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### **DISCLAIMER**

SoBigData (654024) is a Research and Innovation Action (RIA) funded by the European Commission under the Horizon 2020 research and innovation programme.

SoBigData proposes to create the Social Mining & Big Data Ecosystem: a research infrastructure (RI) providing an integrated ecosystem for ethic-sensitive scientific discoveries and advanced applications of social data mining on the various dimensions of social life, as recorded by "big data". Building on several established national infrastructures, SoBigData will open up new research avenues in multiple research fields, including mathematics, ICT, and human, social and economic sciences, by enabling easy comparison, re-use and integration of state-of-the-art big social data, methods, and services, into new research.

This document contains information on SoBigData core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as SoBigData Board members. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date.

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# **GLOSSARY**

ABBREVIATION	DEFINITION
WP	Work Package
TNA	Trans National Access
ACM	Association for Computing Machinery
SIGKDD	Special Interest Group on Knowledge Discovery and Data Mining
DSAA	Data Science and Advanced Analytics

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### **DELIVERABLE SUMMARY**

The report includes the description of dissemination activities and of the events organized during months 37-52 and assesses all the dissemination activities carried out during the project, providing overall statistics and comparisons. It also includes the complete list of publications and it shows all the dissemination material.

#### In particular:

- Section 2: reports the dissemination activities set-up inside SoBigData project.
- Section 3: outlines the dissemination impact.
- Section 4: concludes with consolidated findings so far.

Finally, the appendixes provide an overview on the dissemination material.

## **EXECUTIVE SUMMARY**

This report includes the description of dissemination activities and of the events organized during months 37-52 (from September 2018 (M37) to December 2019 (M52)) and assesses all the dissemination activity carried out during the project, providing overall statistics and comparisons. It also includes the complete list of publications.

Furthermore, it describes the effort on communication and dissemination in order to reach as wide an audience as possible, and the multiple strategies employed by the consortium to grow and consolidate the community.

#### 1 RELEVANCE TO SOBIGDATA

One of the aims of the SoBigData project is to ensure the widest possible dissemination and use of the project results, as well as establishing collaborations with other relevant projects and initiatives and establishing and widening the SoBigData community. This makes dissemination and impact activities of vital importance to overall project success.

#### 1.1 PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide the consortium with an overview of the dissemination and community building events carried out by the project up to its conclusion, in M52. The objectives can be summarized as follows:

- Communication of project results to the general public, scientific communities, and potential adopters through various dissemination channels.
- Dissemination of the project results to the partners' research and business associates, clients and public through media and existing and future contacts.
- Identification of user communities for potential academic and commercial impact.
- Organization of community building events addressed to a variety of users

This deliverable contains the dissemination and communication channels, the communication material, the dissemination activities and indicators and the community building events.

These events comprise the design and realization of a specific website for the SoBigData final conference, held in Brussels, the 19th of November 2019, in the EU Parliament and in the Tuscan Region headquarter in Brussels (see Section 2.3.3.3 SoBigData Final Conference).

The document is categorised into four different sections:

- Section 2 addresses the dissemination plan of the SoBigData project. It gives an overview of dissemination activities, the dissemination channels and the dissemination material.
- Section 3 outlines the dissemination impact.
- Section 4 concludes with consolidated findings so far.
- Finally, Appendix A contains images of dissemination materials (rollup, poster, newsletter).

#### 1.2 RELEVANCE TO PROJECT OBJECTIVES

Dissemination of the project results and impact generation are key activities to reach the project objectives. The focus of SoBigData is on development of a research infrastructure (RI) providing an integrated ecosystem for ethic-sensitive scientific discoveries and advanced applications of social data mining on the various dimensions of social life, as recorded by "big data". The research methods are of especial relevance to academia, but also open interesting impact opportunities aimed at diverse stakeholders. Therefore, a careful planning of the actions to be taken both for dissemination and impact generation is of the highest importance.

#### 1.3 RELATION TO OTHER WORKPACKAGES

Dissemination and impact generation activities are horizontal activities that last for the entire duration of the project. Therefore, there is a clear interaction with **all work packages**.

It is worth mentioning that the relation of dissemination and impact generation with other work-packages is planned as a two-way interaction. On the one hand, all work packages provide feedback, both for dissemination (partners from the networking and joint research activities work-packages will provide ideas, presentations, papers, news, etc.) and impact on stakeholders (potential results of each JRA work-package, licensing approaches, etc.).

On the other hand, WP3 aims to provide feedback to the rest of the work-packages in order to influence their work at multiple levels: watching what is going on in the scientific and commercial spheres, to drive work in the right and timely direction, suggesting changes on the licensing of different components to ensure the complementarity of the results, offering ideas on how small enhancements could be better perceived by the stakeholders, etc.

#### 2 DISSEMINATION PLAN

SoBigData has adopted a multi-channel, multi-target dissemination approaches. Since SoBigData is a research infrastructure, the main dissemination targets are social data scientists, which currently span multiple research communities (data mining and pattern discovery, text and social media mining, mobility analytics, social network analysis, visual analytics, etc.). Furthermore, SoBigData integrates these channels with innovation actions and events aimed at companies in our target verticals (especially SMEs), government organisations, and policy makers. Since the project produced a new research infrastructure as well as new open-source tools and services, training and cross-disciplinary community building was also a target.

The SoBigData website, redesigned in collaboration with WP7 and WP10 in the third year of the project, has been constantly updated. Moreover, SoBigData has always actively promoted the research infrastructure and its services to the large big data research community through his social media channels.

In this context, we recall that within the limitations imposed by appropriate protection of intellectual property, all scientific results of this project are available to the research community. In addition, a number of big social data analytics tools and resources from SoBigData are available as open-source to facilitate take-up.

#### 2.1 DISSEMINATION COMMUNICATION CHANNELS (SOCIAL, PRESS, WEB)

The project has a strong social media presence based on:

• a Twitter account: <u>Twitter.com/SoBigData</u>

• a Facebook page: www.facebook.com/SoBigData

a LinkedIn profile: https://www.linkedin.com/groups/5093052/profile

A YouTube channel: <a href="https://www.youtube.com/channel/UCRMtvc9ovcISG4EymRuczhQ">https://www.youtube.com/channel/UCRMtvc9ovcISG4EymRuczhQ</a>

All the partners ensure that the project has active social media engagement.

The LinkedIn profile is used mainly to promote calls, job opportunities and other types of collaborations within the project.

The Blog page, located on the web site, is constantly updated with new articles on the most relevant news of the project, such as events, talks, new publications, software releases, press releases. The same news are published in a suitable way on the social media channels. The blog pages as well as the social media channels are also used to actively promote new TNA calls.

The Event page, located on the web site, is constantly updated with upcoming events relevant to the project. In particular, there are events organized by SoBigData, like, for instance, summers school, datathons, etc; events were SoBigData participate with a talk, a tutorial, etc.; finally, events of interest to the SoBigData community, thus promoted in the web site, even if they do not see a direct involvement of the SoBigData scientists.

SoBigData is promoted also through strong press coverage with articles and interviews talking about our research infrastructure in online newspaper as well as video and radio. The press coverage helps also to promote events organized by or related to the project. See Table 4 for a detailed list of press coverage.

#### 2.1.1 NEWSLETTER

The project published a newsletter, to reach the vast community of SoBigData. The newsletter, designed by a desktop publishing software, has been published on the social media channels and website of the project as a pdf format. The newsletter has also been disseminated through specific mailing lists. A page on the project website has been dedicated to subscribe/unsubscribe to the newsletter, to make registration management faster and more effective (see <a href="http://www.sobigdata.eu/newsletter">http://www.sobigdata.eu/newsletter</a>).

The Newsletter has an Editorial Board composed by Fosca Giannotti, Kalina Bontcheva, Roberto Trasarti, Beatrice Rapisarda and Valerio Grossi, and an Editorial Secretariat composed by Beatrice Rapisarda and Vittorio Romano to manage the content and the publication of the newsletter. The newsletter is published every 6 months, for a total of 4 issues at the moment, and contains a summary of the latest news about the project, as well as the latest and most interesting publications of project partners. The issues 1, 2, 3 give an overview on the most interesting results of the project, while the last number (Issue 4) is focused on training and community building events.

The SoBigData Newsletter mailing list has been subscribed by 119 people/institutions. Printed versions of the newsletter have been distributed in several events. For details on the newsletter issues, see APPENDIX A Rollup, Poster & Newsletter.

#### 2.2 DISSEMINATION MATERIAL

The dissemination material such as project leaflet, poster and flyer (see D3.5) has been constantly updated, in order to have the printable material always up-to-date for the events organized by the consortium, and new material, such as roll-up has been designed for specific events. For details on the new material produced see APPENDIX A.

Furthermore, a video has been done during the SoBigData final conference held in Brussels the 19th of November 2019, gathering the interviews made to the speakers of the conference. The video will be available at the beginning of 2020 on the YouTube channel of the project:

https://www.youtube.com/channel/UCRMtvc9ovcISG4EymRuczhQ

#### 2.3 DISSEMINATION ACTIVITIES

SoBigData actively planned, for the whole life of the project, dissemination activities such as presence in conferences, workshops, and contacts with other projects, contacts with potential customers, etc. To that extent partners regularly communicated the dissemination opportunities and reported on the different activities carried out.

Since dissemination is an activity transversal to various WPs, dissemination activities also include some training events organized by the project that can be also considered as dissemination events of the SoBigData Research Infrastructure (for a detailed list of training events see D4.3 Training Activities: planning, material and reports 2.

The following sub-sections contain a complete list of publications for the reporting period (M37-M52), the community building events organized or co-organized by SoBigData, a list of SoBigData presence in conferences and workshops, and the press coverage of the project.

#### 2.3.1 PUBLICATIONS

Table 1 includes all academic papers with the acknowledgement of SoBigData from M37 to M52.

Date	Event	Туре	Title	Authors				
	2018							
2018	EPJ Data Science	Journal Article	Blockchain Inefficiency in the Bitcoin Peers Network	Giuseppe Pappalardo, Tiziana Di Matteo, Guido Caldarelli, Tomaso Aste				
2018	arXiv:1810.04717v1	Journal Article	Detecting Core-Periphery Structures by Surprise	Jeroen van Lidth de Jeude, Guido Caldarelli, Tiziano Squartini				
2018	arXiv:1810.05095v1	Journal Article	The Statistical Physics of Real-World Networks	Giulio Cimini, Tiziano Squartini, Fabio Saracco, Diego Garlaschelli, Andrea Gabrielli, Guido Caldarelli				
2018	Journal of Network Theory in Finance	Journal Article	Structural changes in the interbank market across the financial crisis from multiple core–periphery analysis	Sadamori Kojaku, Giulio Cimini, Guido Caldarelli, Naoki Masuda				
2018	Physical Review E	Journal Article	Multiple structural transitions in interacting networks	Giacomo Rapisardi, Alex Arenas, Guido Caldarelli, Giulio Cimini				
2018	arxiv	Journal Article	Entropy-based randomisation of rating networks	Carolina Becatti, Guido Caldarelli, Fabio Saracco				
2018	arxiv	Journal Article	Maximum entropy approach to link prediction in bipartite networks	M. Baltakiene, K. Baltakys, D. Cardamone, F. Parisi, T. Radicioni, M. Torricelli, J. A. van Lidth de Jeude, F. Saracco				
2018	Online Social Networks and Media	Journal Article	Managing social contents in Decentralized Online Social Networks: A survey	B Guidi (University of Pisa), M Conti (CNR), A Passarella (CNR), L Ricci (University of Pisa)				
2018	Pervasive and Mobile Computing	Journal Article	Energy efficient distributed analytics at the edge of the network for IoT environments	L Valerio (CNR), M Conti (CNR), A Passarella (CNR)				
2018	Computer Communications	Journal Article	The Internet of People: A human and data-centric paradigm for the Next Generation Internet	M Conti (CNR), A Passarella (CNR)				
			2019					
2019	ERCIM News vol 116	Journal Article	Special Theme "Transparency in Algorithmic Decision Making"	Andreas Rauber (TU Wien and SBA), Roberto Trasarti, Fosca Giannotti (ISTI- CNR)				
2019	Springer	Journal Article	Computational modelling and data- driven techniques for systems analysis	Stan Matwin, Luca Tesei, Roberto Trasarti				
2019	MDPI.com	Journal Article	Analysis of the Impact of Interpolation Methods of Missing RR- Intervals Caused by Motion Artifacts on HRV Features Estimations	Davide Morelli, Alessio Rossi, Massimo Cairo, David A. Clifton				
2019		Journal Article	SCube: A Tool for Segregation Discovery	Alessandro Baroni, Salvatore Ruggieri				

2019	The 6th IEEE International Conference on Data Science and Advanced Analytics (DSAA'19)	Conference paper	Semantically-aware Statistical Metrics via Weighting Kernels	S. Cresci (CNR), R. Di Pietro (HBKU), M. Tesconi (CNR)
2019	The 1st Multidisciplinary International Symposium on Disinformation in Open Online Media (MISDOOM'19)	Conference paper	Detecting Malicious Social Bots: Story of a Never-Ending Clash	S. Cresci (CNR)
2019	International Journal of Geographical Information Science	Journal Article	A conceptual framework for studying collective reactions to events in location-based social media	Alexander Dunkel, Gennady Andrienko, Natalia Andrienko, Dirk Burghardt, Eva Hauthal and Ross Purves
2019	IEEE Transactions on Visualization and Computer Graphics	Journal Article	Semantics-Space-Time Cube: A Conceptual Framework for Systematic Analysis of Texts in Space and Time	Jie Li, Siming Chen, Wei Chen, Gennady Andrienko, Natalia Andrienko
2019	IEEE Transactions on Visualization and Computer Graphics	Journal Article	Supporting Story Synthesis: Bridging the Gap between Visual Analytics and Storytelling	Siming Chen, Jie Li, Gennady Andrienko, Natalia Andrienko, Yun Wang, Phong H. Nguyen, and Cagatay Turkay
2019	IEEE Transactions on Visualization and Computer Graphics	Journal Article	Constructing Spaces and Times for Tactical Analysis in Football	Gennady Andrienko, Natalia Andrienko, Gabriel Anzer, Pascal Bauer, Guido Budziak, Georg Fuchs, Dirk Hecker, Hendrik Weber, and Stefan Wrobel
2019	Proceedings of the 13th International Workshop on Semantic Evaluation	Conference paper	Team Bertha von Suttner at SemEval- 2019 Task 4: Hyperpartisan News Detection using ELMo Sentence Representation Convolutional Network	Y.Jiang, J. Petrak, X. Song, K. Bontcheva, D. Maynard (USFD)
2019	Springer	Journal Article	Impact of Social and Natural Events on Mobile Call Data Records An Estonian Case Study	Hendrik Hiir, Rajesh Sharma, Anto Aasa and Erki Saluveer
2019	Springer	Journal Article	Predicting Movies Box office result - A large scale study across Hollywood and Bollywood	Risko Ruus and Rajesh Sharma
2019	Springer	Journal Article	Ensemble approach for generalized network dismantling	Xiao-Long Ren, Nino Antulov-Fantulin (ETH)
2019		Conference paper	Exploring Interpretable LSTM Neural Networks over Multi-Variable Data	T Guo (ETH), T Lin, N Antulov-Fantulin (ETH)
2019	DeepAl	Journal Article	Statistical embedding for directed graphs	Thorben Funke, Tian Guo (ETH), Alen Lancic, Nino Antulov-Fantulin (ETH)
2019	WWW '19: Companion Proceedings of The 2019 World Wide Web Conference	Conference paper	Sensing Social Media Signals for Cryptocurrency News	Johannes Beck, Roberta Huang, David Lindner, Tian Guo (ETH), Ce Zhang, Dirk Helbing (ETH), Nino Antulov-Fantulin (ETH)
2019	PNAS	Conference paper	Generalized network dismantling	XL Ren (ETH), N Gleinig (ETH), D Helbing (ETH), N Antulov-Fantulin (ETH)
2019	Springer	Journal Article	Holarchic structures for decentralized deep learning: a performance analysis	Evangelos Pournaras, Srivatsan Yadhunathan, Ada Diaconescu
2019	Elsevier/Science Direct	Journal Article	Socio-technical smart grid optimization via decentralized charge	Evangelos Pournaras, Seoho Jung, Srivatsan Yadhunathan, Huiting Zhang,

			control of electric vehicles	Xingliang Fang
2019	Elsevier/Science Direct	Journal Article	A machine learning approach to online fault classification in HPC systems	Alessio Netti, Zeynep Kiziltan, Ozalp Babaoglu, Alina Sîrbu (UNIPI), Andrea Bartolini, Andrea Borghesi
2019	Springer	Journal Article	Online Fault Classification in HPC Systems through Machine Learning	Alessio Netti, Zeynep Kiziltan, Ozalp Babaoglu, Alina Sîrbu (UNIPI), Andrea Bartolini, Andrea Borghesi
2019	Springer	Journal Article	Integration of Syrian refugees: insights from D4R, media events and housing market data	Simone Bertoli, Paolo Cintia (CNR), Fosca Giannotti (CNR), Etienne Madinier, Caglar Ozden, Michael Packard, Dino Pedreschi (UNIPI), Hillel Rapoport, Alina Sîrbu (UNIPI), Biagio Speciale
2019	Springer	Journal Article	Constraint Programming-based Job Dispatching for Modern HPC Applications	Cristian Galleguillos, Zeynep Kiziltan, Alina Sirbu (UNIPI), Ozalp Babaoglu
2019	ECML PKDD 2019	Conference paper	Node Representation Learning for Directed Graphs	Megha Khosla (LUH), Jurek Leonhardt (LUH), Wolfgang Nejdl (LUH), and Avishek Anand (LUH)
2019	Springer	Journal Article	Estimating PageRank deviations in crawled graphs	Helge Holzmann (Internet Archive), Avishek Anand (LUH), Megha Khosla (LUH)
2019	WSDM '19: Proceedings of the Twelfth ACM International Conference on Web Search and Data Mining 2019	Conference paper	Asynchronous Training of Word Embeddings for Large Text Corpora	Avishek Anand(LUH), Megha Khosla (LUH), Jaspreet Singh(LUH), Jan-Hendrik Zab (LUH), Zijian Zhang (LUH)
2019	Nature	Journal Article	Clusters of investors around initial public offering	Margarita Baltakiene, Kęstutis Baltakys, Juho Kanniainen, Dino Pedreschi, Fabrizio Lillo
2019	New Journal of Physics	Journal Article	Effects of memory on spreading processes in non-Markovian temporal networks	Oliver E Williams, Fabrizio Lillo and Vito Latora
2019	Scientific Reports	Journal Article	Optimal positioning of storage systems in microgrids based on complex networks centrality measures	Saman Korjani, Angelo Facchini, Mario Mureddu, Guido Caldarelli, Alfonso Damiano
2019	Elsevier/Science Direct	Journal Article	Portfolio analysis and geographical allocation of renewable sources: a stochastic approach	Antonio Scala, Angelo Facchini, Umberto Perna, Riccardo Basosi
2019	Elsevier/Science Direct	Journal Article	PRIMULE: Privacy Risk Mitigation for User Profiles	F Pratesi, L Gabrielli, P Cintia, A Monreale, F Giannotti
2019	SSRN	Journal Article	Corporate payments networks and credit risk rating	Elisa Letizia and Fabrizio Lillo
2019	MIDAS/PAP@PKDD/E CML 2018	Conference paper	Privacy Risk for Individual Basket Patterns	Roberto Pellungrini, Anna Monreale, Riccardo Guidotti
2019	AAAI 2019	Conference paper	Meaningful Explanations of Black Box Al Decision Systems	Dino Pedreschi, Fosca Giannotti, Riccardo Guidotti, Anna Monreale, Salvatore Ruggieri, Franco Turini
2019	PAKDD	Conference paper	Investigating Neighborhood Generation Methods for Explanations of Obscure Image Classifiers	Riccardo Guidotti, Anna Monreale, Leonardo Cariaggi

2019	Elsevier/Science Direct	Journal Article	Changes to Gate Closure and its impact on wholesale electricity prices: the case of the UK	AngeloFacchini, AlessandroRubino, GuidoCaldarelli, GiuseppeDi Liddo
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**Table 1: Scientific publications** 

#### 2.3.2 SOBIGDATA COMMUNITY BUILDING EVENTS

Table 2 reports all the events organized or co-organized by SoBigData. Training events, such as datathons, data challenges, summer schools, listed here are included and described in D4.3. Section 2.3.3 reports a detailed description of a selection of relevant events.

Date	Event Title	Туре	Description	Web	Stakeholder
			2018		
10/09/2018	PAP 2018: Personal Analytics and Privacy	workshop	The purpose of this workshop is to encourage principled research that will lead to the advancement of personal data analytics, personal services development, privacy, data protection and privacy risk assessment.	http://kdd.di.unito.it/pap 2018/	Research
10-14/09/2018	KNOWMe: 2nd International Workshop on Knowledge Discovery from Mobility and Transportation Systems	workshop	This workshop brings together transdisciplinary researchers and practitioners working in the related topics from multiple areas such as Data Mining, Machine Learning, Numerical Optimization, Public Transport, Traffic Engineering, Multi-Agent Systems, Human-Computer Interaction and Telecommunications.	http://kdd.isti.cnr.it/kno wme.eu.2018/#oc	Research
23-28/09/2018	SoBigdata@CCS18 Thessaloniki	conference	This Conference is in the field of Complex Systems.	http://ccs2018.web.auth.	Research
01-04/10/2018	IEEE DSAA 2018 The 5th IEEE International Conference on Data Science and Advanced Analytics	conference	DSAA focuses on the science of data science, as well as the implications of the science for applications to industry, government, and society.	https://dsaa2018.isi.it/ho me	Research
12-13/10/2018	Soccer data challenge	datathon	The Soccer data challenge is a competition promoted by SoBigData and open to all fans of data and football.	http://sobigdata- soccerchallenge.it/	Teaching Institutions
22/10/2018	RDSM2018 2nd International Workshop on Rumours and Deception in Social Media	workshop	The 2nd edition of the RDSM workshop will particularly focus on online information disorder and its interplay with public opinion formation.	https://www.pheme.eu/r dsm2018/	Research

			2019		
02/01/2019	SoBigData Master	Master	The Master in Big Data aims at training data scientists, professionals with a mix of multidisciplinary skills, which allow not only acquiring data and extracting knowledge, but also telling stories through these data and managing their ethical and legal implications	https://masterbigdata.it/	Teaching Institutions
15/02/2019	RumourEval 2019	online datathon	The core mission is to automatically determine the veracity of rumours.	https://competitions.cod alab.org/competitions/19 938	Research
5-7/05/2019	2° Soccer Data Cup	Datathon	The Soccer data challenge is a competition promoted by SoBigData and open to all fans of data and football.	http://www.sobigdata.eu/blog/when-soccer-and-science-goes-female-2nd-soccer-data-cup	Teaching Institutions
04-05/06/2019	From Game Theory to Computational Social Science and Beyond	Workshop	This workshop brings together various strands of social sciences (economics, sociology, etc.), complex systems, network science, game theory, socio-physics and data science, to showcase recent scientific advances, and to identify synergies for collaboration.	https://coss.ethz.ch/educ ation/past/HS2019/GT.ht ml	Research
17-21/06/2019	Summer School on Large Scale Text and Social Media Analytics with GATE	Summer School	The focus is on mining text and social media content with GATE. Many of the hands on exercises are focused on analysing news articles, tweets, and other textual content.	https://www.datascience phd.eu/events/summer- school-large-scale-text- and-social-media- analytics-gate	
25-28/06/2019	Summer School on Computational Misinformation Analysis 2019	Summer School	The aim of this summer school is, firstly, to set out the state-of-the-art and challenges in computational misinformation analysis, followed by lectures and hands-on practical sessions on relevant methods, tools, and datasets.	https://gate- socmedia.group.shef.ac.u k/summer-school-comp- misinfo-analysis-2019/	Research
8-9/07/2019	ESME 2019	Workshop	workshop about, ethics, privacy and explainable Al	https://kdd.isti.cnr.it/es me2019/	Research
18/09/2019	womENcourage 2019 – "Diversity Drives Societal Change", ACM Celebration of	Conference	WomENcourage brings together women in the computing profession and related technical fields to exchange knowledge and experience and provide special support for women who are	https://womencourage.a cm.org/2019/	Research
	Women in Computing		pursuing their academic degrees and starting their careers in computing.		

			encourage principled research that will lead to the advancement of explainable, transparent, ethical and fair data mining, machine learning, artificial intelligence.	d2019/	
12-13/10/2019	Soccer Data Challenge	Datathon	The Soccer data challenge is a competition promoted by SoBigData and open to all fans of data and football.	https://sobigdata- soccerchallenge.it/	Teaching Institutions
19/11/2019	Artificial Intelligence: the European approach for citizens' wellbeing	conference	The event aims at debating on the relevance of Artificial Intelligence in the global scenario, in particular addressing the role of Europe and of Science & Technology in fulfilling the societal needs mitigating the risks, which possibly arise from a new way to intend the links between economy and social values.	https://kdd.isti.cnr.it/Al4 Citizensbenefit/	Policy and Law Makers
19/11/2019	From SoBigData to SoBigData++: toward an advanced community of data scientists	conference	The first four years of SoBigData and the SoBigData++ project	http://www.sobigdata.eu /events/sobigdata- sobigdata-toward- advanced-community- data-scientists	Policy and Law Makers

Table 2: Events organized or co-organized by SoBigData

#### 2.3.3 DETAILED REPORT ON SELECTED EVENTS

#### 2.3.3.1 SOBIGDATA@CCS18

The 5<sup>th</sup> Complex Systems Society conference (CCS18) was held in Thessaloniki, Greece on 23-28<sup>th</sup> September 2018. As with all previous meetings this conference delivered the highest quality of presentations, the most up-to-date findings, was attended by the pioneers in the field of Complex Systems, as well as young aspiring students.

CCS2018 is the flagship conference on Complex Systems promoted by the CSS. It brings under one umbrella a wide variety of leading researchers, practitioners and stakeholders with a direct interest in Complex Systems, from Physics to Computer Science, Biology, Social Sciences, Economics, and Technological and Communication Networks, among others.

#### **PARTICIPANTS AND SCHEDULE**

The event is well attended with numbers being close to one thousand, although we do not have confirmed figures for this year. The purpose is to deliver a well-tailored and focused event of the highest scientific and

organizational standards. Full details of the talks, plenary speakers and schedule can be found on the website.

#### **WEBSITE**

The website link provides a full schedule of the whole event.

http://ccs2018.web.auth.gr/

#### 2.3.3.2 IEEE DSAA 2018

This event took place on 1-4 October 2018 in Turin, Italy. It was the 5th annual instalment of the conference and this year welcomed the collaboration of the American Statistical Association, to complement the IEEE Computational Intelligence Society and the ACM SIGKDD. This year Data Science and Advanced Analytics (DSAA) also added the support of the ISI Foundation, which has worked for 35 years to break down traditional silo in the sciences of complexity and data.

The IEEE International Conference on DSAA aims to be the flagship annual meeting spanning the interdisciplinary field of Data Science. DSAA focuses on the science of data science, as well as the implications of the science for applications to industry, government, and society.

#### **PARTICIPANTS AND SCHEDULE**

We do not yet have the number of attendees for this event, but the event is increasing in size every year. This event also offers Travel Awards for female PhD students under the age of 30 to encourage a more females to secure roles in the field of Data Science. There were 4 such awards given this year to females to help them to attend the event.

Data Science Advanced Analytic spans all of the component fields of data science, including statistics, probabilistic and mathematical modelling, machine learning, data mining and knowledge discovery, complexity science, network science, business analytics, data management, infrastructure and storage, retrieval and search, security, privacy and ethics. From the applications side, DSAA aims both to show researchers important problems and issues that are revealed by real applications, and to show practitioners and users how the science can be applied to realize value. DSAA is intended to reflect the interdisciplinary nature of data science and analytics, as an alternative to the highly specialized disciplinary conferences.

#### **WEBSITE**

The website link provides a full schedule of the event and details of the keynote speakers and all other speakers and experts.

https://dsaa2018.isi.it/home

#### 2.3.3.3 SOBIGDATA FINAL CONFERENCE

The SobigData final conference took place in Brussels the 19th of November.

The conference was divided in two part: the morning, at the European Parliament there has been a more institutional part, while in the afternoon, at the Brussels headquarter of Regione Toscana there as been a wrap up of the 4 years of SoBigData.

The 1st part of the event, "Artificial intelligence: the European approach for citizens' wellbeing", hosted in the Altiero Spinelli Building at European Parliament in Brussels, involved EU Institutions, Research Institutions, and Industries. Influential representatives of these organizations discussed different visions and roles of Artificial Intelligence, as well as on its potential impact on the economy, social behavior, and political equilibrium. The event was well attended with about 120 people.

The 2nd part of the event, "From SoBigData to SoBigData++: toward an advanced community of data scientists", hosted in the headquarter of Regione Toscana in Brussels, was focused on the success of SoBigData in his 4 years of life. The participation was of about 60 people.

#### **WEBSITE**

https://kdd.isti.cnr.it/AI4Citizensbenefit/

http://www.sobigdata.eu/events/sobigdata-sobigdata-toward-advanced-community-data-scientists



Figure 1: the website of the Final Conference

#### 2.3.4 PRESENCE IN CONFERENCES AND WORKSHOP

Table 3 reports the conferences and workshops where SoBigData partners gave a talk and/or a presentation of the project.

Date	Event	Туре	Title	Authors	Web	Stakeholder			
	2018								
10/9/2018	ECML PKDD	Tutorial	Human Mobility Analysis: Data Measures Generative Models, and Predictive Algorithms	Luca Pappalardo	https://humanmobilit y-tutorial.github.io/	Research			
10/9/2018	PAP @ECML PKDD 2018 PERSONAL	Workshop	PAP 2018 – International Workshop of Personal Analytics and Privacy	Riccardo Guidotti	http://kdd.isti.cnr.it/ pap2018/	Research			

	ANALYTICS AND PRIVACY					
10/9/2018	PAP @ECML PKDD 2018 PERSONAL ANALYTICS AND PRIVACY	Invited talk	PAP 2018 – International Workshop of Personal Analytics and Privacy	Anna Monreale	http://kdd.isti.cnr.it/ pap2018/	Research
10/09/2018	ECML-PKDD	Tutorial	Efficiency/ Effectiveness Trade-ofs in Learning to Rank	Franco Maria Nardini, Claudio Lucchese	http://learningtorank .isti.cnr.it/	research
12/09/2018	Digital Humanities Perspectives on Al/Machine Learning	Seminar Speaker	Digital Humanities Perspectives on Al/Machine Learning		https://sheffieldmlne t.github.io/talk/semin ar-tobias-blanke/	Research
13/09/2018	ECML PKDD 2018	Invited talk	Combating polarization in social media	Aristides Gionis	http://www.ecmlpkd d2018.org/	Research, Industry
19/09/2018	HUBIT FIRST ANNUAL CONFERENCE	Invited talk	Bridging gap between ICT and Social Scientists	Rajesh Sharma	http://www.hubit- project.eu/en/events /hubit/hubit-first- annual-conference-/	Research, Industry
25/09/2018	3rd Int'l Summer School on Data Science	talk	Scalable unsupervised representations for text and graphs	Avishek Anand	https://sites.google.c om/site/ssdatascienc e2018/	Reserch
29/09/2018	Social Informatics 2018	Talk	Quantifying Media Influence and Partisan Attention on Twitter during the UK EU Referendum.	Genevieve Gorrell	https://socinfo2018.h se.ru/	Research
7-8/11/19	European Parliament	Workshop	Facebook and Other Social Dangers	Mark Coté	http://www.guengl.e u/news/article/event s/facebook-and- other-social-dangers	Policy and Law Makers
21-23/11/19	VII Saint Petersburg International Cultural Forum	Discussion Panel	What Does Culture Need Big Data for?	Mark Coté	https://culturalforum .ru/event/153605222 9037-big-data-data- mining-v-iskusstve	Research and Industry
26/11/2018	Search Solutions 2018	tutorial	Text Analysis with GATE	Diana Maynard	http://irsg.bcs.org/Se archSolutions/2018/s s2018tutorials.php	Research, Industry
29/11/2018	CIPR (Chartered Institute of Public Relations) Annual Conference: Accountable Leadership and Social Purpose	Keynote talk	The language of social media	Diana Maynard	https://www.cipr.co. uk/nationalconferenc e	Industry

14- 16/12/2018	CFE 2018	Contributed talk	Maximum-entropy models in economics and finance	Tiziano Squartini	http://www.cfenetw ork.org/CFE2018/full programme.php	Research
1/2/2019	Politecnico di Milano, Department of Management, Economics and Industrial Engineering	Invited talk	Sentiment Analysis from Social Media	Diana Maynard	https://www.polimi.it /en/scientific- research/department s-and-research- structures/departme nts/	Research
18/10/2018	European Parliament POLICY DEPARTMENT FOR CITIZENS' RIGHTS AND CONSTITUTION AL AFFAIRS	Invited talk	Effects of algorithmic bias in social media platforms.	Dino Pedreschi	http://www.europarl. europa.eu/committe es/en/afco/events- other.html?id=20181 012EOT03121	Policy and Law Makers
			2019			
27/01/2019	AAAI 2019	Tutorial	AAAI 2019 Tutorial on On Explainable AI: From Theory to Motivation, Applications and Limitations	Fosca Giannotti, Riccardo Guidotti	https://xaitutorial201 9.github.io/	Research
05/06/2019	Law and Bilateral Trade: North America - Europe	Invited talk	Presentation of ethical challenge and contribution of DSoBigData	Francesca Pratesi		Research
05/06/2019	From Game Theory to Computational Social Science and Beyond	Talk	Representation learning for Graphs	Avishek Anand	https://coss.ethz.ch/ education/past/HS20 19/controversies.htm	Research
03/07/2019	Workshop: Can big data help migration research?	Chair, talk	Ethical aspects in migration data and research	Francesca Pratesi	https://www.ucl.ac.u k/global- health/workshop- can-big-data-help- migration-research	Research
20/09/2019	ECML PKDD					
08/09/2019	Festival della Letteratura di Mantova	Invited talk	il lato umano dell'Intelligenza Artificiale	Dino Pedreschi	https://www.festival etteratura.it/it/racco nti/lavagne-il-lato- umano-dell- intelligenza-artificiale	Policy and Law Makers
18/09/2019	Sant'Anna Seminars	Round table	Privacy: limite od opportunità? Gli esempi delle nuove tecnologie e dei dati sanitari	Dino Pedreschi	https://www.santann apisa.it/it/news/priva cy-limite-od- opportunita-gli- esempi-delle-nuove- tecnologie-e-dei-dati-	Policy and Law Makers

					sanitari-mercoledi	
15/10/2019	Associazione italiana per l'Intelligenza Artificiale	Talk	I protagonisti del XXI secolo: voce Al ragazzi	Dino Pedreschi	https://www.eventbr ite.it/e/biglietti-i- protagonisti-del-xxi- secolo-voce-ai- ragazzi- 71945987385#listing- organizer	Research, Students
01/03/2019	The 2019 Multidisciplinar y International Symposium on Disinformation in Open Online Media	keynote talk	Detecting malicious social bots: the never- ending clash	Stefano Cresci	https://2019.misdoo m.org/	Research
17/04/2019	kickoff Meeting of the TOFFEe (Tools for Fighting Fakes) project	Invited talk	Spotting content- polluting botnets in Twitter	Stefano Cresci	https://toffee.imtlucc a.it/workshops/kick- off	Research
26/11/2019	Qatar Computing Research Institute (QCRI), Doha (Qatar)	Invited talk	Characterization and detection of disinformation-spreading social bots	Stefano Cresci	http://alt.qcri.org/wordpress/	Research
25/11/2019	Qatar Computing Research Institute (QCRI), Doha (Qatar)	Invited talk	AI/ML for the collection, analysis, and visualization of emergency posts in social media	Stefano Cresci	https://www.hbku.ed u.qa/en/about-qcri	Research
24/11/2019	College of Science and Engineering, Hamad Bin Khalifa University (HBKU), Doha (Qatar)	Invited talk	Characterization and detection of disinformation-spreading social bots	Stefano Cresci	https://www.hbku.ed u.qa/en/cse	Research
27/08/2019	Tacticon @ DFB (German Football Association)	keynote talk	Visual Football Analytics	Gennady & Natalia Andrienko		Research
06/09/2019	Tacticon @ DE- NL qualification game	keynote talk	Visual Football Analytics	Gennady & Natalia Andrienko		Research
24/02/2019	Open Science & Innovation	Talk	Wiser. Semantic Search Engine for expert finding	Paolo Ferragina		Research
27/09/2019	LEX and the City	Invited Talk	La giustizia predittiva: Saremo giudicati da un algoritmo?	Paolo Ferragina		Research

21- 22/11/2019	Text Mining in Science Studies Workshop, 21 November, Berlin.	Invited Talk	Adapting text mining tools to noisy text	Diana Maynard	n/a	Research
2-6 June 2019	European Semantic Web Conference (ESWC) 2019	Keynote talk	Adding value to NLP: a little semantics goes a long way.	Diana Maynard	https://2019.eswc- conferences.org/keyn ote-diana-maynard/	Research and Industry
5-6 August 2019	Essex University Summer School on Big Data and Analytics	Tutorial	Tutorials on "Practical Sentiment Analysis" and "Introduction to NLP"	Diana Maynard	https://www.essex.ac .uk/research/institute s-and- centres/institute-for- analytics-and-data- science/big-data-and- analytics-summer- school	Research
5 March 2019	National Housing Federation Annual Conferece	Keynote talk	The language of tweets	Diana Maynard	https://comms.housi ng.org.uk/	Industry
11 December 2019	Data Science Seminars	Speaker	Data Science and AI for Business Process Improvement	Marlon Dumas	https://www.cs.ut.ee /en/industry- collaboration/data- science-seminars	Research and Industry
13- 17May2019	ACM WWW 2019	Speaker	Sensing Social Media Signals for Cryptocurrency News	Nino Antulov- Fantulin, Dirk Helbing, Tian Guo	https://www2019.the webconf.org	Research
18 Sept 2019	ACM WomenCourag e 2019 data science and society workshop	Invited Talk	Measuring the "salad bowl" -Superdiversity on Twitter-	Alina Sirbu	https://womencoura ge.acm.org/2019/wor kshops-and- tutorials/#w4_anchor	Research
18 Sept 2019	ACM WomenCourag e 2019 data science and society workshop	Invited Talk	Algorithmic bias and opinion fragmentation and polarisation	Alina Sirbu	https://womencoura ge.acm.org/2019/wor kshops-and- tutorials/#w4_anchor	Research
11 June 2019	BIGSSS Summer School on Migration	Speaker	Big Data Mining and Machine Learning for Migration Studies	Alina Sirbu	https://bigsss- css.jacobs- university.de/migrati on2019/	Research, Students
14 July 2019	Complex networks: from socio-economic systems to biology and	Invited Talk	Statistical models for temporal networks	Fabrizio Lillo	https://secs19.liparis chool.it/	Research

	brain					
13 September 2018	Econophysics Colloquium 2018	Invited talk	What drives network dynamics? Disentangling the role of link persistence from dynamic fitness	Fabrizio Lillo		Research
21 September 2018	Alan Hawkes 80th Birthday Celebration Workshop	Invited talk	Detecting and modeling market instabilities at high frequency with Hawkes processes	Fabrizio Lillo		Research
18 March 2019	COMPLENET'19	Talk	A dynamic network model with persistent links and node-specific latent variables, with an application to the interbank market	Fabrizio Lillo		Research
3 May 2019	Qfin@Work	Invited talk	Better to stay apart: asset commonality, systemic risk, and investment strategies	Fabrizio Lillo		Research and Industry
26 May 2019	NextFest 2019 Wired	Invited talk	More women in stem: intelligenze artificiali (e umane)	Fosca Giannotti	https://nextfest2019- milano.wired.it/speak er/fosca-giannotti/	
26 May 2019	NextFest 2019 Wired	Invited talk	Persone dietro le macchine	Dino Pedreschi	https://nextfest2019- milano.wired.it/speak er/dino-pedreschi/	
5 June 2019	From Computational Social Science to Game Theory and Beyond	Invited talk	Dynamical models for temporal networks	Fabrizio Lillo		Research
17 June 2019	Complexity72	Invited talk	Statistical models for temporal networks	Fabrizio Lillo		Research, Students
5 February 2019	Winter Workshop on Complex Systems 2019	Invited talk	Random models for (financial) networks	Fabrizio Lillo		Research, Students
18 Sept 2019	ACM WomenCourag e 2019 data science and society workshop	Talk	City of citizens: shared mobility and urban data science	Chiara Boldrini	https://womencoura ge.acm.org/2019/wor kshops-and- tutorials/#w4_anchor	Research
28 June 2019	Summer School on Computational Misinformation Analysis 2019	Talk	Ego network analysis, information-driven social links and impact on information diffusion	Chiara Boldrini	https://gate- socmedia.group.shef. ac.uk/summer- school-comp-misinfo- analysis-2019/	Students

4 December 2019	Bilateral meeting CNR ISTI-IIT and Hong Kong Productivity Council	Talk	Microscopic social network analysis and information diffusion in Online Social Networks	Chiara Boldrini	n/a	Research and Industry
18 November 2019	2019 EU-US Frontiers of Engineering Symposium	Talk	THE INTERNET OF PEOPLE: A human and data-centric paradigm for the Next Generation Internet	Andrea Passarella	https://www.naefron tiers.org/188386/201 9-EUUS-Frontiers-of- Engineering- Symposium	Research and Industry
12 March 2019	2019 Bilateral meeting CNR- DIITET Toyota	Talk	Internet of People: Human Centric Data Management beyond the Future Internet Edge	Andrea Passarella	n/a	Research and Industry
18 March 2019	Ital-IA - Convegno Nazionale CINI sull'Intelligenza Artificiale	Talk	Virtuale come Specchio del Reale: il Microscopio Sociale delle Online Social Networks	Chiara Boldrini	http://www.ital-ia.it/	Research

Table 3: Workshop/Tutorials/Invited Talks

#### 2.3.5 PRESS COVERAGE

Table 4 lists the articles published in newspapers, magazines and websites that mention SoBigData.

Date	Persons involved	Publication Title	Source
		2018	
10/09/2018	,		https://www.cnr.it/it/comunicato- stampa/8275/calcio-l-algoritmo-prevede-gli- infortuni-e-suggerisce-il-mercato
10/09/2018		Calcio, un algoritmo ora prevede gli infortuni	https://www.repubblica.it/tecnologia/2018/09/1 0/news/calcio_un_algoritmo_ora_prevede_gli_in fortuni-206053505/
10/09/2018			http://www.lescienze.it/lanci/2018/09/10/news/cnr_calcio_l_algoritmo_prevede_gli_infortuni_e_suggerisce_il_mercato-4104266/
10/09/2018	,	Intelligenza artificiale per il calcio, tutti i dettagli sul progetto	http://www.cronacatorino.it/scienza- tecnologia/intelligenza-artificiale-calcio-tutti- dettagli-progetto.html
10/09/2018		L'Intelligenza Artificiale sbarca nel mondo del calcio: possibile prevedere gli infortuni ed il livello di performance	http://www.sportfair.it/2018/09/intelligenza- artificiale-calcio/809851/
14/09/2018	Dino Pedreschi	Dino Pedreschi, la società riflessa nei Big Data	http://www.datamanager.it/2018/09/dino- pedreschi-la-societa-riflessa-nei-big-data/
		2019	
14/01/2019	Andreas Rauber (TU Wien	Transparency in Algorithmic	https://ercim-

	and SBA), Roberto Trasarti, Fosca Giannotti (ISTI-CNR)	Decision Making	news.ercim.eu/en116/special/transparency-in- algorithmic-decision-making-introduction-to- the-special-theme
01/03/2019	Dino Pedreschi	Dalla macchina all'uomo. Tracce digitali per un nuovo umanesimo	http://h5.raiplay.it/raiplay/video/2019/03/396
03/03/2019	Dino Pedreschi	Tutta l'umanità dell'intelligenza artificiale. Big data + machine learning	http://h5.raiplay.it/raiplay/video/2019/03/396 -B-Dino-Pedreschi9de7c76b-8c05-4746-aeee- b5affa1de210.html
02/03/2019	Dino Pedreschi	Big data per un mondo migliore. Non solo marketing	http://h5.raiplay.it/raiplay/video/2019/03/396 A-Dino-Pedreschi08da4b94-f861-41a8-a17f- d228e542f6b3.html
03/04/2019	Fosca Giannotti	Missione nell'enigma dell'IA. L'Europa premia due ricercatori italiani	http://www.sobigdata.eu/sites/default/files/LaStampa_FoscaGiannotti_0.pdf
28/04/2019	Fosca Giannotti	Fondi europei per la ricerca: le università toscane fanno il pieno	https://firenze.repubblica.it/cronaca/2019/03/ 28/news/universita222728732/
28/04/2019	Fosca Giannotti	_	https://www.repubblica.it/tecnologia/2019/03/28/news/intelligenza_artificiale_due_italiani_tra_i_ricercatori_premiati_dall_european_rese_arch_council-222697870/
01/05/2019		winners: An interview with the Digital DNA Toolbox team	https://ocean.sagepub.com/blog/2018-sage- concept-grant-winners-an-interview-with-the- digital-dna-toolbox-team
		Darbia va al Mirad Navt Fact	
09/05/2019	Fosca Giannotti	Barbie va al Wired Next Fest 2019 per esortare donne e bambine a superare il Dream Gap!	https://www.glamour.it/news/eventi/2019/05 /09/barbie-va-al-wired-next-fest-2019- esortare-donne-bambine-superare-dream- gap/
, .	Fosca Giannotti Stefano Cresci	2019 per esortare donne e bambine a superare il Dream Gap! Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»	/09/barbie-va-al-wired-next-fest-2019- esortare-donne-bambine-superare-dream- gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici- piu-di-meta-sono-fatti-da-robot-1.37386302
27/08/2019		2019 per esortare donne e bambine a superare il Dream Gap! Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»  "Privacy: limite od opportunità? gli esempi delle nuove tecnologie e dei dati sanitari"	/09/barbie-va-al-wired-next-fest-2019-esortare-donne-bambine-superare-dream-gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici-piu-di-meta-sono-fatti-da-robot-1.37386302 https://www.santannapisa.it/it/news/privacy-limite-od-opportunita-gli-esempi-delle-nuove-tecnologie-e-dei-dati-sanitari-mercoledi
27/08/2019	Stefano Cresci	2019 per esortare donne e bambine a superare il Dream Gap!  Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»  "Privacy: limite od opportunità? gli esempi delle nuove tecnologie e dei dati sanitari"  Alla ricerca di un'intelligenza artificiale umana: una via europea per l'Ai	/09/barbie-va-al-wired-next-fest-2019- esortare-donne-bambine-superare-dream- gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici- piu-di-meta-sono-fatti-da-robot-1.37386302 https://www.santannapisa.it/it/news/privacy- limite-od-opportunita-gli-esempi-delle-nuove- tecnologie-e-dei-dati-sanitari-mercoledi https://www.ilsole24ore.com/art/alla-ricerca- un-intelligenza-artificiale-umana-una-via- europea-l-ai-ACHfhqg
27/08/2019 31/08/2019 03/09/2019	Stefano Cresci  Dino Pedreschi	2019 per esortare donne e bambine a superare il Dream Gap!  Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»  "Privacy: limite od opportunità? gli esempi delle nuove tecnologie e dei dati sanitari"  Alla ricerca di un'intelligenza artificiale umana: una via europea per l'Ai	/09/barbie-va-al-wired-next-fest-2019-esortare-donne-bambine-superare-dream-gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici-piu-di-meta-sono-fatti-da-robot-1.37386302 https://www.santannapisa.it/it/news/privacy-limite-od-opportunita-gli-esempi-delle-nuove-tecnologie-e-dei-dati-sanitari-mercoledi https://www.ilsole24ore.com/art/alla-ricerca-un-intelligenza-artificiale-umana-una-via-
27/08/2019 31/08/2019 03/09/2019 03/09/2019	Stefano Cresci  Dino Pedreschi  Dino Pedreschi	2019 per esortare donne e bambine a superare il Dream Gap!  Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»  "Privacy: limite od opportunità? gli esempi delle nuove tecnologie e dei dati sanitari"  Alla ricerca di un'intelligenza artificiale umana: una via europea per l'Ai  Intelligenza artificiale, competenze da creare in fretta  19 Inspiring Women in Al, Big	/09/barbie-va-al-wired-next-fest-2019- esortare-donne-bambine-superare-dream- gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici- piu-di-meta-sono-fatti-da-robot-1.37386302 https://www.santannapisa.it/it/news/privacy- limite-od-opportunita-gli-esempi-delle-nuove- tecnologie-e-dei-dati-sanitari-mercoledi https://www.ilsole24ore.com/art/alla-ricerca- un-intelligenza-artificiale-umana-una-via- europea-l-ai-ACHfhqg https://www.ilsole24ore.com/art/intelligenza-
27/08/2019 31/08/2019 03/09/2019 03/09/2019	Stefano Cresci  Dino Pedreschi  Dino Pedreschi  Dino Pedreschi	2019 per esortare donne e bambine a superare il Dream Gap!  Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»  "Privacy: limite od opportunità? gli esempi delle nuove tecnologie e dei dati sanitari"  Alla ricerca di un'intelligenza artificiale umana: una via europea per l'Ai  Intelligenza artificiale, competenze da creare in fretta  19 Inspiring Women in Al, Big Data, Data Science, Machine Learning  Dino Pedreschi spiega il gioco a	/09/barbie-va-al-wired-next-fest-2019- esortare-donne-bambine-superare-dream- gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici- piu-di-meta-sono-fatti-da-robot-1.37386302 https://www.santannapisa.it/it/news/privacy- limite-od-opportunita-gli-esempi-delle-nuove- tecnologie-e-dei-dati-sanitari-mercoledi https://www.ilsole24ore.com/art/alla-ricerca- un-intelligenza-artificiale-umana-una-via- europea-l-ai-ACHfhqg https://www.ilsole24ore.com/art/intelligenza- artificiale-competenze-creare-fretta-ACgehqg https://www.kdnuggets.com/2019/03/women
27/08/2019 31/08/2019 03/09/2019 08/09/2019 09/09/2019	Stefano Cresci  Dino Pedreschi  Dino Pedreschi  Dino Pedreschi  Fosca Giannotti	2019 per esortare donne e bambine a superare il Dream Gap!  Insulti e like ai leader politici, il ricercatore del Cnr: «Più di metà sono fatti da robot»  "Privacy: limite od opportunità? gli esempi delle nuove tecnologie e dei dati sanitari"  Alla ricerca di un'intelligenza artificiale umana: una via europea per l'Ai  Intelligenza artificiale, competenze da creare in fretta  19 Inspiring Women in Al, Big Data, Data Science, Machine Learning  Dino Pedreschi spiega il gioco a carte scoperte tra l'uomo e le macchine secondo	/09/barbie-va-al-wired-next-fest-2019- esortare-donne-bambine-superare-dream- gap/ https://iltirreno.gelocal.it/regione/toscana/20 19/08/27/news/insulti-e-like-ai-leader-politici- piu-di-meta-sono-fatti-da-robot-1.37386302 https://www.santannapisa.it/it/news/privacy- limite-od-opportunita-gli-esempi-delle-nuove- tecnologie-e-dei-dati-sanitari-mercoledi https://www.ilsole24ore.com/art/alla-ricerca- un-intelligenza-artificiale-umana-una-via- europea-l-ai-ACHfhqg https://www.ilsole24ore.com/art/intelligenza- artificiale-competenze-creare-fretta-ACgehqg  https://www.kdnuggets.com/2019/03/women -ai-big-data-science-machine-learning.html https://www.festivaletteratura.it/it/racconti/l avagne-il-lato-umano-dell-intelligenza-

	Giannotti		no-i-colloqui-di-cortona-1.4830290
13/10/2019	Dino Pedreschi	Internet Festival 2019: il bilancio	https://www.nove.firenze.it/internet-festival- 2019-il-bilancio.htm
15/10/2019	Dino Pedreschi	"Così l'intelligenza artificiale ci cambierà": gli studenti e il dibattito sul futuro	https://www.lanazione.it/cronaca/intelligenza- artificiale-1.4835406
15/10/2019	Dino Pedreschi	dall'Associazione Italiana per	https://www.gonews.it/2019/10/15/palazoz-vecchio-primo-evento-dibatto-organizzato-dallassociazione-italiana-lintelligenza-artificiale-dedicato-ai-giovani/
17/10/2019	Fosca Giannotti	C'è del buono nei robot	https://www.pressreader.com/italy/corriere- fiorentino/20191017/281840055436607
22/10/2019	Fosca Giannotti	La scienza delle ragazze: Astrofisiche, innovatrici ed esperte di intelligenza artificiale a Pisa per un incontro del ciclo "Informatica50"	http://www.greenreport.it/news/scienze-e-ricerca/a-pisa-arriva-la-scienza-delle-ragazze/
28/11/2019	Stefano Cresci	The not-so-simple science of social media bots	https://firstdraftnews.org/latest/the-not-so- simple-science-of-social-media-bots/
10/12/2019	Fosca Giannotti	Interview by Presa Diretta, Rai3. Will be aired in February 2020	https://www.presadiretta.rai.it
10/12/2019	Dino Pedreschi	Interview by Presa Diretta, Rai3. Will be aired in February 2020	https://www.presadiretta.rai.it
19/12/2019	Cristina Ioana Muntean	LA "DIETA DIGITALE": IL CIBO SUL WEB E SUI SOCIAL	http://radioaula40.cnr.it/7-la-dieta-digitale-il-cibo-sul-web-e-sui-social/
22/12/2019	Luca Pappalardo	Interview by SuperQuark Piu', Rai Play	https://www.raiplay.it/video/2019/12/Superq uark-piu-Lo-Sport-4c32388b-a69e-487c-b42c- 2a254ac5ad02.html?fbclid=IwAR3ATsJ3BtWW 2uWJ71ndQGTKcLu8lirT9Y-XUb- tvdiGD6tPebYLJUbXCiY

Table 4: Press and news articles from the Consortium

#### 3 DISSEMINATION IMPACT

In Deliverable 3.3 - "Initial Dissemination and Impact Plan" we have defined a set of indicators in order to monitor the success of the communication activities. In more detail, the success indicators, detailed in the next sections are assessed continuously and reported annually.

#### 3.1 PROJECT DISSEMINATION INDICATORS

Table 5 reports the indicators defined in Deliverable 3.3. The following indicators represent some metrics in order to evaluate the dissemination activities. Several components have been defined such as the "number of publications", "the number of interviews", or "the size of the community".

Component	Metrics	Target Y1	Target Y2	Target Y3	Target Y4
Publications	Number of published / submitted (i.e. peer- reviewed) publications in journals or conferences	15	15	15	15
Reported presentations	Number of presentations	5	10	10	15
Press releases	Number of press releases	5 (General press release in English. Individual releases in several project languages)	5	5	5
Interview / Meeting request	Number of interviews and/or requests for establishing contact to SoBigData	4 (1 with academic background and 3 industrial background)	5	10	15
Size of the end- user community	Number of individuals/organisations in the SoBigData community	100	150	200	250

Table 5: Project dissemination indicators.

#### 3.1.1 DISSEMINATION INDICATORS: RESULTS

This section reports the results considering the dissemination indicators introduced in Table 5. Table 6 reports that, in each period, all the indicators have been addressed and the results go well beyond than what was initially estimated.

Component	Metrics	Target (M18)	Result (M18)	Target (M36)	Result (M36)	Target (M48)	Result (M52)
Publications	Number of published / submitted (i.e. peer-reviewed) publications in journals or conferences	22	73	22	99	15	49
Reported presentations	Number of presentations	10	82	15	91	15	56
Press releases	Number of press releases	7	14	7	36	7	32
Interview / Meeting request	Number of interviews and/or requests for establishing contact to SoBigData	6	7	12	42	15	19
Size of the end- user community	Number of individuals/organisations in the SoBigData community	125	176	200	2333	250	2333

Table 6: Project dissemination indicators results.

#### 3.2 SOCIAL CHANNELS INDICATORS

Since SoBigData has a pervasive presence on social media, such as Facebook, Twitter, blog, Table 7 reports all the indicators related to social media activities expected in this reporting period.

	Indicators					
Channel	Objective	Y1	Y2	Y3	<b>Y4</b>	
News/blog posts	News/blog entries on the project web site	10 Posts	12	12	12	
Twitter	Short project updates	20 tweets, 100 followers	40/200	40/300	50/350	
Facebook page	Informal project updates and links to the RSS Web site	To be created	30/100	30/100	30/100	
Project Web site	Number of visits Page views Pages/Visit	100 200 1.5	20% growth	20% growth	20% growth	

**Table 7: Social channels indicators.** 

#### 3.2.1 SOCIAL CHANNELS: RESULTS

The indicators show the success of the project and the activities related to SoBigData. Table 8 reports all the results obtained throughout the duration of the project. We can easily make a comparison between each period and notice ever increasing numbers that go well beyond the estimates made initially. In this context, we have to highlight that the Twitter and Facebook channels do not consider only the project activities but all the activities along the project related to dissemination, e.g. presentation to conference or release of paper.

Channel	Objective		Target	Result	Target	Result	Target	Result
			(M18)	(M18)	(M36)	(M36)	(M48)	(M52)
News/blog posts	News/blog entries on the project web site		16	13	18	44	12	29
Twitter	Short project updates	Tweets	30	561	60	562	50	326
		Followers	200	558	400	1013	350	1281
Facebook	Informal project updates and	Posts	15	526	45	593	30	418
page	links to the RSS Web site	Followers	50	246	150	382	100	441
		Likes		249		125		
Project Web	Number of visits		110	26556	204	20931	172	19195
site	Page views Pages/Visit		220	83361	418	52723	346	36957
			1.7	4.3	2.16	2.51	2.59	2.2

Table 8: Social channels indicators results.

For additional information, we show in Fig.2 the complete statistics and the visits timeline of the SoBigData website.

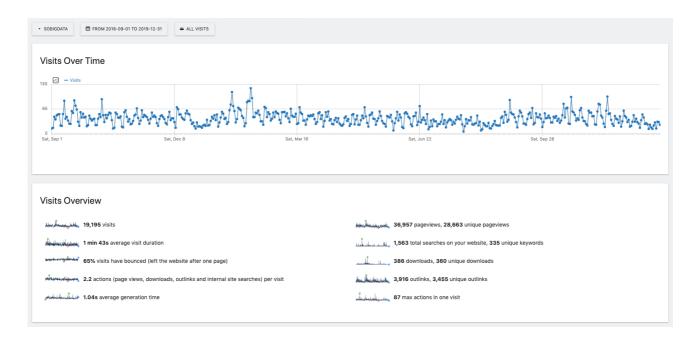


Figure 2: Project Web Site Statistics.

#### 4 CONCLUSIONS

This deliverable shown all the dissemination channels and tools set-up from M37 to M52 of the project. It represents an integration of deliverable "D3.5 - Periodic dissemination and impact report and plan for following year 2" about dissemination and impact plan of SoBigData.

Considering the expected results regarding the dissemination activities (see *Table 6 Project dissemination indicators* and *Table 8 Social channels indicators*) and the actual results (see Table 7 *Project dissemination indicators results* and *Table 9 Social channels indicators*, and for reporting period 1, D3.4, for reporting period 2, D3.5), we can say that the outcomes are more than satisfactory and that in 4 years SoBigData has managed to create an ever-growing community of data scientists.

The next steps will be the consolidation of a cross-disciplinary European research community through SoBigData++ H2020 project.

### APPENDIX A. ROLLUP, POSTER AND NEWSLETTER

#### A.1 Rollup Poster

The rollup poster produced by SoBigData

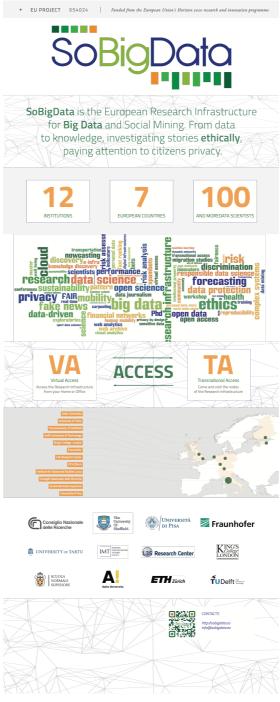


Figure A 1. Overview of the SoBigData poster.

#### A.2 Rollup poster for the SoBigData Master in Big Data Analytics & Social Mining

The rollup poster produced by SoBigData for the Master in Big Data Analytics & Social Mining



Figure A 2. Overview of the SoBigData rollup poster.

#### A.3 Poster

The poster produced by SoBigData

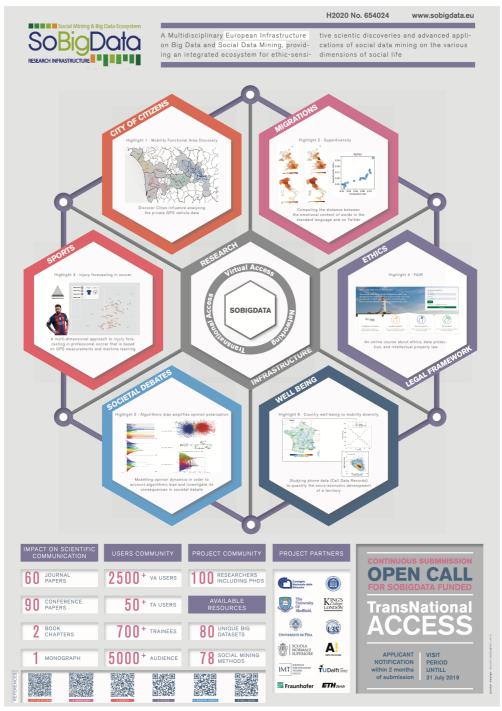


Figure A 2. Project poster.

#### **A.4 Newsletter**

The issue 2, 3, 4 of the newsletters published by SoBigData is freely available at the following link:

http://www.sobigdata.eu/newsletter



Figure A 3. Cover of Issue 2 of the SoBigData newsletter.



The vision that led to the birth of SoBigData, in 2014, anticipated the rising demand for cross-disciplinary research and innovation on the multiple aspects of social complexity from combined data-driven and model-driven perspectives. SoBigData's vision in 2014 also predicted the rising importance of ethics and data scientists' responsibility as a pillar of trustworthy use of big data and analytical technology. SoBigData's initial vision has become today part of the mainstream discourse and may be summarised as follows.

• The necessary starting point to tackle the challenges is to observe how our society works, and the big data originating from the digital breadcrumbs of human activities offer a huge opportunity to scrutinize the ground truth of individual and collective behaviour at an unprecedented detail and at a global scale. This increasing wealth of data is a chance to understand social complexity, provided we can rely on social mining, i.e., adequate means for accessing big social data together with models for extracting knowledge from them.

[Continues on pag. 3]

- 07 TRANSNATIONAL ACCESS: THE OPEN CALL
- 08 THE SOBIGDATA E-LEARNING AREA
- 09 FEATURED: THE ERC GRANT
- 17 RESEARCH HIGHLIGHTS

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Figure A 4. Cover of Issue 3 of the SoBigData newsletter.



Since its inception. SoBigData has emphasised the role Since its inception, SoBigData has emphasised the role of training, aiming to 'promote the education of the next generation of data science researchers'. In order to achieve this goal, training activities have been organised along two main threads: one devoted to different types of events aimed at engaging 'researchers in new research methodologies for social Big Data', and the other dedicated to establishing 'a joint training and education resource repository on social Big Data'.

As the SoBigData project reaches its final phase, it is possible to assess the objectives that were set in the Grant Agreement and offer an overview of all the activities that have taken place. Within Work Package 4, a number of tasks were set: Task 1 focused on the organisation of Summer Schools, which have involved all of the project's partners and aimed at 'introducing participants to techniques and methodologies for analyzing big data, in order to provide them with a solid background in the computational and mathematical theories behind algo

[Continues on pag. 3]

#### Inside this issue

- Mark Cotè and Marco Braghieri, King's College of London, UK EDITORIAL
- SOBIGDATA CONFERENCE ON AI

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  Laura Pollacci, University of Pisa, Italy
- NEXT SOBIGDATA EVENTS
  The editorial board
- HIGHLIGHTS ON TRAINING EVENTS
  Multiple authors



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Figure A 5. Cover of Issue 4 of the SoBigData newsletter.