

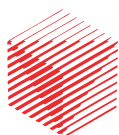
ERCIM

European Research Consortium
for Informatics and Mathematics

Cooperating for Excellence in Research

Activity Report 2017

ERCIM at a Glance	2
Structure and Organization	4
Finances	5
Science	6
. Working Groups	7
.....Blockchain Technology	7
.....Computational and Methodological Statistics.....	8
.....Dependable Software-Intensive Embedded Systems	8
.....Formal Methods for Industrial Critical Systems	9
.....MUSCLE.....	10
.....Many-Valued Logics	10
. Projects	12
.....BigDataEurope	13
.....BlueBridge	14
.....Create-IoT	15
.....GEOLYTICS.....	16
.....HRADIO	17
.....SPECIAL	18
.....VRE4IEC.....	19
.....WAI-TOOLS.....	20
Human Capital	21
.....ERCIM “Alain Bensoussan” Fellowship Programme...22	
.....Cor Baayen Young Researcher Award.....24	
Outreach	26
.....ERCIM News	27
ERCIM Office	28
.....ERCIM and W3C.....	29
Membership	30



ERCIM – the European Research Consortium for Informatics and Mathematics – aims to foster collaborative work within the European research community and to increase cooperation with European industry. In 2017, the members of ERCIM included leading research establishments from 15 European countries. Encompassing about 10 000 researchers and engineers, ERCIM is able to undertake consultancy, development and educational projects on any subject related to its field of activity. ERCIM was founded in 1989.

What is ERCIM?

ERCIM aims to foster collaboration within the European ICST research community and to increase cooperation with industry. Its members are centres of excellence across Europe. ERCIM is internationally recognized as a major representative organization in its field. ERCIM provides access to all major ICST research groups in Europe and has established an extensive program of working groups, publications, fellowships and prizes. It also hosts the European branch of the World Wide Web Consortium (W3C).

ERCIM, a consortium of leading research institutions, focuses on information and communication science and technology (ICST) and related areas of mathematics. ERCIM has a successful track record of promoting ICST research and cooperation in Europe and beyond. Membership is open to top level research institutions (including universities) in ICST.

Objectives

ERCIM's aim is to play a leading role in Information and Communication Technology in Europe by:

- building a Europe-wide, open network of centres of excellence in ICST and Applied Mathematics.
- excelling in research and acting as a bridge for applications
- being internationally recognised both as a major representative organisation in its field and as a portal giving access to all relevant ICST research groups in Europe
- liaising with other international organisations in its field
- promoting cooperation in research, technology transfer, innovation and training.

International Cooperation

ERCIM considers it a high priority to develop cooperation with scientists all over the world. ERCIM hosts the European branch of the World Wide Web Consortium (W3C), the unique international standardization body which sets the Web standards and protocols (HTML, HTTP, XML, etc.) since 1994. ERCIM participates in EU activities and projects. ERCIM has also established cooperation with Informatics Europe, ETSI, the European Telecommunications Standards Institute and with the European Mathematical Society.

Consultancy

ERCIM experts have been involved in many advisory bodies convened by the European Commission. Additionally, ERCIM senior researchers are participating in several EC-funded roadmapping projects as partners, invited participants or members of advisory boards.

Research Projects

In addition to many projects involving ERCIM member institutes, ERCIM is itself participating in several European Commission related activities and projects as coordinator or partner. In these projects, several member institutes carry out the research while the ERCIM Office takes care of administrative and financial tasks.

Working Groups

Working Groups are specialist networks set up by researchers, within which the ERCIM partners arrange regular workshops with invited external participation to study a specific topic and prepare international research projects.

Members

Member institutes are leading research establishments with excellent links to both the national and international, academic and commercial research communities. All current ERCIM members are national centres of excellence, independent of specific commercial ties. They have a strong involvement in the research programs of the European Union and their country, and joint projects with both small and medium-sized enterprises and large industrial companies.

Benefit of Membership

ERCIM is a European-wide network internationally recognized as a representative organisation in its field. Members can benefit from:

- International recognition as a leading centre for ICT R&D. ERCIM, a European-wide network of centres of excellence in ICT, is internationally recognised as a major representative organisation in its field;
- More influence on European and national government R&D strategy in ICT. ERCIM members team up to speak with a common voice and produce strategic reports to shape the European research agenda;
- Privileged access to standardisation bodies, such as the W3C which is hosted by ERCIM as to other bodies with which ERCIM has also established strategic cooperation. These include ETSI, the European Mathematical Society and Informatics Europe;
- Invitations to join projects of strategic importance;
- Establishing personal contacts among executives of leading European research institutes during the bi-annual ERCIM meetings;
- Invitations to join committees and boards developing ICT strategy nationally and internationally;
- Excellent networking possibilities with more than 10.000 high-quality research colleagues across Europe. ERCIM's mobility activities, such as the fellowship programme, leverages scientific cooperation and excellence;
- Professional development of staff including international recognition;
- Publicity through the ERCIM website and ERCIM News, the widely read quarterly magazine.

Innovation

In addition to research in computer science and mathematics, innovation and transfer of research results is one of the ERCIM institutes' current main assignments. ERCIM members play a pioneering role in creating small and medium-sized high-tech companies, an effective way of achieving such a transfer. In addition, ERCIM members have a long track record of cooperation with European industry in R&D projects, generally within the framework of European programmes. As a network, ERCIM can help industrial partners to locate the best scientific teams in Europe for a given domain.

Cor Baayen Award

Each year, ERCIM presents a promising young researcher in computer science and applied mathematics with the prestigious Cor Baayen Award.

Publications

ERCIM publishes the quarterly magazine "ERCIM News", white papers, and policy documents.

The ERCIM community is supported by a Consortium of two bodies:

- ERCIM AISBL an international non for profit association under Belgian law, carrying on the activities of ERCIM concerning collaborative research, networking, and support.
- ERCIM EEIG, the European Economic Interest Grouping, responsible for managing the ERCIM Office and hosting the European branch of W3C.

ERCIM Association

The ERCIM association is managed by the Board of the Association. In 2017, the board was composed of:

- Domenico Laforenza, IIT-CNR, Italy: President:
- Chrisos Koulamas, ISI, Greece: Treasurer
- Jerzy Tiuryn, University of Warsaw, Poland: Secretary

and in addition:

- Dimitris Plexousakis, Institute of Computer Science, Foundation for Research and Technology (FORTH) – Hellas, Greece, responsible for scientific aspects (working groups, etc.)
- Claude Kirchner, Inria, France, responsible for human capital
- Andreas Rauber, SBA Research, Austria, responsible for outreach activities.

The majority of these board members lead a task group consisting of ERCIM member representatives or substitutes.

ERCIM EEIG

The ERCIM EEIG is governed by the EEIG Board of Directors. In 2017 the board was composed of:

- Jos Baeten, CWI (Vice-President of the EEIG)
- Antoine Petit, Inria (President of the EEIG)
- Matthias Jarke, Fraunhofer-Gesellschaft
- Domenico Laforenza, CNR
- Constantine Stephanidis, ICS-FORTH

and its activities were carried out by an Executive Committee composed of:

- Alexander Nouak, Fraunhofer Gesellschaft
- Dick Broekhuis, CWI (chair)
- Claude Kirchner, Inria
- Brian Matthews, STFC
- Dimitris Plexousakis, FORTH
- Fausto Rabitti, CNR.



Domenico Laforenza, ERCIM President

Throughout 2017 ERCIM traded as a consortium consisting of ERCIM EEIG and ERCIM AISBL. ERCIM operated with a gross turnover of 8.0 M€.

60% of these funds came from EU funding of projects which was either disbursed to partners in consortia or held over for disbursement in the next year.

ERCIM Consortium	
Receipts	138,447 €
ERCIM Office	
Receipts	810,381 € (including 534,426€ from EU contracts)
Total received by the EU disbursed to the partners	2.743,253 €
<i>Total Office turnover</i>	3.019,208 €
W3C Europe	
Receipts	3.057,846 € (including 292,786€ from EU contracts)
Total received by the EU disbursed to the partners	2.084,249 €
<i>Total W3C Turnover</i>	4.849,306 €
Total turnover	8.006,961 €

Science Coordination

A major activity within the scope of the Association's mission is related to the promotion of excellence in research and the maintenance of a strong portfolio of scientific activity, materialized in the form of ERCIM-led and coordinated joint research projects and ERCIM-hosted Working Groups. The Science Task Group aims to enable, encourage, sustain and coordinate scientific activities in the form of collaborative research projects and working groups in areas of ICST and Mathematics within which significant research activity is taking place at Institutions within and beyond ERCIM.

The Science Task Group is therefore divided into subtasks:

- Working Groups for building and maintaining a strong network of ERCIM researchers in the different scientific fields of competence of ERCIM.
- Expert Groups which are established on the initiative of ERCIM board to investigate current topics for a limited period with the aim to produce strategic papers or to coordinate relevant activities of common interest.
- Projects for stimulating the submission of ERCIM-led strategically relevant projects and for helping to define the topics for the yearly ERCIM Conference

The members of the Science Task Group in 2017 included:

Chair:

- Dimitris Plexousakis, FORTH

Members:

- Gabriel David, INESC
- Pierre Guisset, ERCIM office
- Thierry Priol, Inria
- Björn Levin, RISE SICS
- Fausto Rabitti, CNR
- Philippe Rohou, ERCIM office

The Science TG can be contacted at tg-science@ercim.eu



*Dimitris Plexousakis, ICS-FORTH
chair of the ERCIM Science Task Group*

Working Groups

The activities of a Working Group can be divided into several areas: workshops to build the community and maintain its vibrancy, projects designed to advance research and innovation in the particular area of the group, and human mobility to assure the appropriate trained human capital. ERCIM provides some financial support to the Working Groups.

A major activity of an ERCIM Working Group is to search actively for project funding that crosses national borders.

ERCIM Working Groups contribute many of the articles in ERCIM News and commonly provide scientific coordination for the special theme sections. They also participate in the production of ERCIM strategic reports.

The purpose of an ERCIM Working Group is to build and maintain a network of ERCIM researchers in a particular scientific field. The Working Groups are open to any researcher in the specific scientific field.

Working Groups with activities in 2017

- Blockchain Technology
- Computational and Methodological Statistics
- Dependable Software-Intensive Embedded Systems
- Formal Methods for Industrial Critical Systems
- Multimedia Understanding through Semantics Computation and Learning - MUSCLE
- Many-Valued Logics

Blockchain Technology

In 2017 ERCIM established a new Working Group Blockchain Technology to study the potential of this technology for a range of application fields in industry and public administration.

Following up on the ERCIM workshop on Blockchain Technology in May 2017 in Paris, ERCIM established the new Working Group Blockchain Technology. It has become evident that blockchain technology is being investigated in various areas of computer science research. That includes peer-to-peer networks, distributed systems, cryptography, algorithms for consensus building and validation as well as for modeling processes and business models. In addition to these basic technologies, the Working Group will also study applications in relevant fields like Internet-of-Things, supply chains, energy and Smart Grid, the media, the medical field and the financial industry.

“We want to establish blockchain technology as a new field of computer science research in Europe. Our working group will strengthen the young community of European blockchain researchers and foster interdisciplinary cooperation and exchange”, Wolfgang Prinz stated.

The Working Group will also establish a roadmap documenting ongoing research and open research questions in the rapidly moving field of blockchain technology. Another element of its

mission is to build a blockchain research community that will be able to successfully initiate and carry out collaborative research projects on a European level.

For its first year the group is planning several meetings and editorial projects in accordance with the objectives of the group. The next major event will be a workshop organized by members of the group, to be held May 8-9, 2018 in Amsterdam, in conjunction with the ERCIM spring meetings.

Researchers from ERCIM member institutions and other organizations are cordially invited to join the new ERCIM working group Blockchain Technology.

Coordinator:

Wolfgang Prinz, Fraunhofer FIT

<https://wiki.ercim.eu/wg/BlockchainTechnology/>

Computational and Methodological Statistics

The Working Group Computing and Statistics focuses on all computational and methodological aspects of statistics. Of particular interest is research in important statistical applications areas where both computational and/or methodological aspects have a major impact. The aim is threefold: first, to consolidate the research in computational and methodological statistics that is scattered throughout Europe; second to provide researchers with a network from which they can obtain an unrivalled sources of information about the most recent developments in computational and methodological statistics as well as its applications; third to edit quality publications of high impact and significance in the broad interface of computing, methodological statistics and its applications.

Coordinator:

Erricos Kontoghiorghes, School of Computer Science and Information Systems, Birkbeck, University of London

Joint projects:

- Computationally-intensive methods for the robust analysis of non-standard data (CRoNoS - ICT COST Action IC1408) http://www.cost.eu/COST_Actions/ict/IC1408

Co-organised event:

- 10th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2017), 16-18 Dec. 2017, Senate House and Beirkbeck, University of London, UK; Lecturers: Arnaud Doucet, University of Oxford, UK. Dimitris Politis, University of California, San Diego, USA. Stephen Pollock, University of Leicester, UK. Coverage: The CMStatistics2017 took place jointly with the CFE2017.
- 11th International Conference on Computational and Financial Econometrics (CFE 2017), 16-18 Dec. 2017, Senate House and Beirkbeck, University of London, UK, Lecturers: Mark W Watson, Princeton University, USA, Ron Smith, Birkbeck University of London, UK. Stephen Pollock, University of Leicester, UK.

Both events took place jointly and attracted more than 1700 participants.

Joint publications:

- Eric Beutner; Laurent Bordes; Laurent Doyen: The failure of the profile likelihood method for a large class of semi-parametric models, *Bernoulli* 23, 3650-3684, 2017
- Eric Beutner; Simon Reese, Jean-Pierre Urbain, Identifiability issues of age-period and age-period-cohort models of the Lee-Carter type, *Insurance: Mathematics and Economics*, 75, 117-125, 2017

- D. Brzyski, C. B. Peterson, P. Sobczyk, E. J. Candes, M. Bogdan, C. Sabatti Controlling the rate of GWAS false discoveries, *Genetics*, 205, 61-75, 2017
- W. Su, M. Bogdan, E. J. Candes, False discoveries occur early on the Lasso path, *Annals of Statistics*, 45 (5), 2133 - 2150, 2017
- P. Sobczyk, M. Bogdan, J. Josse, Bayesian dimensionality reduction with PCA using penalized semi-integrated likelihood, *Journal of Computational and Graphical Statistics*, 26, 826-839, 2017.
- W. H. Aeberhard, E. Cantoni and S. Heritier, Addlepoint tests for accurate and robust inference on overdispersed count data, *Computational Statistics & Data Analysis*, 107, 162-175, 2017
- R. Fried, S. Abbas, M. Borowski, M. Imhoff, Online Analysis of Medical Time Series, *Statistics and Its Application*, vol. 4, pages 169 - 188, 2017
- Hadjiantoni, S. and Kontoghiorghes E., Estimating large-scale general linear and seemingly unrelated regressions models after deleting observations, *Statistics and Computing*, 27 (2), 349-361, 2017

<http://www.cmstatistics.org/CMStatistics2015/>

Dependable Software-Intensive Embedded Systems

In 2017 the ERCIM Working Group Dependable Embedded Software (DES) co-organised and co-hosted workshops and special sessions at a number of renowned conferences, including the Euromicro SEAA/DSD in Vienna, the SAFECOMP conference in Trento (Italy), and the Euromicro conferences on Digital System Design (DSD) and Software Engineering and Advanced Applications (SEAA) in Limassol, Cyprus. At each of these conferences, ERCIM and the DES Working Group were introduced as one of the key elements in the European landscape of research in embedded systems, cyber-physical systems and systems-of-systems.

Coordinators:

Erwin Schoitsch, Austrian Institute of Technology/SBA

Joint publication:

ERCIM News 109 special theme "Autonomous Vehicles" <https://ercim-news.ercim.eu/EN109/>

Co-organised events:

- Euromicro SEAA/DSD, 30 August - 1 September 2017, Vienna, Conference topic: Advanced SW Applications, Digital Systems Design. Lecturers: Paris Avgeriou, Daniel Schall, Erik Jan Marinissen, Ahmed Hemani. Coverage: 250 HW, SW and systems specialists from industry and academia.

- Safecomp 2017, 13-15 September 2017, Trento, Italy. Lecturers: Marcel Verhoef, John McDermid, Radu Grosu. Coverage: industry and academia.
- ERCIM/EWICS/ARTEMIS DECSoS Workshop, 12-September, Trento, Italy. Topic: Dependable Embedded CPS and SoS

Formal Methods for Industrial Critical Systems

Formal methods have been advocated as a means of increasing the reliability of systems, especially those which are safety or business critical, but the industrial uptake of such methods has been slow. This is due to the perceived difficulty of mathematical nature of these methods, the lack of tool support, and the lack of precedents where formal methods have been proven to be effective. It is even more difficult to develop automatic specification and verification tools due to limitations like state explosion, undecidability, etc. The FMICS Working Group brings together researchers of the ERCIM consortium and beyond in order to promote the use of formal methods within industry.

Coordinator:

Tiziana Margaria, University of Limerick

Organised event:

Joint 22nd International Workshop on Formal Methods for Industrial Critical Systems and 17th International Workshop on Automated Verification of Critical Systems

The yearly workshop of the ERCIM Working Group on Formal Methods for Industrial Critical Systems (FMICS) was organised as a joint event together with the workshop on Automated Verification of Critical Systems (AVoCS). The resulting FMICS-AVoCS 2017 workshop took place on 18-20 September in Turin, hosted by the University of Turin.

The aim of the FMICS workshop series is to provide a forum for researchers interested in the development and application of formal methods in industry. It strives to promote research and development for the improvement of formal methods and tools for industrial applications. The aim of the AVoCS workshop series is to contribute to the interaction and exchange of ideas among members of the international community on tools and techniques for the verification of critical systems.

The workshop was chaired by Laure Petrucci (LIPN, CNRS & Université Paris 13, France) and Cristina Seceleanu (Mälardalen University, Sweden). A special track on “Formal methods for mobile and autonomous robots” took place within the event, and was chaired by Ana Cavalcanti (University of

York, UK). The workshop attracted 30 participants from eleven countries.

A total of thirty papers were submitted, including eight specifically for the special track. Fourteen of them were accepted (including four for the special track).

The programme also included two excellent invited keynote lectures: “Replacing store buffers by load buffers in total store ordering” by Parosh Abdulla (Uppsala University, Sweden) and “Towards formal apps: turning formal methods into verification techniques that make the difference in practice” by Kerstin Eder (University of Bristol, UK). Moreover, a half-day tutorial



Best paper award winners Etienne André (left) and Tim Willemse.

took place: “DIME: Model-based generation of running web applications” by Tiziana Margaria (University of Limerick & Lero, Ireland) and Philip Zweihoff (TU Dortmund, Germany).

The presentations were of extremely good quality. The programme committee awarded two best papers: “A unified formalism for monoprocessor schedulability analysis under uncertainty” by Etienne André, and “Formalising the Dezyne modelling language in mCRL2” by Rutger van Beusekom, Jan Friso Groote, Paul Hoogendijk, Rob Howe, Wieger Wesselink, Rob Wieringa and Tim Willemse. An excellent programme together with a nice weather contributed to the success of the workshops.

The proceedings of FMICS-AVoCS 2017 have been published by Springer as volume 10471 of their LNCS series.

Selected papers are proposed for special issues of the international journals Software Tools for Technology Transfer (STTT) and Science of Computer Programming (SCP).

FMICS-AVoCS 2017:
<http://www.es.mdh.se/conferences/fmics-avocs-2017/>
 FMICS Working Group:
<http://fmics.inria.fr/>

MUSCLE - Multimedia Understanding through Semantics Computation and Learning

MUSCLE (formerly Image and Vision Understanding) is the ERCIM Working Group on multimedia understanding through semantics, computation and learning. It gathers teams from both ERCIM and non-ERCIM institutions whose expertise ranges from machine learning and artificial intelligence to image, video and audio processing, and multimedia database management. The group is closely collaborating with ibai-publishing (www.ibai-publishing.org) which provides open-access journals in the fields of Data Mining, Case-Based Reasoning, and Mass Data Analysis of Signals and Images.

Coordinator:

Davide Moroni, ISTI-CNR

Organised event:

2017 International Workshop on Computational Intelligence for Multimedia Understanding

Around twenty researchers attended the International Workshop on Computational Intelligence for Multimedia Understanding (IWCIM) organized annually by the working group Multimedia Understanding through Semantics, Computation and Learning (MUSCLE) of the European Research Consortium for Informatics and Mathematics (ERCIM), which took place as a satellite workshop to EUSIPCO-2017 held in Kos, Greece, September 2, 2017, with eleven original research papers. The IWCIM 2017 website is hosted by Istanbul Technical University and full-text papers may be accessed via MDPI Proceedings.

Multimedia understanding is an important part of many intelligent applications in our social life, be it in our households, or in commercial, industrial, service, and scientific environments. Analyzing raw data to provide them with semantics is essential to exploit their full potential and help us managing our everyday tasks. Nowadays, raw data normally come from a host of different sensors and other sources, and are different in nature, format, reliability and information content. Multimodal and cross-modal analysis are the only ways to use them at their best. Besides data analysis, this problem is also relevant to data description intended to help storage and mining. Interoperability and exchangeability of heterogeneous and distributed data is a need for any practical application. Semantics is information at the highest level, and inferring it from raw data (that is, from information at the lowest level) entails exploiting both data and prior information to extract structure and meaning. Computation, machine learning, statistical and Bayesian methods are tools to achieve this goal at various levels.

Besides the regular track, a special theme for 2017 was selected: "Signal Processing for Surveillance and Security Applications."

Signal processing is an indispensable technology and research field for surveillance and security applications. With the advance of sensor technology and increased computational power, multimodal security and surveillance systems exploiting several modalities become more prevalent than conventional surveillance systems depending solely on single-channel visible-range video. In that respect, methods and techniques for multimodal sensor and signal analysis play instrumental role for surveillance and security applications.

Researchers had the opportunity to attend the invited talk delivered by Prof. Alptekin Temizel (METU) on "First Person Activity Recognition with Multimodal Features". Prof. Temizel presented the state-of-the-art on the subject followed by a discussion on a comparative performance assessment of several features for first person activity recognition.

Prof. Alptekin Temizel, invited speaker from Middle East Technical University, Ankara, Turkey, presenting the state-of-the-art techniques on first-person activity recognition with multimodal features.

Joint publication:

- Aggarwam U., Trocan M., Coudoux F.X, An HVS-inspired video deinterlacer based on visual saliency, Vietnam J. Comput. Sci. 4, 1 (2017) 61-69, 2017.
<https://link.springer.com/article/10.1007/s40595-016-0081-1>

Many-Valued Logics

Coordinator:

Carles Noguera i Clofent, Institute of Information Theory and Automation, Academy of Sciences of the Czech Republic

Joint publications

- Amanda Vidal, Francesc Esteva, Lluís Godó, On modal extensions of Product fuzzy logic, *Journal of Logic and Computation*, 27(1): 299-336, 2017.
<https://academic.oup.com/logcom/article-abstract/27/1/299/2917822>
- Amanda Vidal, Francesc Esteva, Lluís Godó, On strong standard completeness in some MTL-Delta expansions, *Soft Computing* 21(1): 125-147, 2017.
- Amanda Vidal, Francesc Esteva, Lluís Godó, On Finite-Valued Bimodal Logics with an Application to Reasoning About Preferences, in *Proc. EUSFLAT/IWIFSGN (3) 2017*: 505-517, 2017.
https://link.springer.com/chapter/10.1007%2F978-3-319-66827-7_47
- Zuzana Haniková, Lluís Godó: Petr Hájek, Obituary, *Fuzzy Sets and Systems* 327: 1-4, 2017.
<https://www.sciencedirect.com/science/article/pii/S0165011417302452>
- Tomáš Kroupa, Vincenzo Marra, Generalised states: a multi-sorted algebraic approach to probability, *Soft Comput.* 21(1): 57-67, 2017
<https://link.springer.com/article/10.1007%2Fs00500-016-2343-3>
- Leonardo Manuel Cabrer, Luca Spada, MV-algebras, infinite dimensional polyhedra, and natural dualities, *Archive for Mathematical Logic* 56(1-2): 21-42, 2017.
<https://link.springer.com/article/10.1007%2Fs00153-016-0512-9>

(Co-)organised Events

- ManyVal 2017, 15-17 November 2017, Toulouse, France.
Topic: Reasoning under uncertainty and inconsistency;
Lecturers: Leila Amgoud (CNRS, IRIT Toulouse), Lluís Godó (IIIA-CSIC Barcelona, Spain), Tomáš Kroupa (Czech Academy of Sciences, Prague, Czech Rep), Steven Schockaert (University of Cardiff, UK).
ManyVal is a series of international workshops on the logical and algebraic aspects of many-valued reasoning. The aim of the workshops is to gather both established and young researchers sharing an interest for this topic. Accordingly, each edition has a sharp focus. The attendance is limited in order to facilitate close and informal interaction. ManyVal'17 focused on Many-valued logic and reasoning under uncertainty and inconsistency: - many-valuedness in argumentation - many-valued logic programming - logics of possibility and probability - logics of similarity - many-valued modal logics - paraconsistent logics - states and games on many-valued algebras - foundations of many-valued logics.

Projects

In 2017, ERCIM participated in eight research projects funded by the European Commission either as coordinator or as a partner and in one national French research project.

A European project can be a richly rewarding tool for pushing your research or innovation activities to the state-of-the-art and beyond. Through ERCIM, our member institutes have participated in more than 80 projects funded by the European Commission in the ICT domain, by carrying out joint research activities while the ERCIM Office successfully manages the complexity of the project administration, finances and outreach.

Horizon 2020: How can you get involved?

The ERCIM Office has recognized expertise in a full range of services, including:

- Identification of funding opportunities
- Recruitment of project partners (within ERCIM and through a strategic partnership with Ideal-IST)
- Proposal writing and project negotiation

- Contractual and consortium management
- Communications and systems support
- Organization of attractive events, from team meetings to large-scale workshops and conferences
- Support for the dissemination of results

How does it work in practice?

Contact the ERCIM Office to present your project idea and a panel of experts within the ERCIM Science Task Group will review your idea and provide recommendations. Based on this feedback, the ERCIM Office will decide whether to commit to help producing your proposal. Note that having at least one ERCIM member involved is mandatory for the ERCIM Office to engage in a project.

If the ERCIM Office expresses its interest to participate, it will assist the project consortium as described above, either as project coordinator or project partner.

For more information, please contact:
Peter Kunz, ERCIM Office
+33 4 92 38 50 10 peter.kunz@ercim.eu

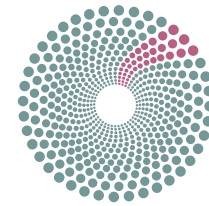
Project acronym	ERCIM's role	ERCIM members/partners involved
BigDataEurope	partner	Fraunhofer IAIS, ERCIM EEIG/W3C
BlueBridge	administrative support	ISTI-CNR, FORTH
CREATE-IoT	partner	ERCIM EEIG/W3C
GEOLYTICS	partner	ERCIM EEIG/W3C
HRADIO	partner	ERCIM EEIG/W3C
SPECIAL	coordinator	ERCIM EEIG/W3C
VRE4EIC	coordinator	CWI, CNR, FORTH
WAI-DEV	coordinator	ERCIM EEIG/W3C

Big Data Europe

The “BigDataEurope” project was developing a Big Data platform based on requirements identified with stakeholders from the seven H2020 societal challenges: Climate, Energy, Health, Transport, Social sciences, Food and Security. The consortium, led by Fraunhofer IAIS engaged with these communities to identify their big data technology needs, to design and realise the required ICT infrastructure and support the use and deployment of the platform.

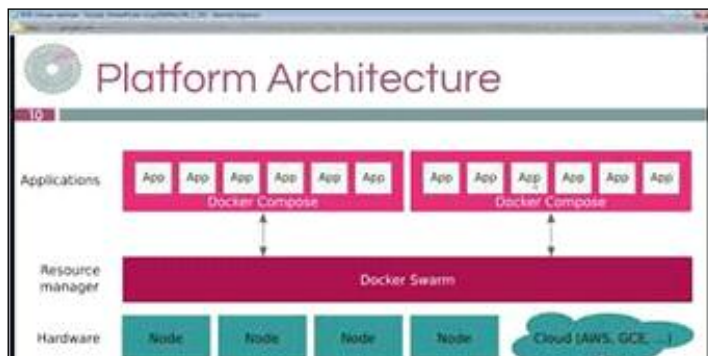
With this platform, the project provides companies and institutions with an integrated and ready-to-use palette of Big Data tools that is adapted to their particular needs. Small and medium-sized companies who do often not have the resources for hiring specialized data scientists will especially benefit from the lowered entrance bar into the Big Data world as they are offered the opportunity to easily understand and use state-of-the-art data science techniques for their business.

The project tackled two key aspects. First, BigDataEurope built up a network between stakeholders of the key European societal sectors. Interest groups modelled after the W3C scheme were then launched to discuss the particular needs of each sector in a series of workshops that covered the whole process of data usage; from data collection, processing, storage, and visualization to the development of data services. The requirements collected in the workshops were used to guide the technical development and implementation of the open BigDataEurope Platform.



BIG DATA EUROPE

Empowering Communities with Data Technologies



Final Release of the Big Data Europe Integrator Platform (BDI)



Final project workshop, December 2017 in Brussels.)

BigDataEurope - Empowering Communities with Data Technologies

EC funding: € 4,984,238

ERCIM's role:
ERCIM EEIG project partner

ERCIM/W3C contact:
Rigo Wenning, W3C

ERCIM members involved:
Fraunhofer-Gesellschaft

Coordinator: Fraunhofer Gesellschaft

Duration:
January 2015 to December 2017

<http://www.big-data-europe.eu/>



BlueBRIDGE

BlueBRIDGE is a European initiative funded under the H2020 framework to further develop and exploit the iMarine e-Infrastructure data services for an ecosystems approach to fisheries.

BlueBRIDGE's overall objective is to support capacity building in interdisciplinary research communities actively involved in increasing scientific knowledge about resource overexploitation, degraded environment and ecosystem with the aim of providing a more solid ground for informed advice to competent authorities and to enlarge the spectrum of growth opportunities as addressed by the Blue Growth Societal Challenge.

BlueBRIDGE capitalizes on past investments and uses the proven D4Science infrastructure that counts over 1,500 users, integrates more than 50 repositories, executes around 13,000 models and algorithms per month and provides access to over a billion records in repositories worldwide, with 99,7% service availability.

BlueBRIDGE aims to develop innovative services in the following areas:

- Blue Assessment - services for stock assessment and for the generation of unique identifiers for global stocks;
- Blue Economy - services supporting the analysis of socio-economic performance in aquaculture;
- Blue Environment - spatial planning services to identify aquaculture and fisheries infrastructures from satellite imagery;
- Blue Skills - on-line training services and capacity building on existing training modules for fisheries scientists and other practitioners.

BlueBRIDGE will develop two new services addressing two relevant problems related to this challenge that build one upon the other:

- Performance evaluation, benchmarking and decision making in aquaculture service: providing capacities for companies to evaluate, benchmark and optimize their performance against best practices and the competition, and to extend the capacity of scientific research communities and policy makers to quantify and comprehend aquafarming industry operation, ensuring sustainability and development of the sector.
- Strategic Investment Analysis and Scientific Planning and Alerting service: supporting investors and scientists in the efficient identification of strategic locations of interest that meet multifactor selection criteria.
- The two new services will be put in practice initially in two domains:
 - a group of aquafarming SMEs, that have been preselected and will be contributing to the benchmarking and evaluation of their production
 - a group of individual stakeholders, not funded by the project, for evaluating potential investment scenarios.



BlueBRIDGE Workshop - FAIR friendly research data catalogues: How far are we?, 3 April 2017, Barcelona

BlueBridge - Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth

EC funding: €5,295,753

ERCIM's role:

ERCIM EEIG provides administrative and financial support

ERCIM members involved:

CNR, FORTH

Scientific coordination:

Donatella Castelli, ISTI-CNR

Duration:

September 2015 - March 2018

<http://www.bluebridge-vres.eu/>



CREATE-IoT

DCREATE-IoT's aim is to stimulate collaboration between IoT initiatives, foster the take up of IoT in Europe and support the development and growth of IoT ecosystems based on open technologies and platforms. This requires synchronisation and alignment on strategic and operational terms through frequent, multi-directional exchanges between the various activities under the IoT Focus Areas (FAs). It also requires cross fertilisation of the various IoT Large Scale Pilots (LSPs) for technological and validation issues of common interest across the various application domains and use cases. CREATE-IoT will align the activities with the Alliance for Internet of Things Innovation (AIOTI) and will coordinate and support the upcoming LSPs in sustaining the ecosystems developed during those projects through mapping the pilot architecture approaches, address interoperability and standards approaches at technical and semantic levels for object connectivity, protocols, data formats, privacy, security, trusted IoT, open APIs and share the road-mapping with international initiatives.

The project will foster the exchange on requirements for legal accompanying measures, development of common methodologies and KPI for design, testing and validation and for success and impact measurement, federation of pilot activities and transfer to other pilot areas, facilitating the access for IoT entrepreneurs/API developers/makers, SMEs, including combination of ICT & Art.

Create-IoT - Cross Fertilisation through alignment, synchronisation and exchanges for IoT

EC funding: € 2.999,999

ERCIM's role:
ERCIM EEIG project partner

ERCIM/W3C contact:
Philipp Hoschka, Dave Raggett (W3C)

ERCIM members involved:
W3C (ERCIM EEIG)

Coordinator: SINTEF

Duration:
January 2017 – December 2019

<https://european-iot-pilots.eu/create-iot>

GEOLYTICS

GEOlytics is a platform of analysis and forecast of the needs for displacements multimode on the whole of the territory. It will exploit the data of geolocation of the operators (mobile operators, GPS operators). The objective is to become the platform of reference on the French market then to give him an international potential.

Like GoogleAnalytics for the Web, it will allow the companies to identify the local potential related to the practices of displacements: zone of real attractivity of a trade, transport demand or of traffic (pedestrian, road, air, railway, etc.).

It falls under the Big plan Dated from New industrial France on the sets of themes of the control of new quantities of data (hundreds of million per day), of the development of advanced algorithms placed at the disposal of carrier sectors (transport, tourism, distribution).

The comprehension of the behaviors of the consumers, the citizens with a dynamic vision and “real time” is the challenge of Geolytics. It fits initially in the market of studies (2.7Md in France, 3.4Md in Germany and the U.K., 34Md with total).

The primary markets all are of the sectors in full change (smart city, saturation of transport in Ile de France). Geolytics will allow them:

- To evaluate the interest to create new lines of transport
- To improve the plan of displacements in an urban area, a department
- To define a marketing adapted to the practices of frequentation
- To calculate the local market share of current or potential storage areas.

It is this vision, centered on the customer, that Geolytics will allow by reducing the time of decision making and will thus reach very short returns on investment (< 6 months).

GEOLYTICS - Multi-source Real-Time and Predictive Passenger Data Data Platform

Funding: € 321,000 (for ERCIM/W3C)

ERCIM's role:

ERCIM EEIG project partner

ERCIM/W3C contact:

Francois Daoust, Philipp Hoschka (W3C)

ERCIM members involved:

W3C (ERCIM EEIG)

Scientific coordination:

IT4PM

Duration:

July 2017 - July 2019

<https://www.pole-scs.org/en/projects/geolytics/>

HRADIO)))



HRADIO

HRADIO (Hybrid Radio everywhere for everyone) focuses on radio service innovations enabled by convergence. While radio, with its rich editorial content, remains a highly popular medium, listening figures are slowly declining, particularly among youngsters. With the rapid rise of smartphones, radio faces competition from many new services including music streaming platforms. Regular radio today often does not include attractive features as known from vertical platforms. And if present, they are mostly not well integrated with the actual radio programme. This is where HRADIO will deliver.

Driven by the industry need to create attractive new radio experiences, the project will leverage the full potential of hybrid technology for radio – enabling the integration of cost-effective broadcast distribution with new online features. Broadcasters will be enabled to personalise radio services (while respecting privacy), to provide intuitive functionalities like time-shifting and, eventually, to foster and to exploit user engagement. HRADIO will pave the way to bring these features not only to broadcasters' native mobile applications, but also to portals, to connected radios and into the car. The core approach is to integrate validated solutions and to harmonise APIs which together will provide broadcasters with an abstracted service layer accessible across any device and distribution platform – ensuring sustainability and return of investment. Therefore, consumers will be able to access their personal radio services on different devices and platforms enabled by a seamless broadcast-internet integration for radio content distribution. All features will be tested in 3 phases of large-scale pilots involving broadcasters, app developers for mobile and automotive devices.

Eventually, HRADIO will publish its developments as ready-to-use Android and HTML client implementations including an extensive set of well documented APIs fostering new service developments for the radio sector. HRADIO - Hybrid Radio everywhere for everyone.



HRADIO at the EBU Radio Summit

Global ITV - Interoperability of Interactive and Hybrid TV systems – A new advanced scheme for future services and applications in a global environment

EC funding: € 2 953,370

ERCIM's role:

ERCIM EEIG project partner

ERCIM/W3C contact:

Philipp Hoschka, Dominique Hazaël-Massieux, Francois Daoust (W3C)

ERCIM members involved:

W3C (ERCIM EEIG)

Scientific coordination:

Interuniversitair Micro-Electronica Centrum (IMEC)

Duration:

September 2017 – February 2020

<https://www.hradio.eu/>



SPECIAL

The SPECIAL project will address the contradiction between Big Data innovation and privacy-aware data protection by proposing a technical solution that makes both of these goals realistic. The project will develop technology that: (i) supports the acquisition of user consent at collection time and the recording of both data and metadata (consent, policies, event data, context) according to legislative and user-specified policies; (ii) caters for privacy-aware, secure workflows that include usage/access control, transparency and compliance verification; (iii) demonstrates robustness in terms of performance, scalability and security all of which are necessary to support privacy preserving innovation in Big Data environments; and (iv) provides a dashboard with feedback and control features that make privacy in Big Data comprehensible and manageable for data subjects, controllers, and processors.

SPECIAL shall allow citizens and organisations to share more data, while guaranteeing data protection compliance, thus enabling both trust and the creation of valuable new insights from shared data. The vision will be realised and validated via real world use cases that - in order to be viable - need to overcome current challenges concerning the processing and sharing of data in a privacy preserving manner. In order to realise this vision, we will combine and significantly extend big data architectures to handle Linked Data, harness them with sticky policies as well as scalable queryable encryption, and develop advanced user interaction and control features: SPECIAL will build on top of the Big Data Europe and PrimeLife Projects, exploit their results, and further advance the state of the art of privacy enhancing technologies.

SPECIAL - Scalable Policy-aware linked data architecture for privacy, transparency and compliance

EC funding: €3 991,389

ERCIM's role:
ERCIM EEIG project coordinator

ERCIM members involved:
W3C (ERCIM EEIG)

Scientific coordination:
Sabrina Kirrane, WU Wien

Administrative coordination:
Jessica Michel Assoumou, ERCIM Office

Duration:
January 2017 – December 2019

<https://www.specialprivacy.eu/>



Workshop on Privacy and Linked Data in Vienna, April 2018

VRE4EIC

The VRE4EIC project will enhance Virtual Research Environments (VRE) aimed at empowering multi-disciplinary research communities and accelerate innovation and collaboration.

Together with ERCIM, seven European organisations are joining forces: European research teams (CWI, TU Delft, CNR, FORTH), international organisations (EuroCRIS and W3C) and active e-Research infrastructures (ENVRIplus, represented by University of Amsterdam and EPOS, represented by INGV). Their objective is to build a VRE reference architecture and building blocks of an enhanced VRE (so-called e-VRE, the software outcome of the project).

According to Keith Jeffery (ERCIM), the scientific coordinator of VRE4EIC, “The project envisages eventually VREs interoperating among themselves using e-VRE while accessing e-Research Infrastructures (such as EPOS and 20 other environmental research infrastructures in ENVRIplus) which are themselves dependent on regional and national e-Infrastructures and European e-Infrastructures such as GEANT, EUDAT, EGI”.

VRE4EIC intends to change the life of 70.000 European researchers, by providing them supporting tools for collaborative, multi-disciplinary data-driven science, as needed to tackle critical societal challenges such as climate change and energy sustainability.

The specific objectives of the project are:

- Increase the VRE usability for multi-disciplinary research;
- Increase the quality of VRE user experiences;
- Increase the deployment of VRE on different research infrastructures by abstracting and reusing building blocks and workflows;
- Improve the contextual awareness and interoperability of metadata;
- Promote exploitation and standardisation of e-VRE.
- VRE4EIC project software outcome will be available under an open source software license for maximum uptake and community building.



VRE4EIC - A Europe-wide Interoperable Virtual Research Environment to Empower Multidisciplinary Research Communities and Accelerate Innovation and Collaboration

EC Funding: € 4.400,000

ERCIM's role:
Project coordinator

ERCIM members involved:
CWI, CNR, FORTH

Scientific coordination:
Keith Jeffery, ERCIM Office

Administrative coordination:
Peter Kunz, ERCIM Office

Duration:
September 2015 - September 2018

<http://www.vre4eic.eu/>



WAI-Tools Open meeting in Brussels, November 2017.

WAI-TOOLS

WAI-Tools, Advanced Decision Support Tools for Scalable Web Accessibility Assessments, drives innovation with sustainable impact on the entire field of web accessibility evaluation and repair through:

- Building on the on-going international standardisation efforts on web accessibility conformance testing;
- Ensuring consistent accuracy across automated, semi-automated, and manual web accessibility testing;
- Pursuing leading edge technologies for website testing, including dynamic and mobile web applications;
- Leveraging the existing market of commercial, free, and open source web accessibility evaluation tools;
- Demonstrating large-scale web accessibility monitoring built on open standards and open source tools.

WAI-Tools achieves this by carrying out key efforts in the vendor-neutral environment of the World Wide Web Consortium (W3C). WAI-Tools draws together key expertise from industry, public bodies, and research to develop common understanding of web accessibility requirements in exchange with the existing community and networks of the W3C Web Accessibility Initiative (WAI).

WAI-Tools is uniquely positioned and qualified to develop authoritative resources that are coordinated and aligned with the on-going European and international efforts on web accessibility standardisation, including W3C Web Content Accessibility Guidelines (WCAG) 2.1, the expected revision of EN 301 549, and upcoming EC definition of mobile requirements and monitoring methodology in light of the EU Directive on web accessibility.

WAI-Tools maximises the impacts while minimising the use of project resources by building on existing open source tools from leading market vendors, rather than investing in teething troubles of less mature tools. WAI-Tools deploys testing tools in existing web accessibility monitoring observatories and integrates these differing national approaches using open data, to demonstrate easier and more cost effective assessment of web accessibility requirements at scale.

WAI-TOOLS - Advanced Decision Support Tools for Scalable Web Accessibility Assessments

EC funding: € 1 999,812

ERCIM's role:
Project coordinator

ERCIM members involved:
ERCIM EEIG/W3C,

Scientific coordination:
Shadi Abou-Zahra, W3C

Administrative coordination:
Jessica Michel Assoumou, ERCIM Office

Duration:
November 2017 – October 2020

<http://www.w3.org/WAI/Tools/>

Human Capital

Human Capital (HC) is a central concern within all organizations. In ERCIM its main focus is the European cooperation of different entities with their own HC policies. To this end we are currently building on two key activities. The first is the ERCIM post-doc fellowship programme that has been in existence since 1994. This programme facilitates the participation of young scientists in research teams within ERCIM member institutes by organizing postdoctoral fellowships. In addition to mobility in high quality teams, it helps participants further their understanding of the European research environment and carrier capabilities.

The second key activity is the Cor Baayen Young Researcher Award that acknowledges the achievements of young research scientists from European teams in informatics or mathematics.

There is scope for further development of both of these tools, but we would also like to create new schemes for mobility between ERCIM members. In particular, in addition to post-docs, we would like to foster mobility of all scientists, including PhD students, engineers and management and administration professionals.

ERCIM's Human Capital Task Group is in charge of supervising these actions and proposing new directions. In 2017 the group was composed of:

- Harald Lenschow, NTNU
- Claude Kirchner, Inria (chair)
- Adriana Lazzaroni, CNR
- Emma Lière, ERCIM Office
- Laszlo Monostori, SZTAKI
- Jerzy Tiuryn, University of Warsaw
- Bettina Touré, Fraunhofer
- Edgar Weippl, AARIT

*Claude Kirchner, Inria, chair of the
ERCIM Human Capital Task Group*





“Alain Bensoussan” Fellowship Programme

The PhD Fellowship Programme has been established as one of the premier activities of ERCIM. Since its inception in 1991, over 500 fellows have passed through the programme. In 2017, 24 young scientists commenced an ERCIM PhD Fellowship and 49 fellows have been hosted during the year. This represents 341 person-months.

The ERCIM Fellowship Programme is open to young researchers from all over the world. It focuses on a broad range of fields in Computer Science and Applied Mathematics.

The fellowship scheme also helps young scientists to improve their knowledge of European research structures and networks and to gain more insight into the working conditions of leading European research institutions. In 2017, many of the hosted fellows were native of countries outside the European Union. This reflects ERCIM's contribution to make Europe not only the world's biggest 'brain factory' but also a large 'brain magnet' in the field of informatics and applied mathematics.

The fellowships are of 12 months duration (with a possible extension), spent in one of the ERCIM member institute. Fellows can apply for second year in a different institute.

Conditions

Candidates must:

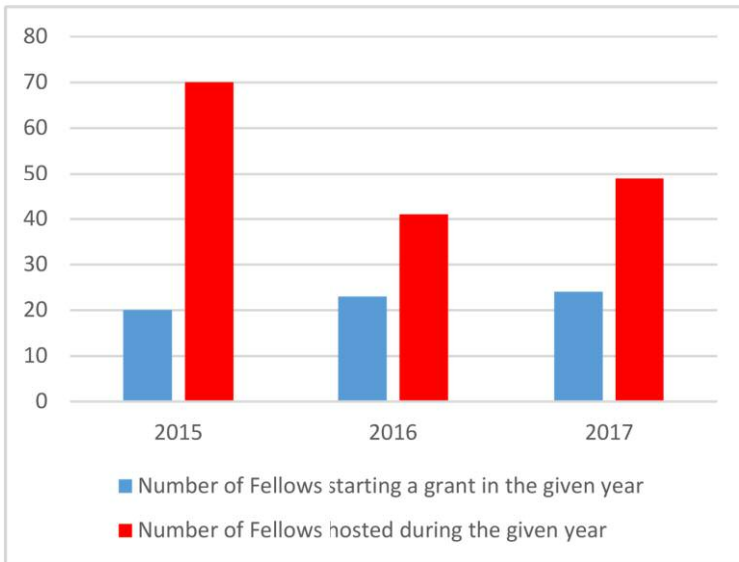
- have obtained a PhD degree during the last eight years (prior to the application deadline) or be in the last year of the thesis work with an outstanding academic record
- be fluent in English
- have no obligations with respect to military service which could impact on the fellowship
- have completed their PhD before starting the grant.

The fellows are appointed either by a stipend (an agreement for a research training programme) or a working contract. The type of contract and the monthly allowance/salary depends on the hosting institute.

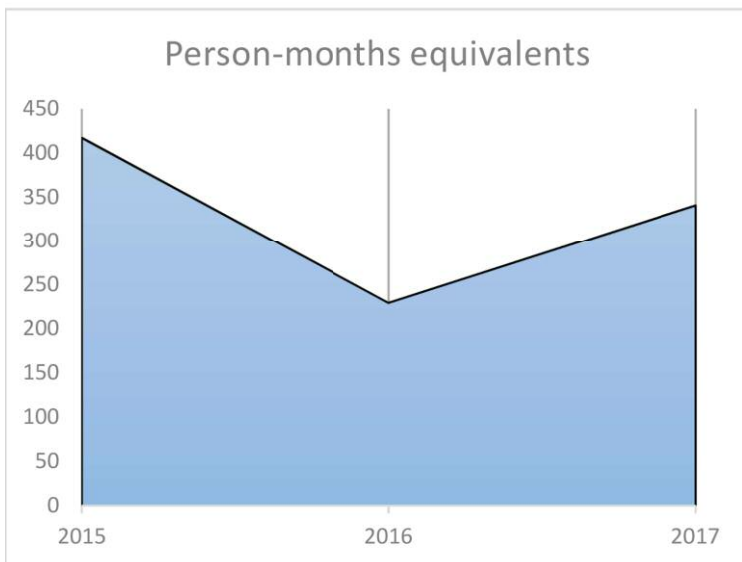
Deadlines for applications are currently 30 April and 30 September each year.

Since 2005 the Fellowship Programme has been named in honour of Alain Bensoussan, former president of Inria, one of the three ERCIM founding institutes.

<http://fellowship.ercim.eu>



Number of fellows hosted from 2015 to 2017



Person-months equivalents for the fellows hosted from 2015 to 2017

ERCIM Fellows hosted in 2017

- Dhaminda Abeywickrama at VTT
- Basant Agarwal at NTNU
- Mahdi Amani at NTNU
- Esdras Anzuola at Fraunhofer-Gesellschaft
- Ali Balador at RISE SICS AB
- Noe Barrera Gallegos at NTNU
- Amyr Borges Fortes Neto at UCY
- Maximiliano Bueno at NTNU
- Algo Carè at SZTAKI and CWI
- Rob Comber at RISE SICS AB
- Thu Ian Dam at NTNU
- Naveen Kumar Dasanadoddi Venkategowda at NTNU
- Felix Del Teso at NTNU
- Henri Der Sarkissian at CWI
- Indrakshi Dey at NTNU
- Raj Narayan Dhara at NTNU
- Naveed Ejaz at Fraunhofer-Gesellschaft
- Beatriz Galindo Prieto at NTNU
- Golsa Ghiaasi Hafezi at NTNU
- Konstantina-Stavroula Giannopoulou at NTNU
- Muhammad Hanif at CNR
- Nabiul Islam at NTNU
- Mads Sielemann Jakobsen at NTNU
- Rashid Khan at NTNU
- Umair Khan at Fraunhofer-Gesellschaft
- Zeeshan Ali Khan at NTNU
- Jalal Khodaparast Ghadikolaei at NTNU
- Marinos Koutsomichalis at NTNU
- Jing Lyu at NTNU
- Kamalakshya Mahatab at NTNU
- Monalisa Mandal at NTNU
- Silverio Juan Martinez fernandez at Fraunhofer-Gesellschaft
- Luis Alberto Martinez vaquero at CNR
- Britta Meixner at CWI
- Amir Mosavi at NTNU
- Thi Thuy loan Nguyen at University of Warsaw
- Stavros Ntalampiras at CNR
- Kalia Orphanou at CWI
- Ilias Pappas at NTNU
- James Ridgway at INRIA
- Damiano Rotondo at NTNU
- Kiran Chandra Sahu at NTNU
- Hector Eloy Sanchez Sardi at Fraunhofer-Gesellschaft
- Azamolsadat Seyedi at NTNU
- Younghak Shin at NTNU
- Jan Slechta at NTNU
- Danyu Yang at NTNU
- Erjon Zoto at NTNU

Tim Baarslag Winner of the 2017 Cor Baayen Young Researcher Award

Tim Baarslag from CWI was selected as the winner of the 2017 ERCIM Cor Baayen Award, in a very tough competition with 15 finalists. The award committee recognises Tim's skills and the results that he has achieved. His enthusiasm for internationally oriented research cooperation, his talent for recognising the potential use of mathematical tools, and his cooperative skills make him a young researcher of outstanding quality.

Tim has obtained some very impressive scientific results. His PhD dissertation was awarded cum laude, which is conferred to less than 5% of doctoral candidates at the Delft University of Technology. His dissertation won the 2014 Victor Lesser Distinguished Dissertation Runner-up Award in recognition of an exceptional and highly impressive dissertation in the area of autonomous agents and multiagent systems. He was shortlisted for the 2014 Artificial Intelligence Dissertation Award, which recognises the best doctoral dissertations in the general area of artificial intelligence. His dissertation is also published by the Springer Theses "the best of the best" series, which recognises outstanding PhD research by selecting the very best PhD theses from around the world for their scientific excellence and high impact on research.

Tim has made a real scientific impact with his work since embarking on his PhD in 2010. He has already published over 40 articles, in collaboration with 35 researchers from 17 international institutes and five industrial partners. His research is published in the highest ranking publications in his field, including the top journal Artificial Intelligence and top conferences such as IJCAI, ECAI, AAI and AAMAS. His research on how artificial intelligence can help negotiate better deals for humans was recently featured in Science. His achievements point to great promise for his future work and for others who build on it.

Since 2016, Tim Baarslag has been working as a researcher at CWI, where he studies negotiation strategies for smart energy cooperatives. He collaborates closely with key smart grid stakeholders to develop his negotiation results into user-adaptable energy trading technology. His negotiation algorithms support energy trading in a sustainable energy community 'Schoonschip' in Amsterdam as part of the ERA-Net Grid-Friends



Tim Baarslag (center) receiving the award from the ERCIM president Domenico Laforenza (right) and ERCIM president-elect Jos Baeten.

project. He has recently received a personal 'Veni' grant for young, talented researchers from The Netherlands Organisation for Scientific Research (NWO).

As the lead developer of the negotiation environment "Genius", he contributed to an international platform for research on automated negotiation agents, which is downloaded more than 100 times a week and is used by more than 20 research institutes all over the world, including Harvard University and Massachusetts Institute of Technology (MIT). Additionally, he is part of the organising team of the International Automated Negotiating Agent Competition (ANAC), which has had more than 100 international participants and is held in conjunction with the leading artificial and multi-agent conferences in his field (AAMAS and IJCAI). Not only have his results and the competition provided a state-of-the-art repository of automated negotiators, they also continue to steer the automated negotiation research agenda.

Tim's work provides a unique blend of mathematically optimal results and application-driven research with a strong potential for knowledge utilisation. In collaboration with MIT CSAIL and the University of Southampton, he has developed new mathematical models that enable essential next steps for conducting privacy negotiations feasibly. Furthermore, together with multiple UK partners including The Open University, Tim helps to design Internet of Things solutions that enable negotiable data access for future data marketplaces. His research has influenced the negotiation architecture that will be used to assess and mitigate privacy trade-offs in existing Internet of Things applications and platforms.

Tim was the first to untangle the connection between negotiation performance and opponent learning. In acknowledgement of the originality of this work, he received the Best Paper Award (out of 101 papers) at the 2013 IEEE/WIC/ACM International Conference on Intelligent Agent Technology. Moreover, he was the first to combine a number of theoretical results in search theory, such as optimal stopping and Pandora's Problem, to formulate new and tested negotiation strategies. This resulted in the Best Paper Award (out of 122 papers) for his results on optimal negotiation strategies during the 2015 IEEE/WIC/ACM International Conference on Intelligent Agent Technology. Moreover, a negotiating agent that successfully applied his open source dissertation framework won The 2013 International Automated Negotiating Agents Competition (ANAC).

Tim is also actively engaged in the broader computing community and highly involved with the most eminent researchers within computer science and mathematics. In 2016, he was selected as one of 200 highly talented, preeminent young researchers in mathematics and computer scientists from over 50 countries for the Heidelberg Laureate Forum scholarship. In 2017, he was selected from over 300 applicants as an outstanding early career individual in the field of computing to take part in the ACM Future of Computing Academy and attend the 2017 Turing Award ceremony, in an effort to support and foster the next generation of computing professionals.

2017 Award

Winner:

- Tim Baarslag (CWI), nominated by Eric Pauwels (CWI)

Honorary mentions:

- Fabrice Ben Hamouda-Guichoux (IBM Research), nominated by David Pointcheval (Inria)

Finalists:

- Tim Baarslag (CWI), nominated by Eric Pauwels (CWI)
- Fabrice Ben Hamouda-Guichoux (IBM Research), nominated by David Pointcheval (Inria)
- Markus Borg (RISE SICS) nominated by Jakob Axelsson (RISE SICS)
- Frederik Diederichs (Fraunhofer IAO), nominated by Anette Weisbecker Fraunhofer (IAO)
- Hadi Fanaee Tork (University of Oslo), nominated by Alípio Jorge (INESC)
- Eemil Lagerspetz (University of Helsinki), nominated by Tuomo Tuikka (VTT)
- Pierre Lairiz (Inria), nominated by Bertrand Braunschweig (Inria)
- Britta Meixner (CWI), nominated by Pablo Cesar (CWI)
- Iason Oikonomidis (ICS-FORTH), nominated by Antonis Argyros (ICS-FORTH)
- Giulio Rossetti (University of Pisa), nominated by Fosca Giannotti (CNR)
- Ville Salo (University of Turku), Tuomo Tuikka (VTT)
- Anna Ståhl, RISE SICS, nominated by Kristina Höök, RISE SICS
- João Tiago Medeiros Paulo (INESC TEC and University of Minho), nominated by José Pereira (INESC TEC and University of Minho)
- Vassilis Vassiliades (Inria), nominated by Chris Christodoulou (University of Cyprus)
- Daniel Weber (Fraunhofer IGD), nominated by Arjan Kuijper (Fraunhofer IGD)

Award

The Cor Baayen Award, given to a promising young researcher in computer science and applied mathematics, was created in 1995 to honour the first ERCIM President and is open to young researchers having completed their PhD thesis in one of the "ERCIM countries". The Cor Baayen Award is a young researcher prize: The selection panel therefore considers the quality of the PhD thesis and all the achievements done up to the nomination date. The award carries a prize of € 5,000. The winner is invited to the ERCIM autumn meetings.

Outreach

The ERCIM Outreach Task Group is responsible for the communication between ERCIM and its wide range of stakeholders. They include national and international funding bodies, the research community in informatics and applied mathematics, with a focus on both senior scientists and young researchers, as well as industrial R&D. ERCIM considers its outreach activities as an important tool for community building. These include publications such as the ERCIM News magazine, the ERCIM web site and the support and organisation of scientific events.

The well-established ERCIM News magazine (see next page), under the responsibility of the editorial board, has already successfully contributed to ERCIM's reputation in the scientific community. It is also a good example of the close cooperation between all ERCIM institutes. In addition to ERCIM News, a number of strategic reports have also been published. All this information can also be accessed via twitter and LinkedIn.



*Andreas Rauber,
SBA Research, chair of the
ERCIM Outreach Task Group*

ERCIM News

Since ERCIM's creation in 1989, the quarterly ERCIM News has been reporting on leading edge European research and developments in Information and Communication Science and Technology (ICST) and Applied Mathematics.

When Inria, CWI and former GMD founded ERCIM in 1989, the establishment of an 'in-house magazine' with the aim of reporting on joint activities was one of the first 'joint actions'. ERCIM rapidly evolved from a black-and-white in-house magazine to a full colour publication covering reports and news about scientific projects from all over Europe and even beyond.

By October 1994, the newsletter was published both in printed and electronic format. At that time, ERCIM News was among the first 5,000 Web sites in the world. Surprisingly, the electronic edition did not detract from the success of the printed edition – instead, many new readers who found us on the Web also subscribe to the printed edition, thus increasing its circulation. The peak was reached in 2009 with a circulation of over 10,000 printed copies. Since then, with the spread of smart phones and tablets, the circulation of the printed edition has reduced whilst the online readership has increased. In 2012, for the first time, more people subscribed to the electronic than to the printed edition. ERCIM News currently maintains a circulation of 3,000 printed copies and more than 7,700 people subscribed to the online edition.

From the early issues on, each issue has focused on a special theme identified by the editorial board. The ERCIM News series has thus become a unique collection providing an overview on a wide range of research topics in ICST and Applied Mathematics. All articles in ERCIM News are written by the scientists themselves and professionally edited. The structure of the articles and the limited length also make them comprehensible for non-experts. Thanks to these unique characteristics, ERCIM News has become well-known in the world of scientific publications, and regular positive feedback from our readers has encouraged us to continue in this way. Indeed, our readership comprises not only scientists, but also students, decision makers, professionals within the industry, representatives from the European Commission, and politicians.

In 2017 ERCIM News published the issues nos 108, 109, 110 and 111. Since its creation, this means more than 2,000 published articles. The popularity of ERCIM News can be credited primarily to our authors to whom the ERCIM editorial board wants to express their warmest thanks on this occasion.

In 2017 ERCIM News issues covered the following special themes:

- ERCIM News 109: Tackling Big Data in the Life Sciences
- ERCIM News 110: Blockchain Engineering
- ERCIM News 111: Digital Humanities
- ERCIM News 112: Quantum Computing

<http://ercim-news.ercim.eu>

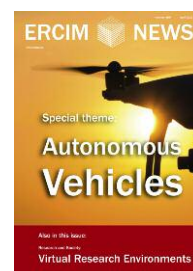
ERCIM News Editorial Board (as of December 2017)

Central editor:

- Peter Kunz, ERCIM Office

Local editors:

- Andras Benczur, SZTAKI
- José Borbinha, Technical University of Lisbon, Portugal
- Monica Divitini, NTNU, Norway
- Marie-Claire Forgue, W3C
- Lida Harami, ICS-FORTH, Greece
- Steve Kremer, Inria, France
- Annette Kik, CWI, The Netherlands
- Alexander Nouak, Fraunhofer-Gesellschaft Germany
- Maria Rudenschöld, RISE SICS, Sweden
- Harry Rudin, Switzerland
- Erwin Schoitsch, AIT Austrian Institute of Technology GmbH/SBA, Austria
- Nguyen Hung Son, University of Warsaw, Poland
- Thomas Tamisier, Centre de recherche publique Gabriel Lippmann, Luxembourg
- Maurice ter Beek, ISTI-CNR, Italy



Issues published in 2017.

ERCIM Office

ERCIM has an office in Southern France, hosted by Inria and located in the Inria Sophia Antipolis - Méditerranée Research Centre premises, nestled amongst researchers (and surrounded by cicadas). The ERCIM Office manages the day-to-day business of ERCIM as well as the European branch of the World Wide Web Consortium (W3C).

With its team of experts, the ERCIM Office provides assistance to ERCIM members in managing European projects by performing the financial and administrative tasks, either as coordinator or partner. Member institutes can thus fully concentrate on scientific work, unburdened by time-consuming administrative tasks. The office has been involved with more than 80 successful projects. The projects in which the ERCIM Office was involved in 2017 are presented in the section “Projects” in this report. They also include projects with participation of the W3C. Some include both W3C and ERCIM members. They provide an example of how ERCIM can facilitate cooperation between research institutes and the W3C with its interest in Web standardization.

Hosting and managing the European branch of W3C is another major task of the ERCIM Office.

The ERCIM Office is under the responsibility of the ERCIM EEIG Board of Directors but also handles ERCIM AISBL financial matters and supports the whole ERCIM community in administrative matters such as the management of the ERCIM Fellowship Programme, as well as in communications, for example by hosting and maintaining web sites and by producing ERCIM News.



The ERCIM office is located in the Inria Sophia Antipolis - Méditerranée Research Centre premises.

People at the ERCIM Office in 2017

Manager:

- Philipp Hoschka
- Caroline Baron, finance and administration manager
- Pierre Guisset, senior consultant
- Peter Kunz, communications and ERCIM News central editor
- Vivien Lacourba, IT manager
- Alexandra Lacourba, administrative assistant
- Emma Lière, project assistant and Fellowship Programme coordinator
- Jessica Michel Assoumou, project coordinator
- Claire Moreau, administrative assistant
- Linh Nguyen, project coordinator and assistant
- Pascale Peyrol, project assistant
- Catherine Riou, administrative assistant
- Samuel Réthoré, systems engineer
- Philippe Rohou, project group manager
- Jean-Guilhem Rouel, systems engineer



ERCIM and W3C

ERCIM hosts the European headquarters of the World Wide Web Consortium (W3C). ERCIM and W3C aim to strengthen research relationships throughout Europe to better support the development of Web technology and to jointly share the results of their collaboration.

Five of the European W3C Offices are based at ERCIM institutes, namely at CWI (Benelux); FORTH (Greece); SZTAKI (Hungary); CNR (Italy) and RISE SICS (Sweden). W3C Offices in Europe work with their regional Web communities to promote W3C technology in local languages, broaden W3C's geographical base, and encourage international participation in W3C activities. Specifically, the W3C Offices help organize meetings and workshops.

As a consortium of members from many European countries, ERCIM creates a balance between European diversity and necessary homogeneity by building bridges between different cultures and facilitating the movement of technical ideas within academia and across borders. W3C is very heavily swayed by its members, several of them having interests in the Web (such as HTML5, Mobile Web, Social Web, Web Privacy and Security, Big Data, etc.) whereas ERCIM jointly has widespread interest in many research fields where Web standards are rarely used. ERCIM then helps to gather those Web communities and make them work together.

Moreover, ERCIM members have strong ties with industrial partners and start-up companies. This is an excellent opportunity for W3C to enlarge its cooperation with European industry, which can broaden its participation in the making of standards.

Finally, hosting the W3C allows ERCIM members to benefit from the know-how and expertise of the W3C team, and to increase its visibility based on W3C's worldwide reputation. The joint efforts of ERCIM and the W3C have started to increase Web research cooperation in Europe.

W3C is the international forum for the development of technology standards and for stewardship of the Web. The organization creates open standards for technology and best practices so that the Web connects people and serves as a platform for innovation. W3C is building an Open Web Platform to connect humanity in a way that makes access to knowledge more efficient and equitable.

The boundaries of this platform are drawn by the Members and the larger Web community. The platform includes the HTML5 specification, CSS, SVG, WebFonts (WOFF), a growing number of APIs, and many other technologies, all designed to work together on any platform, for any person, anywhere.

ERCIM Membership

ERCIM is one of the most recognized ICT Societies in Europe. By joining ERCIM, your research institution or university can directly participate in ERCIM's activities and contribute to the ERCIM members' common objectives to play a leading role in Information and Communication Technology in Europe:

- Building a Europe-wide, open network of centres of excellence in ICT and Applied Mathematics;
- Excelling in research and acting as a bridge for ICT applications;
- Being internationally recognised both as a major representative organisation in its field and as a portal giving access to all relevant ICT research groups in Europe;
- Liaising with other international organisations in its field;
- Promoting cooperation in research, technology transfer, innovation and training.

How to become an ERCIM Member

- Prospective members must be outstanding research institutions (including universities) within their country;
- Applicants shall address a request accompanied by short description to the ERCIM Office. The description must contain:
 - Name and address of the institute;
 - Short description of the institute's activities;
 - Staff (full time equivalent) relevant to ERCIM's fields of activity;
 - Number of European projects currently involved in;
 - Name of the representative and the alternate.
- Membership applications will be reviewed by an internal board and may include an on-site visit;
- The decision on admission of new members is made by the General Assembly of the Association, in accordance with the procedure defined in the Bylaws (<http://kwz.me/U7>), and notified in writing by the Secretary to the applicant;
- Admission becomes effective upon payment of the appropriate membership fee in each year of membership;
- Membership is renewable as long as the criteria for excellence in research and an active participation in the ERCIM community, cooperating for excellence, are met.

Benefit of ERCIM membership

Institutions, as members of ERCIM AISBL, benefit from:

- International recognition as a leading centre for ICT R&D. ERCIM, a European-wide network of centres of excellence in ICT, is internationally recognised as a major representative organisation in its field;
- More influence on European and national government R&D strategy in ICT. ERCIM members team up to speak with a common voice and produce strategic reports to shape the European research agenda;
- Privileged access to standardisation bodies, such as the W3C which is hosted by ERCIM as to other bodies with which ERCIM has also established strategic cooperation. These include ETSI, the European Mathematical Society and Informatics Europe;
- Invitations to join projects of strategic importance;
- Establishing personal contacts among executives of leading European research institutes during the bi-annual ERCIM meetings;
- Invitations to join committees and boards developing ICT strategy nationally and internationally;
- Excellent networking possibilities with more than 10.000 high-quality research colleagues across Europe. ERCIM's mobility activities, such as the fellowship programme, leverages scientific cooperation and excellence;
- Professional development of staff including international recognition;
- Publicity through the ERCIM website and ERCIM News, the widely read quarterly magazine.

For further information about how to join ERCIM AISBL, please contact the ERCIM Office (contact@ercim.eu)

Institutions member of ERCIM in 2017:



Consiglio Nazionale delle Ricerche
Area della Ricerca CNR di Pisa
Via G. Moruzzi 1, 56124 Pisa, Italy
<http://www.iit.cnr.it/>



Norwegian University of Science and Technology
Faculty of Information Technology, Mathematics and
Electrical Engineering, N 7491 Trondheim, Norway
<http://www.ntnu.no/>



Centrum Wiskunde & Informatica

Centrum Wiskunde & Informatica
Science Park 123,
NL-1098 XG Amsterdam, The Netherlands
<http://www.cwi.nl/>



RISE SICS
Box 1263,
SE-164 29 Kista, Sweden
<http://www.sics.se/>



Fonds National de la
Recherche Luxembourg

Fonds National de la Recherche
6, rue Antoine de Saint-Exupéry, B.P. 1777
L-1017 Luxembourg-Kirchberg
<http://www.fnr.lu/>



SBA Research gGmbH
Favoritenstraße 16, 1040 Wien
<http://www.sba-research.org/>



Foundation for Research and Technology – Hellas
Institute of Computer Science
P.O. Box 1385, GR-71110 Heraklion, Crete, Greece
<http://www.ics.forth.gr/>



Magyar Tudományos Akadémia
Számítástechnikai és Automatizálási Kutató Intézet
P.O. Box 63, H-1518 Budapest, Hungary
<http://www.sztaki.hu/>



Fraunhofer ICT Group
Anna-Louisa-Karsch-Str. 2
10178 Berlin, Germany
<http://www.iuk.fraunhofer.de/>



University of Cyprus
P.O. Box 20537
1678 Nicosia, Cyprus
<http://www.cs.ucy.ac.cy/>



INESC
c/o INESC Porto, Campus da FEUP,
Rua Dr. Roberto Frias, n° 378,
4200-465 Porto, Portugal



Institut National de Recherche en Informatique
et en Automatique
B.P. 105, F-78153 Le Chesnay, France
<http://www.inria.fr/>



University of Warsaw
Faculty of Mathematics, Informatics and Mechanics
Banacha 2, 02-097 Warsaw, Poland
<http://www.mimuw.edu.pl/>



I.S.I. – Industrial Systems Institute
Patras Science Park building
Platani, Patras, Greece, GR-26504
<http://www.isi.gr/>



VTT Technical Research Centre of Finland Ltd
PO Box 1000
FIN-02044 VTT, Finland
<http://www.vttresearch.com>



2004, Route des Lucioles
Sophia Antipolis
06410 Biot
France

Tel: +33 4 9238 5010
Fax: +33 4 9238 5011
contact@ercim.eu
<http://www.ercim.eu>
@ercim_news
<http://www.linkedin.com/groups/ERCIM-81390>

