# Tommaso Venturini – Curriculum Vitæ

www.tommasoventurini.it  –  scholar.google.it/citations?user=wW7XV2sAAAAJ&hl

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## Summary

I am researcher at the CNRS Centre for Internet and Society. I am also associate researcher of INRIA and of the médialab of Sciences Po Paris and founding member of the Public Data Lab.

In 2017 and 2018, I have been researcher at the École Normale Supérieure of Lyon and recipient of the "Advanced Research" fellowship of the French Institute for Computer Science and Automation. In 2016, I have been "digital methods lecturer" at the Department of Digital Humanities of King's College London. From 2009 to 2015, I coordinated the research activities of the médialab of Sciences Po Paris.

My research is positioned at the interface between social and human sciences and digital computation and design. My research activities focus on: Digital Methods; Digital Media Studies; Controversy Mapping; Science & Technology Studies; Social Modernization. I have been leading scientist of the projects EMAPS and MEDEA. My current research interests focus on digital communication disorders and online attention hyper-synchronisation.

I teach Controversy Mapping, Digital Methods, Data Journalism, Data Activism and STS at graduate and undergraduate level.

## Current research interests

My current research inquiry into the phenomenon commonly, but improperly, known as 'fake news'. The notion of 'fake news' is misleading because it focuses too narrowly on the dissemination of counterfeit evidence. While this is certainly a problem, the threat of digital misinformation runs deeper and consists in the systemic degradation of public debate. I have called this phenomenon '**junk news**' for (just as junk food) digital misinformation is consumed because it is addictive, not because it is nourishing. More precisely, I propose to conceptualise this type of misinformation as a form of '**online attention hyper-synchronisation**', deriving from the acceleration of media attention cycles and the inflation of information agendas.

This research builds on my long-lasting engagement in the **mapping of public controversies through the traces they leave in digital media** and it is motivated by a first-hand observation (as a researcher and citizen) of the increasing difficulties of these media in sustaining democratic debates. Drawing from novel and established methods and disciplines (such as media, sciences and technology, internet policy, infrastructure and platforms studies), my research investigate the **infrastructures of digital communication**, inquiring into dynamics that span from the online attention market, to tracking and recommendation algorithms, from the growing social metrification, to the proliferation of viral subcultures and to the rise of political trolling. Instead of studying each of these dynamics in isolation it aims at developing the integrated conceptual model of their reinforcing interactions.

Drawing on the **participatory approach** that I have promoted through the **Public Data Lab**, this research hope to engage scholars, citizens, civil society groups and policy-makers, in order to foster a better appreciation of the dynamics of online debate.

## Training and early years

I received my training at the University of Bologna in **U. Eco's Communication Studies Program**. There, I joined the ***Web Group*** a group of students and researchers discussing and practicing electronic media. During my studies, I managed various online co`mmunities and founded **Ideaedi** Web design agency. These professional experiences trained me in working with developers and designers and gave me a hands-on knowledge of digital technologies.

Such knowledge found a first research application in 2001 during a **visiting at UCLA,** where I attended an Honors Collegium course on agent-based modelling. After this experience of digital sociology, I felt that my work on the digital turn should be rooted in a broader understanding of social modernisation. **I graduated *magna cum laude*** with a dissertation on the modernisation of magic, under the supervision of Pierpaolo Giglioli.

My Ph.D. took place at Milano Bicocca in the **Society of Information Program** (co-organized by Sociology and Computer Science departments), where I was exposed to more technical training and discovered Science and Technologies Studies. My STS reflection matured at the *Centre d'Etude des Techniques des Connaissances et des Pratiques* of **Paris I Pantheon-Sorbonne**, where I worked with A. Gras on large technical systems. My **Ph.D. thesis** explored the controversies on agricultural modernisation and biodiversity patenting and was greeted with honours by the jury.

My work on controversies brought me to encounter Bruno Latour and the seminal **project MACOSPOL** (2007-2009). The objective of MACOSPOL was to formalize Controversy Mapping as an applied version of Actor-Network Theory. My role in the project was to mediate the collaboration between the STS team at Sciences Po and the technical partners, particularly at the Digital Methods Initiative of Amsterdam.

## Research achievements

1. I helped Bruno Latour **establish the Sciences Po médialab** (medialab.sciences-po.fr), an experimental laboratory gathering scientists, developers and designers. During the six years of my coordination (2009-2015),
   - the médialab grew up to more than thirty members;
   - obtained and A+ evaluation from the French Evaluation Agency (AERES);
   - published a rich ecosystem of digital research tools (tools.medialab.sciences-po.fr).

2. I have **published in international journals** (scholar.google.fr/citations?user=wW7XV2sAAAAJ&hl), received numerous invitations for keynotes and workshops, and served as a reviewer for research agencies and scientific journals (e.g. the editorial board of *Big Data and Society* and of the *ACM Web Science Conference*).

3. I have been the **principal investigator** of two large collaborative projects (EMAPS and MEDEA) and participated in many other projects (forccast.hypotheses.org, contropedia.net, societalsecurity.net, lafabriquedelaloi.fr, sciencespo.fr/DIME-SHS, politiquesdelaterre.fr, modesofexistence.org).

4. Taking on a position as **"Digital Methods Lecturer" at King's College London**, Digital Humanities Department, I expanded my research network and my competences from the social sciences to the humanities.

5. In 2017 and 2018, I have been the recipient of the **INRIA advanced research fellowship** (www.inria.fr/institut/recrutement-metiers/offres/advanced-research-positions/presentation).

6. In February 2007, I have founded (with J. Gray and L. Bounegru) the **Public Data Lab** (publicdatalab.org)

## Diplomas

- **Habilitation à diriger des recherches** (HDR) "Controversy Mapping, a Travel Companion"
  September 26, 2016, École Normale Supérieure de Lyon
  Jury : Pablo Jensen, Dominique Pestre, Eric Fleury, Didier Bigo, Richard Rogers, Dominique Vinck

- **Ph.D.** "Seminare Vento: Controversie sulla biopirateria e formalizzazione tecnica moderna"
  (Sowing Wind: Biopiracy Controversies and Modern Technical Formalization)
  March 21, 2007, University of Milano Bicocca (Informatics Department & Sociology Department)

- **Master in Semiotics and Communication Sciences**,
  March, 2003, University of Bologna (Communication Sciences Department), *Magna cum Laude.*

## Professional history

| Start | End | Institutions | Positions and status |
|---|---|---|---|
| 01/11/2018 | … | CNRS | Researcher |
| 01/01/2017 | 31/10/2018 | INRIA | Advance Research Fellow |
| 01/01/2016 | 01/01/2017 | King's College London | Lecturer in Digital Methods |
| 01/11/2009 | 31/12/2015 | Sciences Po Paris | Researcher and médialab Coordinator |
| 01/09/2007 | 31/10/2009 | University of Bologna | Post-doc |
| 01/05/2000 | 31/10/2009 | Ideaedi Web Agency | Founder and project manager |

## Prizes and awards

In 2015, I received the Prize "Etoile d'Europe" as the project EMAPS (of whom I was the Principal Investigator) was elected among the best UE-funded research projects led by a French university (the only one in social science).

## Responsibilities

Since 2015 ...... Director of the Scientific Committee, *DIME-SHS programme* Sciences Po Paris, France

Since 2014 ...... Member of the Editorial Board, *Big Data & Society Journal* (Sage)

Since 2019 ...... Member of the Editorial Board, *Political Anthropological Research on International Social Sciences (PARISS) (*Brill*)*

2019 ................. Ph.D. examiner, University of New South Wales, Sydney

2018 ................. Organiser of two sessions at the *EASST 2018 Conference*, Lancaster, UK (24-28/07/18)
- "Data Worlds, public imagination and public experimentation with data infrastructures"
- "What do we still not know about the IPCC"

2018 ................. Expert project reviewer, *Swiss Tropical and Public Health Institute*, Switzerland

2018 ................. Expert project reviewer, University of Leuven, Belgium

2017 ................. Ph.D. examiner, University of Bordeaux, France

2016-2017 ....... Coordinator of the research seminars, Digital Humanities Dept., King's College London, UK

2016 ................. Expert project reviewer, Agence Nationale de la Recherche ANR, France

2016 ................. External examiner for the recruitment an Associate Professor, University of Aalborg, Denmark

2016 ................. Ph.D. Examiner, University of Copenhagen, Denmark

2015 ................. Scientific advisor, *Danish Council for Independent Research* - Humanities

2015 ................. Expert reviewer, *Istituto Zooprofilattico Sperimentale delle Venezie*

2015 ................. Expert reviewer, *Netherlands Organisation for Scientific Research* (NWO)

2014-2015 ....... Reviewer for Master Students admissions, Sciences Po Paris, France

2014 ................. Expert reviewer, *European Union DG Research*

2013 ................. Member of the Editorial Board, *ACM Web Science*

2012 ................. Organizer of the session "Socializing Design, Designing Sociology" at the *4S-EASST Conference*, Copenhagen, Denmark (18/11/12)

2012 ................. Organizer of the session "Debating Environmental Controversies" at the *Public Communication of Science and Technology Conference*, Florence, Italy (18/04/12)

2012 ................. Expert reviewer, *Romanian National Council for Research and Development*

2010 ................. Scientific advisor, *Ministére de l'Enseignement Supérieur et de la Recherche*, France

Through the years, I have conducted peer review for the following journals     and book publishers

| | | |
|---|---|---|
| New Media & Society | Nature Climate Change | Routledge |
| Big Data & Society | Environmental Science & Policy | Palgrave |
| Public Understanding of Science | Science of the Total Environment | Amsterdam University Press |
| Theory Culture and Society | Global Environmental Change | |
| Science, Technology & Human Values | Challenges | |
| Science Communication | CoDesign | |
| Religion, Media & Digital Culture | Canadian Journal of Communication | |
| Qualitative Research | STS Encounters | |
| Poetics | Tecnoscienza | |
| Etnografia e ricerca qualitativa | NECSUS | |

## Mobility

2001-2001 ....... Visiting Students - Media Studies Department, University of California Los Angeles, USA
At *UCLA Honors Collegium* I attended a course on social modelling by P. Bonacich. During that course, I coded an agent-based simulation inspired to the work of R. Axelrod on strategic cooperation (later used as an education resource in the course).

2006-2006 ...... Visiting Researcher - CETCOPRA, Université Paris 1 Sorbonne Pantheon
At the *Centre d'Etude des Techniques des Connaissances et des Pratiques*, I worked with the on technical modernization and participated to the reflection on the creation of *Décroissance & Technique* journal.

2019 ................. Visiting Researcher - Research School of Social Sciences at the Australian National University.
At the *Virtual Observatory for the Study of Online Networks* (VOSON) ([vosonlab.net](vosonlab.net)), I will investigate innovative approaches to model the dynamics of social and communication networks.

## Dissemination of scientific knowledge

Working on two original research topics (sociotechnical controversies and digital methods), I have had the chance to be invited to give dozens of conferences and lectures to different audiences. Here is a selection:

1. *02/04/19 - University of Edinburgh*
   **The Infrastructures of Online Attention Hyper-Synchronisation** *(Research lecture)*
   **@** Department of Science Technology and Innovation Studies

2. *20/03/18 - Australian National University in Canberra*
   **From Fake News to Online Attention Hyper-Synchronisation** *(Research lecture)*
   **@** College of Arts & Social Sciences

3. *27/05/18 - ICA Conference*
   **Confessions of a Fake News Scholar** *(Conference)*
   **@** Panel: "Media Scholars' Consideration of Fake News"

4. 27/10/17 - University of Groningen Center for Digital Humanities
   **Visual network analysis and network storytelling: doing networks other than with mathematics** (Keynote lecture)
   @ Digital Humanities Day

5. 03/07/17 - Université de Montréal
   **Confessions of a Fake News Scholar** (Keynote lecture)
   @ Seminaire "Les fausses nouvelles : le nouveau visage d'un vieux problème"

6. 03/07/17 - University of Amsterdam
   **Visual Network Analysis** (Keynote lecture)
   @ DMI Summer School

7. 21/10/16 - École Supérieure de l'Éducation Clermont-Auvergne
   **Three Maps and Seven Misunderstandings: A Digital Mapping of Climate Adaptation** (Master class)
   @ *Jean Monnet Erasmus+ program*

8. 14/09/16 - Institute for Policy Research – University of Bath
   **Sprinting with Data** (Research lecture)
   @ *Symposium on Evidence and the Politics of Policymaking*

9. 27/06/16 - University of Amsterdam
   **Dancing Together: the Fluidification of the Modern Mind** (Research lecture)
   @ DMI Summer School

10. 09/06/16 - Gothenburg University
    **Actor-Network Theory and Network Analysis, False Friends?** (Research lecture)
    **@ LETStudio Seminar**

11. 17/05/16 - Université de Lorraine
    **Quali-quantitative Methods for Digital Humanities** (Research lecture)
    @ *Séminaire du Centre de Recherches sur les Médiations*

12. 15/03/16 - INRIA/IRISA Rennes
    **Equipping journalist with digital methods: the case of the climate negotiation browser** (Research lecture)
    **@** *Computational Journalism seminar*

13. 23/11/15 - Netherlands Royal Academy of Sciences
    **Contropedia, and the question of analytically separating the medium and the message** (Research lecture)
    @ *Reading Wikipedia*

14. 13/11/15 - Sciences Po Formation Continue
    **Business Intelligence by Controversy Mapping** (Master class)

15. 16/10/15 - European Food Safety Authority
    **Mapping Controversies: Visualizing a World of Change** (Research lecture)
    @ *Drivers for emerging issues in animal and plant health*

16. 25/09/15 - Sciences Po Formation Continue
    **Submitting and Coordinating a European Project** (Workshop)

17. 30/06/15 - Durham University
    **Of Migrants and Words. A Web-Based Analysis of Online**

**Debates on Migrations and Environment** (Research lecture)
*@ Human Migration and the Environment: Futures, Politics, Invention.*

18. 30/06/15 - University of Amsterdam
**A Tale of Two Cities: Controversy Mapping and Issue Mapping (and any subtle difference)** (Research lecture)
*@ DMI Summer School*

19. 02/06/15 - Stockholm Environmental Institute
**4 Misunderstanding about Digital Methods (keynote speech)** (Research lecture)
*@ Data Revolution workshop*

20. 27/03/15 - University of Sussex
**Medusa at the Hairdresser** (Research lecture)
*@ SPRU Freeman Friday Seminars*

21. 26/03/15 - Le Parisien
**Understanding Climate Negotiations Controversies** (Workshop)
*@ Global Editors Lab on « Covering Paris Climate Summit »*

22. 20/02/15 - Bibliotheque Nationale de France
**Climaps by EMAPS (Public Conference)**
*@ Europeana Conference (Re-use track)*

23. 20/02/15 - Goethe-Universitat Frankfurt
**4 Misunderstanding about Digital Methods (keynote speech)** (Research lecture)
*@ Digitale Praxen Conference*

24. 18/09/14 - Centre franco-norvégien en sciences sociales
**Mapping controversies on climate change adaptation** (Research lecture)
*@ Climate exchanges: Language, Media and Politics*

25. 21/08/14 - Universitad de Buenos Aires
**Controversy mapping using digital tools and methods in different academic contexts: South(s)-North(s) dialogs** (Conference, session chair)
*@ 4S/ESOCITE Conference*

26. 17/09/13 - Global System Dynamics and Policies Project
**A Trip to Flatland: on Mapping and Modeling in Social Sciences** (Research lecture)
*@ Uncertainty, Digital Sciences and the Long Term A Global System Science Conference*

27. 8/6/13 - Gothenburg University
**Designing Controversies for their Publics** (Conference)
*@ Ecsite Conference on science centres and museums*

28. 7/6/13 - Gothenburg University
**Controversy Mapping and Second Degree Objectivity** (Lecture)
*@ 'LETStudios''s Social Media Research Seminar series'*

29. 24/05/13 - Sciences Po (Paris)
**Is Emerge Useful?** (Research lecture)
*@ Colloque " Le tout est-il plus grand ou plus petit que ses parties? "*

30. 2/5/13 - Paris
**Program Comitee Member** (Conference, organisation)
*@ ACMeWeb Science 2013*

31. 18/04/13 - Bibliothéque Nationale de France
**Changer de focale: la navigation dans les paysages de données** (Public Conference)
*@ 'Cartographies de l''invisible Art, réseau, big data'*

32. 17/04/13 - University of Amsterdam
**Designing Controversies and their Publics** (Public Conference)
*@ Department of Media Studies*

33. 4/12/12 - EPFL (Lausanne)
**JODSS: Journal of Digital Social Sciences** (Conference)
*@ Just-In-Time Sociology*

34. 18/11/12 - Copenhagen Business School
**Socializing Design, Designing Sociology** (Conference, session chair)
*@ 4S-EASST Conference*

35. 18/11/12 - Copenhagen Business School
**Designing Controversies** (Conference)
*@ 4S-EASST Conference*

36. 24/10/12 - EHESS
**Visual Network Analysis** (Conference)
*@ ThatCamp Digital Humanities*

37. 18/10/12 - Université de Bordeaux
**Member of the Scientific Comitee** (Conference)
*@ Colloque Média / Santé Publique*

38. 6/7/12 - Sciences Po (Paris)
**Roll call Votes Analysis and Accountability** (Conference, session chair)
*@ The Law Factory*

39. 18/04/12 - Florence
**Debating Environmental Controversies (with A. Lorenzet)** (Conference, session organization)
*@ Public Communication of Science and Technology Conference*

40. 18/04/12 - Florence
**Communicating Controversies, Some exemples from climate debate** (Conference)
*@ Public Communication of Science and Technology Conference*

41. 16/11/11 - CREA (Paris)
**Against Emergence** (Conference)
*@ The Unexpected Conference: do human beings behave as atoms*

# Tommaso Venturini – Research Management

## Early professional experiences

During my bachelor and master at the University of Bologna, I have worked for one year as community manager for a webzine dedicated to contemporary art and connected to a major art e-commerce website (*Artenauta.it*). I then work for three years as project manager for a web design and content provider company in Bologna (*Chiocciola Srl*).

Drawing on these experiences, in 2005 I founded **Ideaedi Studio**, a small but innovative Web design agency, which developed a series of online platforms related to cultural events and educational initiatives.

## Management of research team

At the médialab of Sciences Po I had rare opportunity to participate to the creation of a new research centre. Since the foundation of the laboratory, I have shared with Bruno Latour, Paul Girard and Dominique Boullier the responsibility to hatch and nurture an emerging research group. In the six years of my research coordination (2009-2015), the Sciences Po médialab
* grew up to more than thirty persons;
* obtained and A+ evaluation from the French Evaluation Agency (AERES);
* and published a rich ecosystem of digital research tools (tools.medialab.sciences-po.fr)

My specific responsibilities as "coordinator of the research activities" involved:
* recruiting and supervising scholars from diverse backgrounds (engineering, design, social sciences…);
* writing and submitting research projects;
* leading national and international research projects;
* negotiating and handling budgets up to a few millions of euro;
* setting tasks and deadlines;
* animating the team life (organizing our research seminar, writing workshop, team lunch…);
* being the interface of the laboratory toward its partners within and beyond Sciences Po.

## Management of research projects

In my academic career, I had the occasion to participate to several research projects (spanning from one-week intensive workshop, to the 10-year "Financement de l'Avenir" programmes). Through these experiences, I have acquired a solid experience of project writing and management, which prepared me to serve as PI (principal investigator) of two large collaborative projects and, more recently, as a co-founder of the Public Data Lab.

* **2011-2014: EMAPS** (*Electronic Maps to Assist Public Science*).
  Funded by the EU 7th Framework Program, EMAPS reunited six research centres
  *Sciences Po médialab*, Paris, France;
  *Density Design*, Milan, Italy;
  *Digital Methods Initiative*, Amsterdam, The Netherlands;
  *Young Foundation*, London, UK;
  *Barcelona Media*, Barcelona, Spain;
  *Spatial Planning Institute*, Dortmund, Germany).

  The project investigated public discussions about the adaptation to climate change. By analysing data on financial flows, international negotiations, adaptation projects, and by engaging with the main actors of the debate (negotiators, journalists, practitioners…) the project produced a series of visualisation and data stories (climaps.eu).

- **2011-2014: MEDEA** (*Mapping Environmental DEbate on Adaptation*).
  Funded by the French Research Agency, MEDEA (medea.medialab.sciences-po.fr) was the French sister project of EMAPS and gathered a multidisciplinary consortium composed of
  the *médialab of Sciences Po*,
  the *École Nationale Supérieure des Arts Décoratifs*,
  the *Laboratoire des Sciences du Climat et de l'Environnement*.

- **2017-… : PDL** (*Public Data Lab*)
  The Public Data Lab (publicdatalab.org) is a network of researchers working at the crossroads of academic research and public engagement on the theme of digital data. The PDL has already obtained 3 research grants:

  - In February 2017, the PDL received funding for the *First Draft initiative* (firstdraftnews.com) to organize a series of research workshops on the production and circulation of "fake news".

  - In November 2017, the PDL was financed by the European program *Organicity* (organicity.eu), for the *SaveOurAir project* (saveourair.publicdatalab.org), experimenting new ways to use air quality data to promote citizen engagement.

  - In March 2018, the PDL was awarded the first *SAGE Ocean 'Concept Grant'* (ocean.sagepub.com/concept-grants) for the development of miniVAN, a visual network analysis tool addressed to social scientists.

- **2019-2021 DOOM** (Systems-theory for the Disorders Of Online Media)
  Funded by the special CNRS 80|Prime fund for interdisciplinary research, the project is a collaboration between myself and Paolo Frasca, mathematician at the GIPSA-lab of Grenoble. Together we will co-direct an interdisciplinary Ph.D. thesis on the disorders of digital communication, such as the formation of "filter bubbles" and the viral propagation of "junk news". The project starts from the assumption that these *information disorders* are direct consequences of the contemporary media infrastructure and of the dynamics of collective attention that they generate. In order to capture these dynamics, this project advocates the mathematical modelling of the interplay between the medium (algorithmic component) and the users (human component). The resulting dynamics shall be explored by a system-theory approach, using notions such as feedback and stability.

# Tommaso Venturini – Teaching Portfolio

## Teaching by doing

For 3 reasons, at least, I have always found more interesting to **develop skills** rather than teach notions:

First, because I believe that universities should equip students with tools that they can use in their professional and personal life. And while the theories of human and social sciences do not always find direct applications, their research techniques unfailingly do. Knowing to extract information books and websites, to compare ideas, to write organised texts, are competences that never get wasted.

Second, because (important as they are) theories and other forms of conceptual knowledge can be easily acquired if one has the skills to do so. At a time in which intellectual technologies have achieved an extreme refinement, mastering these technologies is more important than being erudite.

Third, because I cannot see my teaching as separated from my research. One of the greatest strengths of universities is to be both research *and* education institutions and I see no point in separating the two functions. In my courses, I always tried to open my investigations to students and to make the most of their collaboration. My investigations get help and my students get a hands-on research experience.

This is why all my courses (listed below) are based on a **learning-by-doing approach** and configured as practical (and often collective) projects where students work on assignments that are thematically open (to let them choose their topics of interest) but designed to teach them one or more of the following skills:

- **Ethnography**. If there is one invaluable competence that the social sciences can teach students, this is how to deal with human beings – how to get in touch with them, how to sustain such contact; how to ask them questions, how to elicit their help, how to organise their contributions, how to formalize their knowledge, how to understand their culture and care for their concerns. Despite what is often believed, none of these crucial skills is completely innate and all can be improved by learning and practicing specific ethnographic techniques and a general discipline of attention.

- **Archival work**. The capacity to handle information stored in the form of documentary archives and networks is a classic skill of human sciences and one that has become essential now that digital technologies have swelled this type of information beyond imagination. It is for this reason that humanities embraced electronic technologies long before social sciences, and it is for this reason that digital humanities methods should be taught in all digital-oriented curricula.

- **Participatory design**. The idea of design as a discipline focussed on presentation is far too narrow and fails to highlight the multitude of the techniques that designers have developed to help people coming from different backgrounds to work together and elicit innovative ideas. 'Design thinking' is not just a form of thinking, but a series of practical methods that can and should be taught to all students.

- **Data questioning**. While there is no shortage of courses on data analysis, too little attention is generally dedicated to the operations that precede computation. What infrastructure has allowed the creation of data? how have data points been cut out of an indistinct flow of information? how have datasets been cleaned and prepare for treatment? Questions of such kind are crucial to assure the quality of computational results and even more important to attend to the moral and political implications of datafication. Data wrangling and exploratory data analysis are key skills not only for working with data, but also to engage in data society.

- **Academic writing**. It is often said that critical thinking is the hallmark of higher education. While there is truth to this idea, I believe that reflexivity can be better developed in the practice of writing rather than in abstract thinking. At the beginning of my career, I had the chance to participate in the Ph.D. Writing Workshop organised by B. Latour. Such a course marked a watershed for me, for it made me understand that writing (including, of course, forms of non-textual writing such as diagrams and visualisations) is not just a way to present research results, but a way to enact such results.

## Controversy mapping

The most developed example of the teaching approach described above is the Controversy Mapping course (CM), on which I have been working for more than ten years. CM is an original pedagogical and research methods emerged some twenty years ago in the French School of Science and Technology Studies (STS). The objective of this approach is double:

**Methodologically**, it investigates sociotechnical controversies (e.g. the disputes about GMOs, nuclear power, climate change…) to reveal how science and technology participate in the construction of collective life. Sociotechnical debates are the moment in which the role of scientific ideas and technical objects are explicitly discussed revealing their networks of internal components and external supporters.

**Politically**, CM intends to facilitate public discussions about science and technology, by listing the actors of these debates, deploying their position and viewpoints, describing their alliances and oppositions, and investigating their balance of power. By this study, controversy mapping hope to make sociotechnical debates more readable and to encourage citizens and student engagement.

Beside developing and teaching the controversy mapping course at *Sciences Po Paris*, at the *Politecnico of Milan* and at *Universitade Federale de Rio de Janeiro*, I have worked on this method in several ways:

- In my **Ph.D. thesis**, I carried out such an investigation using the analysis of the legal disputes about seed patenting to reveal a deeper and larger discontent with agricultural modernization.

- In the **MACOSPOL** project, I collaborated with B. Latour to consolidate the method of CM, by organizing a vast discussion with all the researchers and teachers employing it.

- Coordinating the project **EMAPS** (www.emapsproject.com) and **MEDEA** (medea.medialab.sciences-po.fr), I tried to demonstrate how CM could be usefully employed to analyse public debates about climate change.

- By mounting the project **FORCCAST** (forccast.hypotheses.org) and coordinating its 1st axis for two years, I contributed to the development of CM as teaching tool at university and high school level.

- More recently I have been writing a **Field Guide to CM**. This text constitutes both my HDR thesis and a book currently under preparation.

**As a teaching method**, CM is currently taught to some many hundreds of students in various European and American universities (Paris, Copenhagen, Milan, Oxford, Manchester, Amsterdam, Liège, Olso, Padova, Trento, São Paulo, Rio de Janeiro, Buenos Aires…).

Despite its solid tradition and upward trajectory, CM is still an experimental approach. Its use both in the classroom and in research is hindered by the difficulty to **combine its two sources of inspiration**: the conceptual heritage of French STS (and Actor-Network Theory in particular) and the data exploration techniques of Digital Methods. My main contribution to CM has precisely been to combine these two strands assuring their theoretical and practical compatibility.

## Course list

2019................**Writing with Data Workshop** (9h hours, 3 days)
College of Arts and Social Sciences, Australian National University, Canberra, Australia

2017-2018.......**Data Activism** (40h course)
Master Programme in Information Architecture, *École Normale Supérieure de Lyon*

2018................**Writing with Data Workshop** (9h hours, 3 days)
Workshop for Ph.D. students and early career scientists, University of Amsterdam

2016-2017....... **Digital Methods II** – Working with Data (20h course)
Bachelor Programme in Digital Culture (second year)

2016-2017....... **Digital Methods I** – Approaches (20h course)
Bachelor Programme in Digital Culture (first year)

2016-2017....... **Data Journalism** (20h course)
Master Programme in Digital Culture and Society, King's College London, UK

2016-2017....... Graduate and undergraduate **student tutor**
Digital Humanities Dept., King's College London, UK

2008-2016....... **Cartographie de Controverses** (48h course)
Double licence Sciences et Sciences Sociales (SCUBE), Sciences Po Paris, France

2012-2015....... **Controversy Mapping** (24h course)
Paris School of International Affaires (PSIA), Sciences Po Paris, France

2013................. **Cartografia de Controversias** (20h course)
Ph.D. School, Universitade Federale de Rio de Janeiro, Brazil

2013................. **Journalisme de données** (25h course)
Ecole de Journalisme, Sciences Po Paris, France

2012-2013....... **Digital Methods and Innovation Networks** (15h course)
Alta Scuola Politecnica, Politecnico di Milano e Politecnico di Torino, Italy

2010-2013....... **Controversial design** (25h)
Politecnico di Milano, Italy

2007-2012....... **Controversy Mapping** (48h course)
Ecole de la Communication, Sciences Po Paris, France

## Curriculum development

My first appointment at INRIA has been at the *Institut rhônalpin des systèmes complexes* ([www.ixxi.fr](www.ixxi.fr)) hosted by the *ENS Lyon* (one of the four *École Normales Supérieures* training most French higher education teachers). There I was part of a small committee missions to develop a new pre-master year curriculum in "Sciences des Sociétés Numériques" (Digital Societies Sciences).

The objective of the curriculum (yet to be implemented) will be to offer an interdisciplinary training to ENS students covering all the aspects of the societal transformations produced by the advent of digital technologies. The curriculum will be divided in four main pedagogical units (60 ECTS in total):

1. Knowledge of the digital worlds
- Data Economics
- Digital Law and Governance
- Sociology of the Digital

2. Digital data exploitation
- Data Analytics / Data Mining
- Big Data and Machine Learning
- Collective Research Project

3. Advanced studies
- Advanced Geomatics
- Advanced Natural Language Processing
- Computational Social Sciences

4. Individual research project

## Supervision of research activities

2019-2021....... Supervision of **one Ph.D candidate** in the project DOOM (Systems-theory for the Disorders Of Online Media).f

2015-2018....... **Vivian Depoues** (Ph.D. candidate)
Title: "Des connaissances scientifiques sur les changements climatiques à l'analyse économique pour la prise de décision en vue de l'adaptation des infrastructures".

Financed by the ADEME, the thesis of Vivian Depoues investigates the role of economic models in decision-taking activities connected to the adaptation to climate change, in the case of French railway.

2015-2018....... **Liliana Bounegru** (Ph.D. candidate)
Title: "Doing Journalism Research with Digital Methods: The Case of Data Journalism".
Though not in an official capacity, I have had the chance to informally supervising the research of Liliana Bounegru on data journalism and the different ways in which digital technologies and infrastructures have been affected the practices of news-making.

2013-2019....... **6 visiting Ph.D. and post-doc researchers** from various Brazilian University

2016-2015....... **15 Master Students** - Department of Digital Humanities, King's College London, UK

2015-2016....... **1 Master Student** – PSIA (Paris School of International Affairs) Sciences Po, Paris

I greatly hesitated in including this section in my teaching portfolio (rather than in the main CV). Supervising advanced students and early career researchers is, I believe, much more than a form of teaching (and many cases, I suspect to have learned more from them than they have from me).

# Tommaso Venturini – Publications

All my publications are available on my website, www.tommasoventurini.it

## Research monographs

**Venturini, T.** & Munk, A. (2016, forthcoming) *Controversy Mapping. A Field Guide through Actor-Network Theory and Digital Methods.* In preparation.

## International journals

[1] **Venturini, T.**, and Rogers, R. (2019). 'API-Based Research' or How Can Digital Sociology and Digital Journalism Studies Learn from the Cambridge Analytica Affair. *Digital Journalism*, (forthcoming).

[2] Gray, J., Bounegru, L., & **Venturini, T.** (2019). The Infrastructural Uncanny: "Fake News" and the Fabric of the Web as Matter of Concern. *New Media & Society*, (forthcoming).

[3] **Venturini, T.**, Bounegru, L., Gray, J., & Rogers, R. (2018). A reality check(list) for digital methods. *New Media & Society*, (forthcoming), 146144481876923. http://doi.org/10.1177/1461444818769236

[4] Rein, K., & **Venturini, T.** (2018). Ploughing Digital Landscapes. *New Media & Society* (forthcoming), http://doi.org/10.1177/1461444817748954

[5] **Venturini, T.**, Jacomy, M., Meunier, A., & Latour, B. (2017). An unexpected journey: A few lessons from sciences Po médialab's experience. *Big Data & Society*, 4(2), 205395171772094. http://doi.org/10.1177/2053951717720949

[6] Bounegru, L., **Venturini, T.**, Gray, J., & Jacomy, M. (2017). Narrating Networks. *Digital Journalism*, 5(6), 699–730. http://doi.org/10.1080/21670811.2016.1186497

[7] Markusson, N., Kaltenbrunner, A., Laniado, D., & **Venturini, T.** (2016). Contrasting medium and genre on Wikipedia to open up geoengineering. *Big Data & Society*, 3(2). http://doi.org/10.1177/2053951716666102

[8] Jensen, P., Morini, M., Karsai, M., **Venturini, T.**, Vespignani, A., Jacomy, M., … Fleury, E. (2015). Detecting global bridges in networks. *Journal of Complex Networks*, cnv022. http://doi.org/10.1093/comnet/cnv022

[9] **Venturini, T.**, Jensen, P., & Latour, B. (2015). Fill in the Gap: A New Alliance for Social and Natural Sciences. *Journal of Artificial Societies and Social Simulation*, *18*(2), 11. Retrieved from http://jasss.soc.surrey.ac.uk/18/2/11.html

[10] **Venturini, T.**, Ricci, D., Mauri, M., Kimbell, L., & Meunier, A. (2015). Designing Controversies and Their Publics. *Design Issues*, *31*(3), 74–87. http://doi.org/10.1162/DESI_a_00340

[11] Severo, M., & **Venturini, T.** (2015). Intangible cultural heritage webs: Comparing national networks with digital methods. *New Media & Society*, (forthcoming), 1–20. http://doi.org/10.1177/1461444814567981

[12] Latour, B., Boullier, D., **Venturini, T.**, Jensen, P., & Grauwin, S. (2015). O Todo é Sempre Menor que as Partes: um teste digital acerca das mônadas de Gabriel Tarde. *Parágrafo*, *2*(3), 7–25.

[13] Tuckett, D., Mandel, A., Mangalagiu, D., Abramson, A., Hinkel, J., Katsikopoulos, K., … Wilkinson, A. (2015). Uncertainty, Decision Science, and Policy Making: A Manifesto for a Research Agenda. *Critical Review*, *27*(2), 213–242. http://doi.org/10.1080/08913811.2015.1037078

[14] **Venturini, T.**, Baya Laffite, N., Cointet, J.-P., Gray, I., Zabban, V., & De Pryck, K. (2014). Three maps and three misunderstandings: A digital mapping of climate diplomacy. *Big Data & Society*, *1*(2). http://doi.org/10.1177/2053951714543804

[15] Jacomy, M., **Venturini, T.**, Heymann, S., & Bastian, M. (2014). ForceAtlas2, a Continuous Graph Layout Algorithm for Handy Network Visualization Designed for the Gephi Software. *PloS One*, *9*(6), e98679. http://doi.org/10.1371/journal.pone.0098679

[16] **Venturini, T.** (2012). Building on faults: how to represent controversies with digital methods. *Public Understanding of Science*, *21*(7), 796 – 812. http://doi.org/10.1177/0963662510387558

[17] Bourdaa, M., Konsman, J. P., Sécail, C., **Venturini, T.**, Veyrat-Masson, I., & Gonon, F. (2013). Does television reflect the evolution of scientific knowledge? The case of attention deficit hyperactivity disorder coverage on French television. *Public Understanding of Science (Bristol, England)*, (Forthcoming). http://doi.org/10.1177/0963662513484842

[18] Latour, B., Jensen, P., **Venturini, T.**, Grauwin, S., & Boullier, D. (2012). "The whole is always smaller than its parts": a digital test of Gabriel Tardes' monads. *The British Journal of Sociology*, *63*(4), 590–615. http://doi.org/10.1111/j.1468-4446.2012.01428.x

[19] **Venturini, T.**, & Guido, D. (2012). Once Upon a Text : an ANT Tale in Text Analysis. *Sociologica*, *3*. http://doi.org/10.2383/72700

[20] **Venturini, T.** (2010). Diving in magma: how to explore controversies with actor-network theory. *Public Understanding of Science*, *19*(3), 258–273. http://doi.org/10.1177/0963662509102694

[21] **Venturini, T.** (2007). Verba Volant, Scripta Manent: The Discontinuity Effect of Explicit Media. *American Behavioral Scientist*, *50*(7), 879–896. http://doi.org/10.1177/0002764206298313

## International conferences

[1] **Venturini T.** (2018). Teaching Infrastructures Breaching through Data journalism and Data Activism. *European Association of the Study of Science and Technology Studies (EASST) Conference*, Lancaster 25-28/07/2018

[2] **Venturini T.** (2018). The Expert Network Quantifying bridging work in the IPCC. *European Association of the Study of Science and Technology Studies (EASST) Conference*, Lancaster 25-28/07/2018

[3] **Venturini T.** (2018). Confessions of a Fake News Scholar. *International Communication Association (ICA) Conference*, Prague, 24-28/05/2018.

[4] **Venturini, T.** (2016). Actor-Network VS Network Analysis VS Digital Networks Are We Talking About the Same Networks? In *4S-EASST Conference Barcelona* (track "Critical Data Studies"), 03/09/16

[5] De Pryck, K., **Venturini, T**., Banneyx (2016). Doctor Jekyll and Mister Hyde: the IPCC a scientific and intergovernmental organization. In *4S-EASST Conference* (track "STS and Climate Change: Perspectives on/from the Global South"), Barcelona, 01/09/16.

[6] Jacomy, M., Girard, P., Ooghe, B., & **Venturini, T.** (2016). Hyphe, a Curation-Oriented Approach to Web Crawling for the Social Sciences. *In International AAAI Conference on Web and Social Media* (pp. 595–598).

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[8] Borra, E., Weltevrede, E., Ciuccarelli, P., Kaltenbrunner, A., Laniado, D., Magni, G., … **Venturini, T.** (2015). Societal Controversies in Wikipedia Articles. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15* (pp. 193–196). http://doi.org/10.1145/2702123.2702436

[9] Borra, E., Weltevrede, E., Ciuccarelli, P., Kaltenbrunner, A., Laniado, D., Magni, G., … **Venturini, T.** (2014). Contropedia - the analysis and visualization of controversies in Wikipedia articles. In *OpenSym 2014 Proceedings*.

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[11] **Venturini, T.** (2012). Designing Controversies. In *Design and Displacement, 4S-EASST Conference*.

[12] **Venturini, T.** (2012). Communicating Controversies, Some Example from the Climate Debate. In *Public Communication of Science and Technology Conference*.

## Books chapters

[1] **Venturini, T.** (2019). From Fake to Junk News, the Data Politics of Online Virality. In D. Bigo, E. Isin, & E. Ruppert (Eds.), *Data Politics: Worlds, Subjects, Rights*. London: Routledge (forthcoming).

[2] **Venturini, T.** (2018). Sur l'étude des sujets populaires ou les confessions d'un spécialiste des fausses nouvelles. In P. Trudel (Ed.), *Les fausses nouvelles : nouveaux visages, nouveaux défis*. Montréal : Presses de l'Université Laval (forthcoming).

[3] **Venturini, T.**, Jacomy, M., Bounegru, L., & Gray, J. (2018). Visual Network Exploration for Data Journalists. In S. I. Eldridge & B. Franklin (Eds.), *The Routledge Handbook to Developments in Digital Journalism Studie*. Abingdon: Routledge (forthcoming)

[4] **Venturini, T.** (2018). The Fish Tank Complex of Social Modelling. In M. Nagatsu & A. Ruzzene (Eds.), Frontiers of Social *Science: A Philosophical Reflection*. New York: Bloomsbury (forthcoming)

[5] **Venturini, T.**, Munk, A., & Jacomy, M. (2018). Actor-Network VS Network Analysis VS Digital Networks Are We Talking About the Same Networks? In D. Ribes & J. Vertesi (Eds.), *DigitalSTS: A Handbook and Fieldguide* (forthcoming)

[6] **Venturini, T.**, Munk, A., & Meunier, A. (2018). Data-Sprint: a Public Approach to Digital Research. (C. Lury, P. Clough, M. Michael, R. Fensham, S. Lammes, A. Last, & E. Uprichard, Eds.). *Interdisciplinary Research Methods* (forthcoming)

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[9] **Venturini, T.**, Bounegru, L., Jacomy, M., & Gray, J. (2016). How to Tell Stories with Networks: Exploring the Narrative Affordances of Graphs with the Iliad. In *Datafied Society*. Amsterdam: University Press.

[10] **Venturini, T.** (2012). Great expectations: méthodes quali-quantitative et analyse des réseaux sociaux. In J.-P. Fourmentraux (Ed.), *L'Ère Post-Media. Humanités digitales et Cultures numériques* (Vol. 104, pp. 39–51). Paris: Hermann.

## National journals

[1] **Venturini, T.**, Jacomy, M., Baneyx, A., & Girard, P. (2016). Hors champs: la multipositionnalité par l'analyse des réseaux. *Reseaux,* 199(5), 11–42. http://doi.org/10.3917/res.199.0011

[2] Boechat, M. & **Venturini, T**. (2016). From Analysis to Presentation: Information Visualization for Reifying Issues and Reenacting Insights in Visual Data Analysis. *Les Cahiers Du Numérique*, 4 185–205. doi:10.3166/LCN.12.4.185-204.

[3] Severo, M., & **Venturini, T.** (2016). Enjeux topologiques et topographiques de la cartographie du web. *Reseaux*, *1*(195), 87–105. http://doi.org/10.3917/res.195.0085`

[4] Latour, B., Boullier, D., **Venturini, T**., Jensen, P., & Grauwin, S. (2015). O Todo é Sempre Menor que as Partes: um teste digital acerca das mônadas de Gabriel Tarde. *Parágrafo*, 2(3), 7–25.

[5] **Venturini, T.**, Cardon, D., & Cointet, J.-P. (2015). Méthodes digitales: Approches quali/quanti des données numériques - Curation and Presentation of the Special Issue. *Réseaux*, *188*, 9–21. http://doi.org/10.3917/res.188.0009

[6] **Venturini, T.**, Gemenne, F., & Severo, M. (2013). Des Migrants et des Mots. Une analyse numérique des débats médiatiques sur les migrations et l'environnement. *Cultures & Conflits*, *88*(4).

[7] **Venturini, T.** (2008). Piccola introduzione alla cartografia delle controversie. *Etnografia E Ricerca Qualitativa*, *3*, 369–394.

[8] **Venturini, T.** (2007). Les trous noirs de la Révolution Verte. *Décroissance & Technique*, *3*.

[9] **Venturini, T.** (2005). Il mago e l'imprenditore magico. *Cassazione Penale*, *45*(3).

## National conferences

**Venturini, T.**, & Latour, B. (2010). The Social Fabric: Digital Traces and Quali-quantitative Methods. In *Proceedings of Future En Seine* 2009 (pp. 87–101). Paris: Editions Future en Seine.

## Other publications

[1] Bounegru, L., Gray, J., **Venturini, T.**, & Mauri, M. (2018). A Field Guide to Fake News and other Information Disorders. Retrieved from http://fakenews.publicdatalab.org

[2] **Venturini, T.**, Jacomy, M., & Carvalho Pereira, D. (2015). *Visual Network Analysis*. Medialab woring papers

[3] **Venturini, T.** (2015). Review of "An Aesthesia of Networks: Conjunctive Experience in Art and Technology, by Anna Munster." *Digital Studies / Le Champs Numerique*, (forthcoming).

[4] **Venturini, T.**, Meunier, A., Munk, A. K., Borra, E. K., Rieder, B., Mauri, M., … Laniado, D. (2014). Climaps by Emaps in 2 Pages (A Summary for Policy Makers and Busy People in general). *Social Science Research Network*, (ID 2532946). Retrieved from http://papers.ssrn.com/abstract=2532946

[5] **Venturini, T.** (2012). Medialab de Sciences Po : cartographier le web pour les sciences sociales. Retrieved from http://www.ina-sup.com/node/2842

[6] **Venturini, T.** (2006). Opera Aperta: Wikipedia e l'oralità secondaria. *Magma*, *4*, 35–45. Retrieved from http://www.doaj.org/doaj?func=abstract&id=286736