilities and essentially no limits in our ability to interact with other peers. This new knowledge production process is impacting on all aspects of knowledge creation on all types of knowledge and the Web is becoming the most extensive knowledge repository that ever existed. The reason for this immediate success is the fact that no specific skills are needed for participating. A new paradigm is actually gaining impact very quickly in large-scale information systems: Collaborative Tagging. In new web applications (e.g. Flickr www.flickr.com, Connoteawww.connotea.org, Citeulike www.citeulike.org, Delicious de.icio.us, etc.) people no longer make passive use of online resources. They take instead an active role and enrich resources with semantically meaningful information. Such information consists of terminology (or tags) freely associated by each user to resources and is shared with users of the online community. Despite its intrinsic anarchist nature, the dynamics of this terminology system spontaneously leads to patterns of terminology common to the whole community or to subgroups of it. Surprisingly, this emergent and evolving semiotic system provides a very efficient navigation system through a large, complex and heterogeneous body of information.

At the moment, there exists no foundational research for these systems, and they provide only very simple structures for organizing knowledge. Individual users create their own structures, but these can currently not be exploited for knowledge sharing. The aim of TAGora is twofold. On

Tagora

the one hand it is important performing analysis of Web 2.0 phenomena to determine what social effects we are now seeing from tagging structures, recommendation systems, and other content that is emergent from large-scale use of social software. On the other hand it is crucial providing theoretical foundations for upcoming Web 2.0 applications and to investigate further applications that go beyond bookmark- and file-sharing.

We strongly believe we are facing a unique opportunity to exploit and give theoretical foundations to the recent, though extremely rapid, developments of emergent semantics in Web-based applications. The common effort of researchers in many different fields could provide the right trigger to face and tame the challenges of Web Science.

And of course one among the most important challenging tasks of this project is the development and fostering of a new culture of interaction between IT and complex systems science. This will require that gaps will be bridged from both sides.

## 2.2 Publications in international journals:

### 2.2.1 Published or in Press

**Third year**

- C. Cattuto, A. Barrat, A. Baldassarri, V. Loreto, *Collective dynamics of social annotation*, Proceedings of the National Academy of Sciences of the USA (PNAS) **106**, 10511 (2009).

- Pachet, F. Description-Based Design of Melodies. Computer Music Journal, 33(4), Winter 2009.

**Second year**

- V. Loreto and L. Steels *Social dynamics: Emergence of language* Nature Physics **3** 758 (2007).

- Ciro Cattuto, Christoph Schmitz, Andrea Baldassarri, Vito D. P. Servedio, Vittorio Loreto, Andreas Hotho, Miranda Grahl and Gerd Stumme, *Network Properties of Folksonomies*, In Susanne Hoche and Andreas Nürnberger and Jürgen Flach, editor(s), AI Communications Journal, Special Issue on *Network Analysis in Natural Sciences and Engineering*, (20)4:245-262, IOS 2007.

- C. Castellano, S. Fortunato and V. Loreto, *Statistical physics of social dynamics*, *Rev. Mod. Phys.*, **81**, 591 (2009).

- Noy, N. F., Chugh, A. and Alani, H. *The CKC Challenge: Exploring Tools for Collaborative Knowledge Construction*, *IEEE Intelligent Systems*, **23**, (2008)

- C. Cattuto, A. Baldassarri, V. D. P. Servedio, V. Loreto, *Emergent Community Structure In Social Tagging Systems*, *Advances in Complex Systems*, **11** 597-608 (2008).

**First year**

- Cattuto, C., Loreto, V. & Pietronero, L., *Semiotic dynamics and collaborative tagging*, Proceedings of the National Academy of Sciences United States of America, 2007, **104**, 1461.

- Cattuto, C., Loreto, V. & Servedio, V. D. P., *A Yule-Simon process with memory*, Europhysics Letters, 2006, **76**, 208-214.

- Tisselli, E., *thinkflickrthink: a case study on strategic tagging*, To appear in Communications of the ACM Journal. http://www.motorhueso.net/text/thinkflickrthink_pdf.pdf

### 2.2.2   Submitted for Publication

**Third year**

- R. Schifanella, A. Barrat, C. Cattuto, B. Markines, F. Menczer, *Folks in folksonomies: Social link prediction from shared metadata*, submitted to the Third ACM International Conference on Web Search and Data Mining (WSDM 2010).

- V. D. P. Servedio, A. Baldassarri, A. Capocci and V. Loreto *Hunting correlations in streams of text* Submitted for publication (2009).

- A. Capocci, A. Baldassarri, V. D. P. Servedio and V. Loreto *Statistical properties of interarrival times distribution in social tagging systems* Submitted for publication (2009).

- F. Pachet and P. Roy *Analytical Features: a Knowledge-Based Approach to Audio Feature Generation* Submitted to Journal of Artificial Intelligence Research (2009).

- F. Pachet *Description-Based Design of Monophonic melodies* Submitted to Computer Music Journal (2009).

## 2.3   Publications: Books & Conference Proceedings

### 2.3.1   Published or in Press

**Third year**

- Dellschaft, Klaas; Görlitz, Olaf; Szomszor, Martin (2009): Sense Aware Searching and Exploration with MyTag. In: Proceedings of ISWC-09 Poster and Demo Session.

- Alani, H., Szomszor, M., Cattuto, C., Van den Broeck, W., Correndo, G. and Barrat, A. (2009) Live Social Semantics. In: 8th International Semantic Web Conference (ISWC), October 2009, US.

- García-Silva, A.; Szomszor, M., Alani, H., Corcho, O. (2009), Preliminary Results in Tag Disambiguation using DBpedia. First International Workshop on Collective Knowledge Capturing and Representation - CKCaR'09, KCAP 2009, CA, USA.

- Illig, J.; Hotho, A.; Jäschke, R., Stumme, G. (2009 (to appear)), A Comparison of content-based Tag Recommendations in Folksonomy Systems, in 'Postproceedings of the International Conference on Knowledge Processing in Practice (KPP 2009)', Springer, .

- Hotho, A.; Jäschke, R.; Benz, D.; Grahl, M.; Krause, B.; Schmitz, C., Stumme, G. (2009), Social Bookmarking am Beispiel BibSonomy, in Andreas Blumauer, Tassilo Pellegrini, ed.,'Social Semantic Web', Springer, Berlin, Heidelberg, pp. 363–391.

- Markines, B.; Cattuto, C.; Menczer, F.; Benz, D.; Hotho, A., Stumme, G. (2009), Evaluating Similarity Measures for Emergent Semantics of Social Tagging, in '18th International World Wide Web Conference', pp. 641–641.

- Markines, B.; Cattuto, C.; Menczer, F. (2009), Social Spam Detection, Proceedings of the 5th International Workshop on Adversarial Information Retrieval on the Web (AIRWeb2009).

Tagora

- Benz, D.; Grobelnik, M.; Hotho, A.; Jäschke, R.; Mladenic, D.; Servedio, V. D. P.; Sizov, S.; Szomszor, M., Biller, W. (2008), Analyzing Tag Semantics Across Collaborative Tagging Systems, in Harith Alani; Steffen Staab, Gerd Stumme, ed.,'Proceedings of the Dagstuhl Seminar on Social Web Communities'.

- Cattuto, C.; Benz, D.; Hotho, A., Stumme, G. (2008), Semantic Analysis of Tag Similarity Measures in Collaborative Tagging Systems, in 'Proceedings of the 3rd Workshop on Ontology Learning and Population (OLP3)', pp. 39–43.

- Cattuto, C.; Benz, D.; Hotho, A., Stumme, G. (2008), 'Semantic Grounding of Tag Relatedness in Social Bookmarking Systems', The Semantic Web - ISWC 2008, 615–631.

- Cattuto, C.; Benz, D.; Hotho, A., Stumme, G. (2008), Semantic Grounding of Tag Relatedness in Social Bookmarking Systems, in Amit P. Sheth; Steffen Staab; Mike Dean; Massimo Paolucci; Diana Maynard; Timothy W. Finin, Krishnaprasad Thirunarayan, ed.,'The Semantic Web – ISWC 2008, Proc.Intl. Semantic Web Conference 2008', Springer, Heidelberg, pp. 615–631.

- Jäschke, R.; Krause, B.; Hotho, A., Stumme, G. (2008), Logsonomy – A Search Engine Folksonomy, in 'Proceedings of the Second International Conference on Weblogs and Social Media(ICWSM 2008)', AAAI Press, .

- Krause, B.; Hotho, A., Stumme, G. (2008), A Comparison of Social Bookmarking with Traditional Search, in Craig Macdonald; Iadh Ounis; Vassilis Plachouras; Ian Ruthven, Ryen W. White, ed.,'30th European Conference on IR Research, ECIR 2008', Springer, Glasgow, UK, pp. 101-113.

- Krause, B.; Jäschke, R.; Hotho, A., Stumme, G. (2008), Logsonomy - Social Information Retrieval with Logdata, in 'HT '08: Proceedings of the Nineteenth ACM Conference on Hypertext and Hypermedia', ACM, New York, NY, USA, pp. 157–166.

- Krause, B.; Schmitz, C.; Hotho, A., Stumme, G. (2008), The Anti-Social Tagger - Detecting Spam in Social Bookmarking Systems, in 'Proc. of the Fourth International Workshop on Adversarial Information Retrieval on the Web'.

- Alani, H.; Staab, S., Stumme, G., ed. (2008), Proceedings of the Dagstuhl Seminar on Social Web Communities, Schloss Dagstuhl.

- Szomszor, M.,; Alani, H., Cantador, I., O'Hara, K. and Shadbolt, N. (2008) Semantic Modelling of User Interests based on Cross-Folksonomy Analysis. In Proceedings of the 7th International Semantic Web Conference (ISWC), October 26th - 30th, Karlsruhe, Germany.

- Passant, A., Mulvany, I., Mika, P., Maisonneuve, N., Löser, A., Cattuto, C., Bizer, C., Bauckhage, C. and Alani, H. (2008) Mining for Social Serendipity. In: Dagstuhl Seminar on Social Web Communities, 21-26 September, Dagstuhl, Germany.

- Maisonneuve N., Stevens M., Niessen M. E. and Steels L. (2009). *Map and Measure Noise Pollution using Mobiles Phones*. In Proceedings of ITEE 2009 – Information Technology in Environmental Engineering 4th International Symposium, pp. 215-228, Springer Berlin Heidelberg, May 2009. DOI: 10.1007/978-3-540-88351-7_16

- Maisonneuve N., Stevens M., Niessen M. E., Hanappe P., Steels L. *Citizen Noise Pollution Monitoring*. In Proceedings of 10th Annual International Conference on Digital Government Research, volume 390 of ACM International Conference Proceeding Series, pp. 96-103. Digital Government Society of North America / ACM Press, May 2009.

- Maisonneuve N., Stevens M. and Steels L. *Measure and Map Noise pollution with your phone*. In Proceedings of the DIY for CHI workshop held on April 5, 2009 at CHI 2009, the 27th Annual CHI Conference on Human Factors in Computing Systems.

- Pachet, F. and Roy, P. *Improving Multi-Label Analysis of Music Titles: a Large Scale Validation of the Correction Approach*. IEEE Transactions on Audio Speech and Language Processing, 17(2):335-343 2009

- Baldassarri, A., Barrat, A., Capocci, A., Halpin, H., Lehner, U., Ramasco, J., Robu, V. and Taraborelli, D. *The Berners-Lee Hypothesis: Power laws and Group Structure in Flickr* in Harith Alani; Steffen Staab, Gerd Stumme, ed.,'Proceedings of the Dagstuhl Seminar on Social Web Communities', Dagstuhl, 2008.

- Capocci, A., Baldassarri, A., Servedio, V.D.P. and Loreto, V.. *Statistical properties of inter-arrival times distribution in social tagging systems* in 'HT '09: Proceedings of the 20th ACM conference on Hypertext and hypermedia', 239-244 (2009)

- Abbasi, R. and Staab, S. *RichVSM: enRiched Vector Space Models for Folksonomies*. In: HT '09: Proceedings of the 20th ACM conference on Hypertext and hypermedia, 219–228 (2009)

- Abbasi, R., Chernov, S., Nejdl, W., Paiu, R. and Staab, S. *Exploiting Flickr Tags and Groups for Finding Landmark Photos*. In: ECIR'09: Proceedings of 31st European Conference on Information Retrieval / Advances in Information Retrieval, 654–661 (2009).

- Abbasi, Rabeeh, Grzegorzek, Marcin and Staab, Steffen. *Merging Tagging and Low Level Image Features in Folksonomies to Improve Image Classification*. In: PetaMedia Workshop on Implicit Human-Centered Tagging. Queen Mary University, London, UK (2008)

- Abbasi, Rabeeh; Grzegorzek, Marcin and Staab, Steffen. *Large Scale Tag Recommendation Using Different Image Representations*. In: 4th International Conference on Semantic and Digital Media Technologies (SAMT 2009)

- Franz, Thomas, Dellschaft, Klaas and Staab, Steffen. *Unlock your Data: The Case of MyTag*. In: Proceedings of FIS-2008 - the Future Internet Symposium. Vienna, Austria: Springer (2008).

- Pachet, F., Roy, P., *Improving Multilabel Analysis of Music Titles: A Large-Scale Validation of the Correction Approach*, IEEE Transactions on In Audio, Speech, and Language Processing, Vol. 17, No. 2. (2009), pp. 335-343.

**Second year**

- Abbasi, Rabeeh and Staab, Steffen. *Introducing Triple Play for Improved Resource Retrieval in Collaborative Tagging Systems*. In: Proceedings of ECIR'08 Workshop on Exploiting Semantic Annotations in Information Retrieval (ESAIR 2008).

- Dellschaft, Klaas and Staab, Steffen. *Strategies for the Evaluation of Ontology Learning*. In: Buitelaar, Paul and Cimiano, Philipp (eds.): Bridging the Gap between Text and Knowledge – Selected Contributions to Ontology Learning and Population from Text. Amsterdam: IOS Press (2008).

- A. Baronchelli, C. Cattuto, V. Loreto and A. Puglisi, *Complex systems approach to the emergence of language*, book chapter, in press in "Language, Evolution and the Brain", J. W. Minett & W. S-Y. Wang (Eds.) City University of Hong Kong Press, (2008).

Tagora

- Vittorio Loreto, Ciro Cattuto and Andrea Baldassarri, *Information dynamics in web-based social systems*, position paper at the FET COSI-ICT Workshop, "Science of Complex Systems for Socially Intelligent ICT", October the 6th, 2007, Dresden, Germany,

- F. Pachet and P. Roy *Is Hit Song Science a Science?* Accepted to the International Symposium on Music Information Retrieval (ISMIR) (2008)

- Luc Steels and Eugenio Tisselli *Social Tagging in Community Memories* USA Proceedings of the AAAI Spring Symposium: Social Information Processing. Stanford University (2008)

- Olaf Göerlitz, Sergej Sizov and Steffen Staab *Tagster - Tagging-Based Distributed Content Sharing* Proceedings of the ESWC 2008 Demo Session **5021** 807-811 (2008)

- Beate Krause, Andreas Hotho and Gerd Stumme *The Anti-Social Tagger - Detecting Spam in Social Bookmarking Systems* Proc. of the Fourth International Workshop on Adversarial Information Retrieval on the Web (2008)

- Ciro Cattuto, Dominik Benz, Andreas Hotho and Gerd Stumme *Semantic Analysis of Tag Similarity Measures in Collaborative Tagging Systems* Proceedings of the 3rd Workshop on Ontology Learning and Population (OLP3), Patras, Greece, July2008 (2008).

- Robert Jäschke, Beate Krause, Andreas Hotho and Gerd Stumme *Logsonomy - A Search Engine Folksonomy* Proceedings of the Second International Conference on Weblogs and Social Media(ICWSM 2008), AAAI Press (2008)

- Miranda Grahl, Andreas Hotho and Gerd Stumme *Conceptual Clustering of Social Bookmarking Sites* I-KNOW '07. 7th International Conference on Knowledge Management, Graz, Austria (2007).

- Dominik Benz and Andreas Hotho *Position Paper: Ontology Learning from Folksonomies* Workshop Proceedings of Lernen - Wissensentdeckung - Adaptivität (LWA 2007), 109 Martin-Luther-Universität Halle-Wittenberg (2007).

- Klaas Dellschaft and Steffen Staab *An Epistemic Dynamic Model for Tagging Systems* HYPERTEXT 2008, Proceedings of the 19th ACM Conference on Hypertext and Hypermedia, (2008).

- Miranda Grahl, Andreas Hotho and Gerd Stumme. *Conceptual Clustering of Social Bookmark Sites.* In Alexander Hinneburg, editor(s), Workshop Proceedings of Lernen - Wissensentdeckung - Adaptivität (LWA 2007), 50-54, Martin-Luther-Universität Halle-Wittenberg, (2007).

- Robert Jäschke, Leandro Marinho, Andreas Hotho, Lars Schmidt-Thieme and Gerd Stumme. *Tag Recommendations in Folksonomies.* In 11th European Conference on Principles and Practice of Knowledge Discovery in Databases, Warsaw, Poland, September 17-21, (2007).

- Beate Krause, Andreas Hotho and Gerd Stumme. *A Comparison of Social Bookmarking with Traditional Search.* In Craig Macdonald, Iadh Ounis, Vassilis Plachouras, Ian Ruthven and Ryen W. White, editor(s). Advances in Information Retrieval, 30th European Conference on IR Research, ECIR 2008, 101-113 (2008).

- Robert Jäschke and Miranda Grahl and Andreas Hotho and Beate Krause and Christoph Schmitz and Gerd Stumme. *Organizing Publications and Bookmarks in BibSonomy.* In Harith Alani and Natasha Noy and Gerd Stumme and Peter Mika and York Sure and Denny Vrandecic, editor(s), Workshop on Social and Collaborative Construction of Structured Knowledge (CKC 2007) at WWW 2007, Banff, Canada, (2007).

- Szomszor, M., Cantador, I. and Alani, H., *Correlating User Profiles from Multiple Folksonomies* In ACM Conference on Hypertext and Hypermedia, Pittsburgh, Pennsylvania, 2008.

- Cantador, I., Szomszor, M., Alani, H., Fernandez, M. and Castells, P., *Enriching Ontological User Profiles with Tagging History for Multi-Domain Recommendations*. In 1st International Workshop on Collective Semantics: Collective Intelligence and the Semantic Web (CISWeb 2008), Tenerife, Spain, 2008.

- Görlitz, O., Sizov, S., Staab, S., *PINTS: Peer-to-Peer Infrastructure for Tagging Systems* Proceedings of the Seventh International Workshop on Peer-to-Peer Systems, IPTPS, February 2008. Tampa Bay, USA.

- Abbasi, R., Staab, S., *Introducing Triple Play for Improved Resource Retrieval in Collaborative Tagging Systems* Proceedings of ECIR'08 Workshop on Exploiting Semantic Annotations in Information Retrieval (ESAIR 2008).

- Aucouturier J.-J., Pachet F., Roy P., Beurivé A. (2007) *Signal + Context = Better Classification*, International Conference on Music Information Retrieval (ISMIR).

**First year**

- Abbasi R., Staab S., Cimiano P., *Organizing Resources on Tagging Systems using T-ORG*. Proc. Workshop on "Bridging the Gap between Semantic Web and Web 2.0" at the 4th European Semantic Web Conference ESWC 2007, Innsbruck, Austria, June 7, 2007

- Aurnhammer, M., Hanappe, P. & Steels, L., *Augmenting Navigation for Collaborative Tagging with Emergent Semantics*, Proc. of ISWC2006 International Semantic Web Conference, Springer, LNCS, 2006.

- Dellschaft, K. & Staab, S., *On How to Perform a Gold Standard based Evaluation of Ontology Learning*, Proc. of ISWC-2006 International Semantic Web Conference, Springer, LNCS **4273**, 2006.

- Hotho, A., Jäschke, R., Schmitz, C. & Stumme, G. *Das Entstehen von Semantik in BibSonomy*, Social Software in der Wertschöpfung, Nomos, 2007 (in press).

- Hotho, A., Jäschke, R., Schmitz, C. & Stumme, G., Hochberger, C. & Liskowsky, R. editors, *Emergent Semantics in BibSonomy*, Proc. Workshop on Applications of Semantic Technologies, Informatik 2006, Gesellschaft für Informatik, 2006, P-94.

- Hotho, A., Jäschke, R., Schmitz, C. & Stumme, G., Avrithis, Y. S., Kompatsiaris, Y., Staab, S. & O'Connor, N. E. Editors, *Trend Detection in Folksonomies*, Proc. First International Conference on Semantics And Digital Media Technology (SAMT), Springer, 2006, **4306**, 56-70.

- Cattuto, C., Loreto, V. & Pietronero, L., *Semiotic Dynamics in Online Social Communities*, Proceedings of the European Conference on Complex Systems ECCS06, Oxford (UK), 2006.

- Schmitz, C., Grahl, M., Hotho, A., Stumme, G., Cattuto, C., Baldassarri, A., Loreto, Servedio, V. D. P., *Network Properties of Folksonomies*, Proceedings of the WWW2007 International World Wide Web Conference, 2007.

Tagora

- Szomszor, M., Cattuto, C., Alani, A., O'Hara, K., Baldassarri, A., Loreto,V., Servedio, V. D. P., *Folksonomies, the Semantic Web, and Movie Recommendation*, "Bridging the Gap between Semantic Web and Web 2.0" at the 4th European Semantic Web Conference ESWC 2007, Innsbruck, Austria, June 7, 2007

- Rabbat, P., Pachet, F., *Direct and Inverse Inference in Music Databases: How to Make a Song Funk ?* Ismir (International Symposium on Music Information Retrieval), Phiiladelphia, 2008.

## 2.4  Posters

**Third year**

- Klaas Dellschaft and Olaf Görlitz and Martin Szomszor. *Sense Aware Searching and Exploration with MyTag.* Proceedings of the ISWC-09 Poster and Demo Session, 25-29 October 2009, Washington, DC.

- Klaas Dellschaft and Steffen Staab. *Understanding the Dynamics in Tagging Systems*, European Future Technologies Conference (FET09), 21-23 April 2009, Prague.

- Andrea Capocci, Francesco Visconti and Vittorio Loreto, *Del.icio.bus: a folksonomy for city public transportation*, European Future Technologies Conference (FET09), 21-23 April 2009, Prague.

- Rabeeh Abbasi and Steffen Staab. *Discovering and Exploiting Semantics in Folksonomies*, European Future Technologies Conference (FET09), 21-23 April 2009, Prague.

- Rabeeh Abbasi, Marcin Grzegorzek and Steffen Staab. *Using Colors as Tags in Folksonomies to Improve Image Classification*. Conference on Semantics and Digital Media Technologies (SAMT), 2008.

**Second year**

- Robert Jäschke and Beate Krause and Andreas Hotho and Gerd Stumme. Logsonomy - A Search Engine Folksonomy. Proceedings of the Second International Conference on Weblogs and Social Media(ICWSM 2008), AAAI Press,2008.

- C. Cattuto, A. Baldassarri, V. D. P. Servedio, V. Loreto, *Vocabulary growth in collaborative tagging systems*, ECCS 2007 - European Conference on Complex Systems October 1st-5th, 2007, Dresden, Germany.

- Braun, M., Dellschaft, K., Franz, T., Hering, D., Jungen, P., Metzler, H., Miller, E., Rostilov, A., Saathoff, C., *Personalized Search and Exploration with MyTag* WWW 2008 Poster Session.

**First year**

- M. Aurnhammer, *Evolving Texture Features by Genetic Programming*, 9th European Workshop on Evolutionary Computation in Image Analysis and Signal Processing, Valencia (Spain), 2007.

- C. Cattuto, A. Baldassarri, V. D. P. Servedio, and V. Loreto, *Investigating Community Structure In Social Tagging Systems*, Spring Meeting of the German Physical Society (DPG), Regensburg (Germany), March 26-30th, 2007.

- Franz T., Saathoff C., Görlitz O., Ringelstein C., Staab S. (2006), SEA: Introducing the Semantic Exchange Architecture, presented at the European Semantic Web Conference 2006, Budva Montenegro.

- Aurnhammer M., *Evolving Texture Features by Genetic Programming*, 9th European Workshop on Evolutionary Computation in Image Analysis and Signal Processing, 10th European Conference on Genetic Programming, Valencia (Spain), 11-13 April, 2007.

- Hanappe P., *The Ikoru system: a testbed for collaborative tagging and content-based analysis*, poster at the Sony CSL OpenHouse, Tokyo, June 2007.

- Görlitz, O., Sizov, S., Staab, S., *PINTS: Peer-to-Peer Infrastructure for Tagging Systems* Poster at German Workshop on 'Realistische Evaluierungsansätze für P2PIR-Systeme'.

## 2.5 Talks, lectures and conference presentations

**Third year**

- A. Hotho: Extracting Semantics from Folkonomies (Invited Talk). Triple-I 2008, Graz, 2.-6.9.08.

- A. Hotho: Semantics in Social Tagging Systems (Invited Talk). Workshop Wikimedia/Dublin Core, Berlin, 25.-26.9.08

- A. Hotho: The Anti-Social Tagger – Detecting Spam in Social Bookmarking Systems. KDML 2008, Würzburg, 5.-9.10.08

- A. Hotho: Analyse semantischer Strukturen in Folksonomies. Neofonie. Berlin,3.-4.11.08

- A. Hotho: Data Mining in Tagging Systems (Invited Talk). Cagliari 9.-11.12.08

- A. Hotho: Analysis of Emerging Structures in Tagging Systems (Invited Talk). DAI Laboratory, 22.8.2008

- N. Maisonneuve: *Map and Measure Noise Pollution using Mobiles Phones.* Presented at ITEE 2009 – Information Technology in Environmental Engineering 4th International Symposium, 29 May 2009.

- M. Stevens: *Measure and Map Noise pollution with your phone*. Presented at DIY for CHI workshop held on April 5, 2009 at CHI 2009, the 27th Annual CHI Conference on Human Factors in Computing Systems.

- B. Markines: Evaluating Similarity Measures for Emergent Semantics of Social Tagging, at '18th International World Wide Web Conference', 2009.

- B. Markines: Social Spam Detection, 5th International Workshop on Adversarial Information Retrieval on the Web (AIRWeb2009).

- D. Benz: Semantic Analysis of Tag Similarity Measures in Collaborative Tagging Systems, at the 3rd Workshop on Ontology Learning and Population (OLP3)', 2008

- C. Cattuto (invited): Measuring and Grounding Similarity from Social Annotations, Database and Information Systems seminar series, Faculty of Computer Science of the Free University of Bozen-Bolzano, Bolzano (Italy), February 17th, 2009.

Tagora

- C. Cattuto (invited): Informatics Colloquium on: "Social Annotation as a Collective Exploration of a Semantic Space", School of Informatics, Indiana University, Bloomington, IN (USA), November 14th, 2008.

- C. Cattuto (invited): colloquium on "Social Annotations and Social Similarity", School of Informatics, Indiana University - Purdue University Indianapolis (IUPUI), Indianapolis, IN (USA), November 14th, 2008.

- C. Cattuto (invited): Semantic Grounding of Tag Relatedness in Social Bookmarking Systems, Center for Data and Search Informatics (DSI), Indiana University, Bloomington, IN (USA), November 12th, 2008.

- C. Cattuto: Semantic Grounding of Tag Relatedness in Social Bookmarking Systems, at ISWC 2008.

- B. Krause: Logsonomy – A Search Engine Folksonomy, at the Second International Conference on Weblogs and Social Media(ICWSM 2008).

- B. Krause: A Comparison of Social Bookmarking with Traditional Search, at the 30th European Conference on IR Research, ECIR 2008, Glasgow, UK.

- A. Hotho: Logsonomy – Social Information Retrieval with Logdata, at the Nineteenth ACM Conference on Hypertext and Hypermedia, ACM, New York, NY, USA, 2009.

- B. Krause: The Anti-Social Tagger — Detecting Spam in Social Bookmarking Systems, at the Fourth International Workshop on Adversarial Information Retrieval on the Web, 2008.

- V. Loreto: Workshop on "Coarse thinking and decision making", Venice, 25-26 June 2008. *Invited speaker*.

- V. Loreto: *Collective dynamics of social annotation*, European Conference on Complex Systems ECCS'08, Jerusalem, 10-19 September 2008. *Invited Speaker*.

- V. Loreto: Conference on Statistical Mechanics of Game Theory, Mariehamn, Aland, Finland, 27-20 May 2009 *Invited Speaker*.

- V. Loreto: *Cultural route to the emergence of names and linguistic categories*, Workshop on: *At the roots of Complexity: The emergence of structures in Matter, Brain, Life, Language*, 22-24th June 2009, Torino, Italy, *Invited Speaker*.

- V. Loreto: *Collective dynamics of social annotation*, Convegno Nazionale di Meccanica Statistica, 24-26th May 2009, Parma, Italy, *Invited Speaker*.

- V. Loreto: *Collective dynamics of social annotation*, Conference TextGraphs-4: Graph-based Methods for Natural Language Processing, 6-7th August 2009, Singapore *Invited Speaker*.

- V. Loreto: *TAGora project: an update*, Hypertext 2009 conference, Torino, Italy (2009).

- V. Loreto: *Collective dynamics of social annotation*, Invited seminar at Marseille University, July 2009.

- Andrea Capocci: *Statistical properties of inter-arrival times distribution in social tagging systems*, Hypertext 2009 conference, Torino, Italy (2009).

**Second year**

- Vittorio Loreto (PHYS-SAPIENZA), *Cultural route to the emergence of names and linguistic categories*, *International workshop on Sociophysics, Status and Perspectives*, ISI Foundation, 26th-29th May 2008, Torino, Italy. *Invited Speaker*.

- Vittorio Loreto (PHYS-SAPIENZA), *Structure and evolution of collaborative web-based systems*, EU-China Summer School on *Internet, Sciences, and Society*, 1st-4th June 2008, Warsaw, Poland. *Invited Speaker*.

- Vittorio Loreto (PHYS-SAPIENZA), *Cultural route to the emergence of names and linguistic categories*, EU-China Summer School on *Internet, Sciences, and Society*, 1st-4th June 2008, Warsaw, Poland. *Invited Speaker*.

- Vittorio Loreto (PHYS-SAPIENZA), *Information dynamics in the social web*, Università Ca' Foscari, September the 27th 2007, Venice, Italy, *Invited Seminar*.

- Vittorio Loreto (PHYS-SAPIENZA), *Conventions and opinions formation in negotiation dynamics*, Workshop IACIA, Interacting Agents, Complexity and Inter-Disciplinary Applications, 5th October 2007, Dresden, Germany *Invited Speaker*.

- Vittorio Loreto (PHYS-SAPIENZA),*Convention and opinion formation in negotiation dynamics*, Bologna, Mathematics Dept., 18th October 2007, *Invited Seminar*.

- Vittorio Loreto (PHYS-SAPIENZA), *Dinamica dell'informazione nelle comunità on line*, Convegno *Conoscere la complessià: viaggio tra le scienze*, CSI-Piemonte, 22nd-23rd November 2007 Torino, Italy. *Invited Speaker*

- Andrea Baldassarri (PHYS-SAPIENZA), *Emergent Community Structure in Social Tagging Systems*, ECCS 2007 - European Conference on Complex Systems October 1st-5th, 2007, Dresden, Germany.

- Andrea Baldassarri (PHYS-SAPIENZA), *Emergent Community Structure in Social Tagging Systems*, Workshop on: Theoretical Aspects and Models of Large, Complex and Open Information Networks. ISI Foundation, Villa Gualino, November 19th - 21st, 2007, Torino, Italy.

- Vito D. P. Servedio (PHYS-SAPIENZA), *Network Structure of Folksonomies*, Social Websites - Complex Dynamics and Structure (satellite conference of ECCS'07). October 5th, 2007, Dresden, Germany.

- Andrea Capocci (PHYS-SAPIENZA), *Clustering and semantics of tagging networks*, Workshop on: Theoretical Aspects and Models of Large, Complex and Open Information Networks. ISI Foundation, Villa Gualino, November 19th - 21st, 2007, Torino, Italy.

- Ciro Cattuto (PHYS-SAPIENZA) gave an invited course at the Interdisciplinary College IK2008 (http://ik2008.de/), March 7-14, 2008, Günne (Germany). The course consisted of 5 hours of graduate-level lectures on the "Structure and Evolution of Collaborative Web-Based Systems" (http://ik2008.de/html/sc173.html).

- Ciro Cattuto (PHYS-SAPIENZA), *Stylized facts in social tagging systems* (invited), International School on Complexity: Course on "Statistical Physics of Social Dynamics: Opinions, Semiotic Dynamics, and Language". July 14th-19th, 2007, Erice, Italy.

- Ciro Cattuto (PHYS-SAPIENZA), *Networks of tag co-occurrence in collaborative tagging systems* (invited), Workshop on "Enhancing Social Interaction: Recommendation Systems, Reputation, P2P, Trust and Social Networks", European Conference on Complex Systems ECCS07. October 4th, 2007, Dresden, Germany.

Tagora

- Ciro Cattuto (PHYS-SAPIENZA), *Memory and Growth in Collaborative Tagging Systems*, Workshop on "Social Websites - Complex Dynamics and Structure", European Conference on Complex Systems ECCS07. October 5th, 2007, Dresden, Germany.

- Ciro Cattuto (PHYS-SAPIENZA), *Social information processing on the web* (invited), Physics Department, University of Perugia (Italy). November 7th, 2007, Perugia, Italy.

- Ciro Cattuto (PHYS-SAPIENZA), *Networks of tag co-occurrence in collaborative tagging systems* (invited), Workshop on "Theoretical Aspects and Models of Large, Complex and Open Information Networks". ISI Foundation, Villa Gualino, November 19th - 21st, 2007, Torino, Italy.

- Ciro Cattuto (PHYS-SAPIENZA), *Social Information Processing on the Web* (invited), First Conference of the Enrico Fermi Center. November 30th, 2007, Roma, Italy.

- C. Cattuto (PHYS-SAPIENZA), *Networks of tag co-occurrence and measures of relatedness in social tagging systems*, Meeting of the German Physical Society (DPG), Working Group Physics of Socio-Economic Systems (AKSOE). February 27th, 2008, Berlin (Germany).

- C. Cattuto (PHYS-SAPIENZA), *Social bookmarking and social similarity* (invited), Department of Physics, University of Fribourg. April 21st, 2008, Fribourg (Switzerland).

- Gerd Stumme (UNIK), *Information Retrieval and Knowledge Discovery in Folksonomies*, Social Websites - Complex Dynamics and Structure (satellite conference of ECCS'07). October 5th, 2007, Dresden, Germany.

- Beate Krause (UNIK), *The Anti-Social Tagger - Detecting Spam in Social Bookmarking Systems*. Fourth International Workshop on Adversarial Information Retrieval on the Web, 2008.

- Miranda Grahl (UNIK), *Conceptual Clustering of Social Bookmark Sites*. In Alexander Hinneburg, editor(s), Workshop Lernen - Wissensentdeckung - Adaptivität (LWA 2007), Martin-Luther-Universität Halle-Wittenberg, 2007.

- Andreas Hotho (UNIK), *Logsonomy - A Search Engine Folksonomy*. Second International Conference on Weblogs and Social Media(ICWSM 2008), 2008.

- Beate Krause (UNIK), *A Comparison of Social Bookmarking with Traditional Search*. 30th European Conference on IR Research, ECIR 2008.

- Miranda Grahl (UNIK), *Conceptual Clustering of Social Bookmarking Sites*. 7th International Conference on Knowledge Management (I-KNOW '07), 356-364,Know-Center,Graz, Austria,2007.

- Andreas Hotho (UNIK), *Organizing Publications and Bookmarks in BibSonomy*. Workshop on Social and Collaborative Construction of Structured Knowledge (CKC 2007) at WWW 2007, Banff, Canada, 2007.

- Martin Szomszor (UNI-SOTON) *Correlating User Profiles from Multiple Folksonomies* In ACM Confrence on Hypertext and Hypermedia, Pittsburgh, Pennsylvania, 2008.

**First year**

- Staab S., Topic Communities in Peer to Peer Networks. Talk at the workshop on *Semantic Network Analysis* at the European Semantic Web Conference 2006, June 11-15th, Budva, Montenegro.

- Nigel Shadbolt, panel on *The Next Wave of the Web*, World Wide Web Conference, Edinburgh, 2006.

- G. Stumme: Semantic Network Analysis of Ontologies. Fachgruppentreffen FGML, 7.10.2006, Hildesheim

- Görlitz O., Tagora: Analysing Folksonomies in Online Communities. Talk at the workshop on *Formation of Social Networks in Social Software Applications*, GI Annual Meeting 2006, October 2-10th, Dresden, Germany.

- Schmitz, C..: *Trend Detection in Folksonomies*, Proc. First International Conference on Semantics And Digital Media Technology (SAMT), Athens, Greece, December 6-8, 2006.

- Staab S., Ontology Learning. Invited Talk at the Inaugural Workshop of the Language, Interaction and Computation Lab at the Center For Mind / Brain Sciences (CIMeC), May 19, 2007, Rovereto, Italy.

- C. Cattuto, *Stochastic Models of Tagging Behavior*, International workshop on "Cooperation in Selfish Systems incorporating TagWorld I", University of Bologna Residential Center, Bertinoro (Italy), May 26-29th, 2006.

- C. Cattuto, *Semiotic Dynamics in Online Social Communities*, European Conference on Complex Systems ECCS06, Saïd Business Schoo, Oxford (UK), September 25-29th, 2006.

- C. Cattuto, *Complex Dynamics and the new Web Language*, 2005 Erice Prize for Science and Peace, Pontifical Academy of Sciences, The Vatican, December 21st, 2006.

- C. Cattuto, *Stochastic Models for Collaborative Tagging*, Noise in Physical Systems (N.i.P.S.) Workshop, Castello di Monterone, Perugia (Italy), March 10th, 2007.

- C. Cattuto, DPG Conference, Working Group Physics of Socio-Economic Systems, *Stochastic Models for Social Tagging Behavior*, Spring Meeting of the German Physical Society (DPG), Regensburg (Germany), March 26-30th, 2007.

- C. Cattuto, *Structure and Evolution of Collaborative Tagging Systems*, Collaborative Knowledge Management workshop (CoKM2007) at the Professional Wissensmanagement conference (WM2007), Potsdam (Germany), March 28-29th, 2007.

- C. Cattuto, *Semiotic dynamics in online communities*, Seminar on Language, Evolution, and the Brain (SLEB), International Institute of Advanced Studies (IIAS), Kyoto (Japan), April 23-27th, 2007.

- C. Cattuto, *Emergent semantics in online communities*, Language Engineering Group, Chinese University of Hong Kong, Hong Kong, May 4th, 2007.

- V. D. P. Servedio, DPG Conference, Section Dynamics and Statistical Physics, *Ranking and Community detection in unweighted networks*, Spring Meeting of the German Physical Society (DPG), Regensburg (Germany), March 26-30th, 2007.

- V. Loreto, DPG Conference, Working Group Physics of Socio-Economic Systems, *Nonequilibrium phase transitions in negotiation dynamics*, Spring Meeting of the German Physical Society (DPG), Regensburg (Germany), March 26-30th, 2007.

- V. Loreto, *Simon's like models with memory for tagging behaviour*, Conference on New Directions in Complex Systems, Buyukada, Istanbul (Turkey), September 3-9, 2006.

Tagora

- V. Loreto, *Stochastic models for tagging behaviour*, Language simulations Conference, Warsaw (Poland), September 11-14, 2006.

- V. Loreto, *Cultural route tothe emrgence of linguistic agreement*, EPFL, Lausanne, November 13, 2006.

- V. Loreto, *Complex systems approach to Language Games*, International Conference on Complex systems: from Physics to Biology and the social sciences, Lisbona (Portugal), November 22-25, 2006.

- V. Loreto, *Characterization of Complexity*, V Seminaire Transalpin de Physique "Dynamics and statistics in complex systems", Villa Gualino, Torino - Italy, February 26 - March 2, 2007.

- V. Loreto, *Language Games: a physicist point of view*, Seminar on Language, Evolution, and the Brain (SLEB), International Institute of Advanced Studies (IIAS), Kyoto (Japan), April 23-27th, 2007.

- V. Loreto, *Cultural route to the emergence of linguistic categories*, Language Engineering Group, Chinese University of Hong Kong, Hong Kong, May 4th, 2007.

- Szomszor, M., Cattuto, C., Alani,A., O'Hara, K., Baldassarri, A., Loreto,V., Servedio, V. D. P., *Folksonomies, the Semantic Web, and Movie Recommendation*, "Bridging the Gap between Semantic Web and Web 2.0" at the 4th European Semantic Web Conference ESWC 2007, Innsbruck, Austria, June 7, 2007.

- Schmitz, C.: *Network Properties of Folksonomies*, Challenge on Collaborative Knowledge Creation at the WWW2007 International World Wide Web Conference, Banff, Canada, May, 8–12, 2007.

- Hotho, A.: *BibSonomy - A social publication reference management system*. Challenge on Collaborative Knowledge Creation at the WWW2007 International World Wide Web Conference, Banff, Canada, May, 8–12, 2007.

- A. Hotho: BibSonomy - Research around a Folksonomy System, Informatik–Kolloquium Magdeburg, 31.5.2007

- Hanappe P., *Introduction to Collaborative Tagging*, Università IUAV di Venezia, Italy, June 2006.

- Hanappe P., *Collaborative Tagging and Semiotic Dynamics*, presentation at the Hochschule fur Gestaltung, Karlsruhe, Germany, November 2006.

- Staab, S., *On Understanding the Sharing of Conceptualizations* at the Conference "Processing Text-technological Resources", Bielefeld, Germany, March 13-15, 2008.

- Staab, S., *On Knowledge and Its Dynamics in Social Media*, Chinese Academy of Sciences, Bejing, China, April 21, 2008.

- Görlitz, O., Sizov, S., Staab, S., *Tagster - Tagging-Based Distributed Content Sharing* Proceedings of the ESWC 2008 Demo Session.

## 2.6   Tutorials

UniK provides four online tutorials for BibSonomy. They explain what the links around a BibSonomy entry mean, how to integrate BibSonomy into ones browser, how to add keywords to ones bookmarks, and how to provide metadata for your publication. The tutorials are available online at http://www.bibsonomy.org/help/tutorials.

## 2.7   Conferences, Workshops and Summer Schools

**Completed**

**Completed Third year**

- Ciro Cattuto was the General Co-Chair of Hypertext 2009: the 20th ACM conference on hypertext and hypermedia, June 29th to July 1st 2009, Turin, Italy. (http://www.ht2009.org/). Ciro Cattuto has been since in the steering committee of ACM Hypertext.

- Andreas Hotho and Vittorio Loreto have been Chairs of the Track 2 on People, Resources, and Annotations of the Hypertext 2009: the 20th ACM conference on hypertext and hypermedia, June 29th to July 1st 2009, Turin, Italy. (http://www.ht2009.org/index.php).

- Andrea Capocci and Vittorio Loreto organized a workshop on *Tagging Dynamics in Online Communities* in the framework of Hypertext 2009, June 29th, Turin, Italy. All the TAGora teams presented their results at the workshop. (http://www.tagora-project.eu/blog/2009/03/27/ht09-workshop-semiotic-dynamics-in-online-social-communities/)

- Harith Alani, Vittorio Loreto, Steffen Staab, Gerd Stumme organized a Dagstuhl Seminar on *Social Web Communities*, September 21st to 26th 2009.
  (http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=08391)

- Vittorio Loreto has been Session leader for the session on *Information and Communication Technologies* at the European Conference on Complex Systems ECCS08, Jerusalem, 10-19 September 2008. (http://www.jeruccs08.org)

- Folke Eisterlehner, Andreas Hotho, and Robert Jäschke (UNIK) were organizing the ECML PKDD Discovery Challenge 2009, Bled, Slovenia, 7.-11. September 2009. The challenge is using BibSonomy both as data source and as life system for evaluation.

- Dominik Benz (UNIK) was Co-Chair of the Workshop "Knowledge Discovery, Data Mining, Maschinelles Lernen 2008" der Fachgruppe KDML, Würzburg, Germany, 6.-8. Oktober 2008

- Gerd Stumme (UNIK), Harith Alani (SOTON), and Steffen Staab (UNI KOBLENZ) were organising the Dagstuhl Seminar "Social Web Communities", Dagstuhl, Germany, 21.-26. September 2008

- Dominik Benz, Andreas Hotho, and Robert Jäschke (UNIK) were organizing the ECML PKDD Discovery Challenge 2008, Antwerp, Belgium, 15. September 2008. The challenge was performed on BibSonomy data.

- Andreas Hotho (UNIK) was Co-Chair of the Wikis, Blogs, Bookmarking Tools - Mining the Web 2.0 Workshop, Workshop at ECML PKDD 2008, Antwerp, Belgium, 15. September 2008

- Andreas Hotho (UNIK) was Co-Chair of the International Workshop on Knowledge Acquisition from the Social Web, Workshop at Triple-I 2008, Graz, Austria, 3. September 2008

- Harith Alani (UNI-SOTON) was Co-Chair of the Semantic Technologies track of the European Semantic Web Conference, Crete, 2009.

- Harith Alani (UNI-SOTON) will be the co-chair of the Posters and Demos track for the 8th International Semantic Web Conference, near Washington DC, USA, 2009.

**Completed Second year**

- Vittorio Loreto (PHYS-SAPIENZA) was the vice-chairman of the XXIII IUPAP International Conference on Statistical Physics, STATPHYS 23, Genoa, Italy, 9-13 July 2007.
  (http://www.statphys23.org).

- Vittorio Loreto (PHYS-SAPIENZA) and Luc Steels (SONY-CSL) organized the *International School on Complexity: Course on Statistical Physics of Social Dynamics: Opinions, Semiotic Dynamics, and Language*, jointly with Ettore Majorana Foundation and Center For Scientific Culture, Erice, Italy 13-20 July, 2007.
  (http://pil.phys.uniroma1.it/erice2007).

- Gerd Stumme is co-organizing the "Web Mining 2.0 Workshop" that will be co-located with the 18th European Conference on Machine Learning / 11th European Conference on Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD) 2007, September 21, 2007 - Warsaw, Poland.
  (http://www.kde.cs.uni-kassel.de/ws/ecmlpkdd2007/)

- Andreas Hotho is co-organizing the "International Workshop on Data Mining in Web 2.0 Environments" held in conjunction with the IEEE International Conference on Data Mining (ICDM 2007) on October 28, 2007 in Omaha, United States.
  (http://www.kde.cs.uni-kassel.de/ws/Web2DM)

- Andreas Hotho is co-organising the Workshop 'Wikis, Blogs, Bookmarking Tools - Mining the Web 2.0' at ECML PKDD 2008, Antwerp, Belgium, 15. September 2008

- Andreas Hotho co-organised the Workshop ' Emergent Semantics and Ontology Evolution' at ISWC 2007, Busan, Korea, Workshop 13. November 2007

- Andreas Hotho co-organised the Workshop 'Data Mining in Web 2.0 Environments' at the IEEE International Conference on Data Mining 2007, Omaha, United States, 28. October 2007

- Gerd Stumme co-organised the Workshop 'Web Mining 2.0' at ECML/PKDD 2007, Warsaw, Poland, 21. September 2007

- Andreas Hotho co-organised the Workshop 'Bridging the Gap between Semantic Web and Web 2.0' at ESWC 2007, Innsbruck, Austria, 7. June 2007

- Ciro Cattuto co-organised the Workshop on "Social Websites - Complex Dynamics and Structure" (http://www.tagora-project.eu/outreach/eccs07) at the European Conference on Complex Systems ECCS07. October 5th, 2007, Dresden, Germany.

- Ciro Cattuto was the chairman, together with Filippo Menczer, of the "social linking" track (http://www.sigweb.org/ht08/home/soclinking.html) at the ACM Hypertext 2008 conference (http://www.sigweb.org/ht08/), Pittsburgh (USA), June 19-21, 2008.

- Steffen Staab has been the general chair of the International Conference on Intelligent User Interfaces, Canary Islands, Spain, January 13-16, 2008.
(http://www.iuiconf.org/)

**Completed First year**

- Gerd Stumme and Christoph Schmitz were co-organizers of a workshop on Semantic Network Analysis that was co-colocated with the European Semantic Web Conference ESWC-2006, June 12, 2006 at Budva, Montenegro.
(http://www.kde.cs.uni-kassel.de/ws/sna2006/)

- Andreas Hotho co-chaired the "Workshop on Web Mining 2006 (WebMine)" that was co-located with the European Conference on Machine Learning/International Conference on Principles of Knowledge Discovery in Databases 2006, September 18th, 2006, Berlin, Germany.
(http://www.kde.cs.uni-kassel.de/ws/webmine2006/)

- Steffen Staab co-organized the 15th International Conference on Knowledge Engineering and Knowledge Management, EKAW 2006, Podebrady, Czech Republic, October 2-6 2006.
(http://ekaw.vse.cz/)

- Vittorio Loreto (PHYS-SAPIENZA) organized the II Bagnovignoni meeting on *Semiotic Dynamics: Grammar*, Bagnovignoni (Siena), Italy, 23-26 October 2006.

- Steffen Staab co-organized the 1st International Conference on Semantic and Digital Media Technologies, Athens, Greece, 6-8 December 2006.
(http://www.samt2006.org/)

- Steffen Staab is co-organizing the 6th International Conference on Ontologies, DataBases, and Applications of Semantics (ODBase), Vilamoura, Portugal, November 25-30, 2007.
(http://www.cs.rmit.edu.au/fedconf/index.html?page=odbase2007cfp)

- Harith Alani and Gerd Stumme organized a workshop on Social and Collaborative Construction of Structured Knowledge at the World Wide Web Conference 2007.
(http://km.aifb.uni-karlsruhe.de/ws/ckc2007).

- Andreas Hotho co-chaired the Workshop "Bridging the Gap between Semantic Web and Web 2.0" that was co-located with the 4th European Semantic Web Conference ESWC 2007, June 7, 2007, Innsbruck, Austria.
(http://www.kde.cs.uni-kassel.de/ws/eswc2007/)

- 1st International Workshop on Collective Semantics: Collective Intelligence & the Semantic Web (CISWeb 2008) at the 5th European Semantic Web Conference (ESWC-08) http://www.eswc2008.org, June 2, 2008, Tenerife, Spain

- General and local chair for the 3rd International Conference on Semantic and Digital Media Technology, 2008 (SAMT-2008), Dec 3-5, 2008, Koblenz, Germany

- Program chair for the 7th International Semantic Web Conference, 2008 (ISWC'08), Oct 26-30, 2008 Karlsruhe, Germany

Tagora

- General chair, ACM IUI-2008, International Conference on Intelligent User Interfaces, January 13-16, 2008, Maspalomas, Spain

- PC Co-Chair, ODBase-2007, The 6th International Conference on Ontologies, DataBases, and Applications of Semantics, Nov 25-30, 2007, Albufeira, Portugal

## 2.8 Press, Radio & TV.

### 2.8.1 Press

**Third year**

- La strategia del tag, *OggiScienza*, 3rd July 2009,
  (http://oggiscienza.wordpress.com/2009/07/03/la-strategia-del-tag/).

- Ecco come scegliamo i 'tag' su internet. Il CNR: opportunità rivoluzionarie, *Computerworld*,
  8th July 2009,
  (http://www.cwi.it/notizia/18409/2009-07-08/Ecco-come-scegliamo-i-tag-su-internet-Il-CNR-opportunita-rivoluzionarie.
  html/).

- Tagging e ... problemi di testa, *Innovazione, Idee, reti, business*, 3rd July 2009,
  (http://www.lobbyinnovazione.it/index.php?option=com_content&view=article&id=231%3Atagging-e-problemi-di-testa&catid=
  1%3Ablog&Itemid=15&lang=it)

- Tag anti spam, *Galileo*, 3rd July 2009,
  (http://www.galileonet.it/news/11701/tag-anti-spam)

- Discovery Challenge 2009 – Die Literaturrecherche verbessern. publik Nr. 4, University of
  Kassel, May 2009. http://www.uni-kassel.de/presse/publik/09_04/s.4.pdf

- Nordhessen-Thema: Bücher jetzt einfacher verwalten. HNA – Hessisch Niedersächsische
  Allgemeine, 22.12.2008. http://www.kde.cs.uni-kassel.de/presse/HNA-Artikel-12-08

- The Wild vs The Orderly: Folksonomies and Semantics (TRIPLE-I 2008). Semantic Web
  Company, 4.9.2008.
  http://blog.semantic-web.at/2008/09/04/the-wild-vs-the-orderly-folksonomies-and-semantics-triple-i-2008/

- Citizen Science: How Smartphones Can Aid Scientific Research, Popular Mechanics Magazine, March 2009, http://www.popularmechanics.com/science/research/4308375.html (article on NoiseTube).

**First year**

- Swaminathan, N., *Tag, You're It: Scientists Describe Collaborative Tagging Sites like Del.icio.us*,
  ScientificAmerican.com, 23 January 2007
  (http://www.sciam.com/article.cfm?articleid=5021D304-E7F2-99DF-33DDD86F3B3ECA20).

- Bohannon, J., *Folk Wisdom for Web Sites*, ScienceNOW, 23 January 2007
  (http://sciencenow.sciencemag.org/cgi/content/full/2007/123/5).

- Progetto italiano studia nuovo linguaggio rete: Un gruppo INFM-CNR studia lo sviluppo del
  fenomeno "tagging", che genera nuove modalità di categorizzazioni, *Corriere della Sera*, 19
  July 2006,
  (http://www.corriere.it/Primo_Piano/Scienze_e_Tecnologie/2006/07_Luglio/19/web2.shtml).

- Al via un progetto di ricerca per studiare la dinamica della informazione sul web, *BUR.it - Bollettino Università & Ricerca*, 18 July 2006, (http://www.bur.it/2006/N_G_061926.php).

- Al via un progetto di ricerca per studiare la dinamica dell'informazione sul web, *Sussidiario*, (http://www.sussidiario.it/notizie/ultimora/messages/12581.shtml).

- Vittorio Loreto (PHYS-SAPIENZA), Il volo delle Oche, Radio24, 1st July 2006. (http://ilsole24ore.com/radio24$_$audio/oche010706.rm).

- Comportamento online, sotto c'è la matematica, *Corriere dell'Università e del Lavoro*, 5-18 February 2007, p. 6.

- Dopo i bloggers arrivano i "taggers": il nuovo fenomeno del web tra i nuovi punti del progetto "Tagora" del CNR, *ITnews*, 31 July 2006, (http://www.itnews.it/news/2006,182,dx,0731,135847.html).

- Dopo i bloggers arrivano i "taggers": il nuovo fenomeno del web tra i nuovi punti del progetto "Tagora" del CNR, *pc-facile.com*, 2 August 2006, (http://www.pc-facile.com/news/dopo_bloggers_arrivano_taggers/).

- Dotta, G., Tagora, studio italiano sulla folksonomy, *HTML.it* ,19 July 2006, (http://webnews.html.it/news/leggi/4468/tagora-studio-italiano-sulla-folksonomy/).

- Frittella L., Verso il web del futuro: Lo studio "Tagora" è rivolto alle dinamiche dell'informazione in Internet, *Rai.it*, 31 July 2006, (http://www.rai.it/news/articolonews/0,9217,1067143,00.html).

- Gallavotti B., *Come si spia il futuro di Internet: un progetto europeo indaga la folksonomia, il fenomeno di organizzazione spontanea dei contenuti. Fisici e neuroscienziati impegnati in un'impresa interdisciplinare, ispirata dalla logica dei sistemi complessi*, La Stampa, 28 March 2007 (http://www.tagora-project.eu/wp-content/2007/05/bohannon_folksonomy_ sciencenow.pdf).

- Gruppo studia linguaggio e dinamiche della rete, *Broadcast&Video*, n. 373, 21 July 2006, p. 12.

- Guidolanda F., Tagora, lo studio del Web 2.0, *InternetNews*, 24 July 2006, (http://internetnews.blog.dada.net/permalink/270736).

- Manacorda E., Internet: Dimmi come cataloghi... *Galileo - Giornale di scienza e problemi globali*, 4 August 2006, (http://www.galileonet.it/Magazine/mag0630/0630_2.html).

- Molinari C., Il web del futuro, *Il web del futuro - Cached Blog*, 1 August 2006, (http://www.cached.it/blog/archives/248-Il-web-del-futuro.html).

- Progetto "TAGora" sulle nuove dinamiche del web, *Città della Scienza*, 3 August 2006, (http://www.cittadellascienza.it/news_dal_mondo/index.cfm?sw=1&id_cat=6&ID_LANCI=5078).

- Progetto "Tagora": Semiotic Dynamics in on-line Social Communities?, *Ricerca Italiana*, 25 July 2006, (http://www.ricercaitaliana.it/news/news_ente-redazione_ri.htm(linkaPDFINFM)).

- Sante J. Achille, Europe studies the Web 2.0 Phenomenon with TAGora, *Multilingual Search*, 20 July 2006, (http://www.multilingual-search.com/527/20/07/2006/en/).

Tagora

- TAGora: ecco dove ci porterà il web, *La Stampa Web*, 31 July 2006,
  (http://www.stampa.cnr.it/documenti/agenzie/2006/Lug/31_lug_06_02.txt(adkronos)).

- TAGora: esplorare le dinamiche del web, *ADV News 24h*, 3 August 2006,
  (http://www.advmagazine.net/advnews-24h/index.php?p=11015048441707).

- TAGora: esplorare le dinamiche del web, *Amici Amici Magazine*, n. 1518, 3 August 2006.

- TAGora: esplorare le dinamiche del web, , *Jugo*, 31 July 2006,
  (http://www.jugo.it/modules.phpname=News&file=article&sid=4118).

- TAGora: un progetto italiano verso il web semantico, *Googlisti.com*, 26 July 2006,
  (http://googlisti.com/tag/tagora/).

- Tagora, studio italiano sulla folksonomy, *HTML.it* ,
  (http://webnews.html.it/news/stampa/4468/tagora-studio-italiano-sulla-folksonomy/).

### 2.8.2  Talks at non-technical events, Radio

**Third year**

- Vittorio Loreto (PHYS-SAPIENZA), Italian Radio, Radio 24, *Cataloghiamo tutto*, 16th August
  2008. (http://www.moebiusonline.eu/trasmissioni/080816trasmissione.shtml)

- Vittorio Loreto (PHYS-SAPIENZA), Italian Radio, Radio 24, *Il Tagging*, 15th August 2009.
  (http://www.moebiusonline.eu/trasmissioni/0908_Agosto_trasmissione.shtml#102)

**Second year**

- Vittorio Loreto (PHYS-SAPIENZA), *Complessità, informazione e altre storie*, Secondo ciclo
  di conferenze sul tema *Armonie del cosmo: le "due culture"*, Teatro dell'Opera, Roma, Italy,
  15th May 2008.

- Vittorio Loreto (PHYS-SAPIENZA), Italian Radio, Rai - Radio 3 Scienza, *Complessitá senza
  complessi*, 24th April 2008. (http://www.radio.rai.it/radio3/view.cfm?Q_EV_ID=249235)

- Ciro Cattuto (PHYS-SAPIENZA), radio interview on complexity and on-line user behav-
  iors: http://www.formicablu.it/fmblue/index.php?LoudbotService=3&id=198, November 20th,
  2007.

- Vittorio Loreto (PHYS-SAPIENZA), Italian Radio, Rai - Radio 3 Scienza, *La lingua batte
  dove la fisica vuole*, 23rd October 2007. (http://www.radio.rai.it/radio3/view.cfm?Q_EV_ID=
  229258)

- Vittorio Loreto (PHYS-SAPIENZA), Italian Radio, Rai - Radio 3 Scienza, *La fisica dei sis-
  temi complessi*, 20th September 2007. (http://www.radio.rai.it/radio3/view.cfm?Q_EV_ID=
  226108)

- Ciro Cattuto and Vittorio Loreto (PHYS-SAPIENZA) gave a lecture at the Perugia Science
  Festival (http://www.perugiasciencefestival.it): "Caffè corretto con frattali: I sistemi complessi
  da Internet alle galassie", September 8th, 2007, Perugia (Italy).

- Ciro Cattuto (PHYS-SAPIENZA) gave several lectures in the context of a dissemination event
  repeated at different locations in Italy: at the science fest organized by the Lazio Region (http:
  //festivalscienza.it), in Poggio Mirteto (Lazio) and Viterbo (Lazio); and at a dissemination
  event organized at the STATPHY23 conference in Genova.

Figure 2.1: http://www.tagora-project.eu

**First year**

- C. Cattuto, panel on *Collaborative collection making* at the Sony Intensive Science event, La Maison Rouge, Paris, October 6-10th, 2006.

- V. Loreto (PHYS-SAPIENZA), *La nascita del consenso nei sistemi complessi: l'esempio del linguaggio*, round table on "La Nascita del Consenso" at the Roma Opera Theatre, Roma, May 31st, 2007.

- C. Cattuto, *Il web come sistema complesso: la gestione collaborativa della conoscenza* , round table on "La Nascita del Consenso" at the Roma Opera Theatre, Roma, May 31st, 2007.

- C. Cattuto, *La complessità nel cyberspazio*, "Apriamo la mente. Lazio, terra di scienza" science festival, Viterbo (Italy), May 26th, 2007.
  (www.culturalazio.it/binary/lazioCultura/agenda/programmi_Mela.1178712093.pdf)

- G. Stumme, C. Schmitz: Jagd auf die Hommingberger Gepardenforelle Sucurreng3.texhmaschinen und Soziale Software. Presentation for B Braun AG, Kassel, 19.9. 2006

- Tisselli, E., *Tags and maps: fragmented mirrors*, round table at the "Createurs singuliers" Symposium at the Museum of Contemporary Art of Geneva, Geneva, May 27th 2008.

## 2.9   TAGora Project Website and Portal

As part of the project presentation task, a web site has been set up as a single reference point for all the public activities of the TAGora project. The second-level domain `tagora-project.eu` was registered and reserved for the TAGora project. A dedicated Linux server was purchased and is currently hosted in the computer room of the PHYS-SAPIENZA team. The server is running the open-source Apache (http://www.apache.org) web server and related services. The TAGora web site, http://www.tagora-project.eu (Fig. 2.1) is managed by using Wordpress (http://wordpress.org), the popular open-source content management system (CMS). The Wordpress installation was highly customized to fit the project needs, both in terms of graphical layout and in terms of content structure. The front page of the web site provides an outline of the TAGora mission and a list of the participating institutes. The main navigation bar (see Fig. 2.1, top) provides access to the following sections:

- **people**, http://www.tagora-project.eu/people: this section provides short bios of all the persons involved in the TAGora project.

- **consortium**, http://www.tagora-project.eu/consortium: this section, which can be reached as a subsection of the "People" button, gives an overview of the TAGora consortium, highligthing the complementarity of the partners in relation to the project mission. A list of the TAGora teams follows, providing details about the areas of expertise of each team and its position within the international research community.

- **products**, http://www.tagora-project.eu/products: this section showcases the applications developed in the framework of the project (currently the Ikoru image-tagging application by Sony CSL, the BibSonomy social bookmarking system developed at the University of Kassel, Zexe.net developed at the Sony-CSL laboratory and Tagster, developed at the university of Koblenz).

- **contact**, http://www.tagora-project.eu/contact: provides contact information for the project. This includes the email address for project inquiries, `info@tagora-project.eu`, the address of the project coordinator, and information access to the TAGora mailing list for announcements and project news, available at http://lists.tagora-project.eu/listinfo/news.

In addition to the above section, three more dynamic website sections are available, whose content is constantly updated to reflect the progress of the project:

- **blog**, http://www.tagora-project.eu/blog: this section is a full-blown blog for the TAGora project, co-authored by several project members. The blog is used to announce all kinds of events and news involving the TAGora project, covering scientific results, participation to conferences and workshops, project-sponsored events, press releases, articles in the press and so on. RSS and Atom feeds are provided to allow better exchanges with the blogging community.

- **outreach**, http://www.tagora-project.eu/outreach: this section is a subset of the TAGora blog, focusing on blog entries that deal with press releases and articles in the press.

- **publications**, http://www.tagora-project.eu/publications: provides a live list of papers published by members of the TAGora project. For each article, the full bibliographic information is given, together with an PDF version of the paper. The publication list is constantly updated by polling BibSonomy: project members post their new articles to BibSonomy, under the grop "TAGora", and tag them as *tagorapub*. The TAGora website polls the BibSonomy RSS feed for the TAGora group and when it detects new articles tagged with *tagorapub*, it loads them into Wordpress and published them. This kind of integration is an original design deployed by the TAGora project.

New buttons, moreover, have been added to the website in order to add some more portal-like features:

- **data**, http://www.tagora-project.eu/data: provides dataset reporting the tagging activities in some major online tagging communities such as del.icio.us, Flickr, Bibsonomy; moreover, software tools useful to analyze and simulate tagstreams and networks are provided.

- **tagging**, http://www.tagora-project.eu/tagging: provides a list of social tagging websites, among the most popular in the Web. Along with a list of website, some video-tutorial are included in order to explain the user how to use them.

All the content included in the above three sections (blog entries, press entries, publication entries) is tagged, and a live tag-cloud is provided in the sidebar of the website (Fig. 2.1, right). Blog posts have editorially given tags, while the tags of publication entries are automatically pulled from BibSonomy. Tags can be effectively used to browse the whole dynamic content of the TAGora website. Standard text search of the website content is also available.

## 2.10   Demonstrations in Industrial and Scientific Exhibition

SONY-CSL met with the following people and corporate divisions to discuss collaborative tagging and demonstrate the Ikoru system (see Task 2.2):

- Steve Amagai (Sony Corporation, Tokyo)

- Gerald Reitmayr (Senior Manager E-Business at Digital Imaging Sony Europe)

- Mr Ozawa (Product Planing Dept. VBD, ITCNC, Sony Corporation)

- Akikazu Takeuchi of So-Net (Sony Communication Network Corporation, Tokyo)

- Masanao Tsutsui (Sony CyberShot, Digital Imaging Business Group, Tokyo)

- Dr Sato (Mobile Product R&D Group, Sony Corporation, Tokyo)

- Dr Toshino (PAO Group, Sony Corporation, Tokyo)

## 2.11　Other dissemination actions

**Third year**

- Ciro Cattuto has been the General Co-Chair of Hypertext 2009: the 20th ACM conference on hypertext and hypermedia, June 29th to July 1st 2009, Turin, Italy. (http://www.ht2009.org/index.php).

- Andrea Capocci and Vittorio Loreto organized a workshop on *Tagging Dynamics in Online Communities* in the framework of Hypertext 2009, June 29th, Turin, Italy. All the TAGora teams presented their results at the workshop. (http://www.tagora-project.eu/blog/2009/03/27/ht09-workshop-semiotic-dynamics-in-online-social-communities/)

- Harith Alani, Vittorio Loreto, Steffen Staab, Gerd Stumme organized a Dagstuhl Seminar on *Social Web Communities*, September 21st to 26th 2009. (http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=08391)

- Vittorio Loreto (PHYS-SAPIENZA) has been the session leader of the Information and Communication Technologies session at European Conference on Complex Systems 2008 (ECCS 2008), Jerusalem, Israel, September 14th-19th, 2008.

**Second year**

- PHYS-SAPIENZA presented a stand with videos and demos at the Convegno *Conoscere la complessià: viaggio tra le scienze*, CSI-Piemonte, 22nd-23rd November 2007 Torino, Italy.

- Hanappe P., Linke A., *Phenotypes/Limited Forms*, art installation, Zentrum für Kunst und Medien, Karlsruhe, Germany, October 2007 - January 2009.

- Hanappe P., Linke A., *Phenotypes/Limited Forms*, art installation, "Selective Knowledge" exhibition at the The National Bank of Greece Cultural Foundation, Institute for Contemporary Art and Thought, Athens, Greece, April - July 2008.

- Linke A., Hanappe P., Tisselli E., Rich A., Kuhn W., Mende D., Pocock P., Korn S., students of the curator class at the HfG Karlsruhe, *Interactive Photo Archive* (working title), Institute for Contemporairy Art and Tought, Athens, Greece, planned for October 2007.

**First year**

- Aurnhammer M., Hanappe P., Linke A., Brunello M., Graziani S., and the students of the Faculty of Arts and Design, Università IUAV di Venezia, ClaVES undergraduate degree in Visual Arts and Theatre, *Linking Linke*, La Maison Rouge, Paris, Ocrober 2006.

Tagora

- Aurnhammer M., Hanappe P., Linke A., Brunello M., Graziani S., and the students of the Faculty of Arts and Design, Università IUAV di Venezia, ClaVES undergraduate degree in Visual Arts and Theatre, *Linking Linke*, Sony ExploraScience Museum, Tokyo, December 2006 - January 2007.

- Sony CSL, *Intensive Science*, brochure for the 10th anniversary of the Sony Computer Science Laboratory, Paris, October 2006.

- Debatty R., *Net_Dérive, the city as instrument*, We make money not art, 19 October 2006, http://www.we-make-money-not-art.com/archives/009042.php

- Rheingold H. *Street Ethnographers*, Smart Mobs, 22 May 2007, http://www.smartmobs.com/archive/2007/05/22/street_ethnogra....html

- Green J.-A., *canal*MOTOBOY: Empowering people to tell their stories*, Networked_performance, 11 May 2007, http://www.turbulence.org/blog/archives/004266.html

- Wellington C., *Motoboys transmitem de celulares*, Overmundo, 10 May 2007, http://www.overmundo.com.br/agenda/motoboys-transmitem-de-celulares

- Aurnhammer M., Hanappe P., *Linking Linke and Collaborative Tagging*, panel discussion, Intensive Science Exhibition, La Maison Rouge, Paris, October 2006.

- Steels L., Pachet F., Hanappe P. *Collective Intelligence and Sustainable Development*, Solutions for a Sustainable Worls Workshop, Camargue, France, May 2007.

## 2.12 Dissemination actions toward the other projects of the Complex System Initiative

**Third year**

- Vittorio Loreto (PHYS-SAPIENZA) has been the session leader of the Information and Communication Technologies session at European Conference on Complex Systems 2008 (ECCS 2008), Jerusalem, Israel, September 14th-19th, 2008.

- Andrea Baldasarri (PHYS-SAPIENZA) took part to the Cluster Meeting for the 6 STREP projects on Complex Systems, Brussels, 14th October 2008.

**Second year**

- Vittorio Loreto (PHYS-SAPIENZA) took part to the Workshop on the results of the 'Simulating Emergent properties of Complex Systems' pro-active initiative, Brussels, 25th October 2007.

- Vittorio Loreto (PHYS-SAPIENZA) presented the TAGora project to the Showcase of European Complexity Science Projects (CRP Forum), October the 6th, 2007, Dresden, Germany.

- Vittorio Loreto (PHYS-SAPIENZA) presented a position paper *Information dynamics in web-based social systems* at the FET COSI-ICT Workshop, "Science of Complex Systems for Socially Intelligent ICT", October the 6th, 2007, Dresden, Germany.

**First year**

- Vittorio Loreto (PHYS-SAPIENZA) has been the vice-chairman of the XXIII IUPAP International Conference on Statistical Physics, STATPHYS 23, Genoa, Italy, 9-13 July 2007. (http://www.statphys23.org).

- Vittorio Loreto (PHYS-SAPIENZA) and Luc Steels (SONY-CSL) organized the *International School on Complexity: Course on Statistical Physics of Social Dynamics: Opinions, Semiotic Dynamics, and Language*, jointly with Ettore Majorana Foundation and Center For Scientific Culture, Erice, Italy 13-20 July, 2007. (http://pil.phys.uniroma1.it/erice2007).

- Ciro Cattuto (PHYS-SAPIENZA) organized a satellite workshop of the European Conference on Complex Systems 2007 (ECCS 2007) on *Social websites: complex dynamics and structure*, Dresden, Germany, 5th October 2007.

## 2.13   Joint Publications

**Third year**

- Alani, H., Szomszor, M., Cattuto, C., Van den Broeck, W., Correndo, G. and Barrat, A. (2009) Live Social Semantics. In: 8th International Semantic Web Conference (ISWC), October 2009, US.

- Dellschaft, Klaas; Görlitz, Olaf; Szomszor, Martin (2009): Sense Aware Searching and Exploration with MyTag. In: Proceedings of ISWC-09 Poster and Demo Session.

- Markines, B.; Cattuto, C.; Menczer, F.; Benz, D.; Hotho, A., Stumme, G. (2009), Evaluating Similarity Measures for Emergent Semantics of Social Tagging, in '18th International World Wide Web Conference', pp. 641–641.

- Benz, D.; Grobelnik, M.; Hotho, A.; Jäschke, R.; Mladenic, D.; Servedio, V. D. P.; Sizov, S.; Szomszor, M., Biller, W. (2008), Analyzing Tag Semantics Across Collaborative Tagging Systems, in Harith Alani; Steffen Staab, Gerd Stumme, ed.,'Proceedings of the Dagstuhl Seminar on Social Web Communities'.

- Cattuto, C.; Benz, D.; Hotho, A., Stumme, G. (2008), Semantic Analysis of Tag Similarity Measures in Collaborative Tagging Systems, in 'Proceedings of the 3rd Workshop on Ontology Learning and Population (OLP3)', pp. 39–43.

- Cattuto, C.; Benz, D.; Hotho, A., Stumme, G. (2008), 'Semantic Grounding of Tag Relatedness in Social Bookmarking Systems', The Semantic Web - ISWC 2008, 615–631.

- Cattuto, C.; Benz, D.; Hotho, A., Stumme, G. (2008), Semantic Grounding of Tag Relatedness in Social Bookmarking Systems, in Amit P. Sheth; Steffen Staab; Mike Dean; Massimo Paolucci; Diana Maynard; Timothy W. Finin, Krishnaprasad Thirunarayan, ed.,'The Semantic Web – ISWC 2008, Proc.Intl. Semantic Web Conference 2008', Springer, Heidelberg, pp. 615–631.

- Alani, H.; Staab, S., Stumme, G., ed. (2008), Proceedings of the Dagstuhl Seminar on Social Web Communities, Schloss Dagstuhl.

- Passant, A., Mulvany, I., Mika, P., Maisonneuve, N., Löser, A., Cattuto, C., Bizer, C., Bauckhage, C. and Alani, H. (2008) Mining for Social Serendipity. In: Dagstuhl Seminar on Social Web Communities, 21-26 September, Dagstuhl, Germany.

Tagora

- Baldassarri, A., Barrat, A., Capocci, A., Halpin, H., Lehner, U., Ramasco, J., Robu, V. and Taraborelli, D. *The Berners-Lee Hypothesis: Power laws and Group Structure in Flickr* in Harith Alani; Steffen Staab, Gerd Stumme, ed.,'Proceedings of the Dagstuhl Seminar on Social Web Communities', Dagstuhl, 2008.

**Second year**

- Ciro Cattuto, Dominik Benz, Andreas Hotho and Gerd Stumme *Semantic Analysis of Tag Similarity Measures in Collaborative Tagging Systems* Proceedings of the 3rd Workshop on Ontology Learning and Population (OLP3), Patras, Greece, July2008 (2008).

- V. Loreto and L. Steels *Social dynamics: Emergence of language*, Nature Physics **3** 758 (2007).

- B. Markines, C. Cattuto, F. Menczer, D. Benz, A. Hotho and G. Stumme, *Social Similarity*, submitted to the ACM 17th Conference on Information and Knowledge Management (CIKM2008) (2008).

- C. Cattuto, B. Benz, A. Hotho and G. Stumme, *Semantic Grounding of Tag Relatedness in Social Bookmarking Systems*, submitted to the International Semantic Web Conference 2008 (ISWC2008).

**First year**

- Cattuto, C., Schmitz, C., Baldassarri, A., Servedio, V. D. P., Loreto, V., Hotho, A., Grahl, M., Stumme, G., *Network Properties of Folksonomies*, AICOM Special Issue on *Network Analysis in Natural Sciences and Engineering*, 2007.

- Schmitz, C., Grahl, M., Hotho, A., Stumme, G., Cattuto, C., Baldassarri, A., Loreto, Servedio, V. D. P., *Network Properties of Folksonomies*, Proceedings of the WWW2007 International World Wide Web Conference, 2007.

- Szomszor, M., Cattuto, C., Alani, H., O'Hara, K., Baldassarri, A., Loreto, V. and Servedio, V. D. P., *Folksonomies, the Semantic Web, and Movie Recommendation*. In Proceedings of 4th European Semantic Web Conference (SemNet 2007), Bridging the Gap between Semantic Web and Web 2.0, pp. 71–84, (2007).