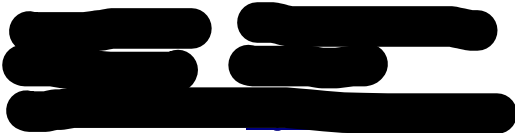# Curriculum Vitae

Name: Andrei-Nicolae Ciortea

Summary

Dr. Andrei Ciortea is an assistant professor in Computer Science with a focus on Web-based Systems at the School of Computer Science, University of St.Gallen (HSG), Switzerland, and an external collaborator of the WIMMICS team at INRIA, Université Côte d'Azur, CNRS, I3S, France. His main research interests include hypermedia systems, REST and the Web Architecture, Web-based multi-agent systems (MAS), and the Web of Things (WoT). Andrei received the best paper award at the 6th International Conference on the Internet of Things (IoT 2016). Before joining HSG, he had a 6-month research visit with Siemens Corporate Technology in Berkeley, USA, where he was the principal investigator and lead architect of a system for intelligent manufacturing that integrated MAS with WoT systems. Andrei co-organized the Dagstuhl Seminar 21072 on "Autonomous Agents on the Web" in Feb. 2021, the First Workshop on Hypermedia Multi-Agent Systems in 2019 (co-located with The Web Conference 2019) and will co-organize the upcoming Dagstuhl Seminar 23081 on "Agents on the Web" in Feb. 2023.

Andrei obtained his Ph.D. in January 2016 from the University "Politehnica" of Bucharest, Romania, and Mines Saint-Étienne, France (joint supervision). He joined the W3C WoT Working Group in 2016, and he is a founding member of the Romanian Association for Artificial Intelligence (ARIA). In ARIA, Andrei served as a member of the board of directors from 2011 to 2016, and he (co-)initiated 2 international projects and 7 national projects during that timeframe.

Education

Doctor of Philosophy in Computer Science (Oct. 2011 – Jan. 2016), University "Politehnica" of Bucharest (UPB), Romania, in joint supervision with Mines Saint-Étienne (MSE), France.
- Title: "Weaving a Social Web of Things: Enabling Autonomous and Flexible Interaction in the Internet of Things"
- Advisors: Prof. Olivier Boissier (MSE), Prof. Adina Magda Florea (UPB), Prof. Antoine Zimmermann (MSE)
- Jury: Dr. Fabien Gandon (Research Director, INRIA), Prof. Alessandro Ricci (University of Bologna), Prof. Erik Mannens (Ghent University), Prof. Costin Bădică (University of Craiova), Prof. Ștefan Trăușan-Matu (UPB)

Master of Science in Artificial Intelligence (Oct. 2009 – Sep. 2011), University "Politehnica" of Bucharest, Romania; Title: "Modeling Relationships for Privacy Preservation in Virtual Communities" (grade: 10/10).

Bachelor of Science in Computer Science (Oct. 2005 – Jul. 2009), University "Politehnica" of Bucharest, Romania; Title: "Adaptive Electronic Commerce" (grade: 9.71/10).
- Selected as the best thesis in my presentation session

High School (Oct. 2001 – Jul. 2005), Saint Sava National College, Bucharest, Romania.
- Top of my class grade average at the national baccalaureate exam (grade average: 9.63/10)

Positions and Work Experience

Assistant Professor in Computer Science with a focus on Web-based Systems, School of Computer Science, University of St.Gallen; St.Gallen, Switzerland (Feb. 2022 – present)

External Collaborator, WIMMICS Team, INRIA Sophia Antipolis, France (Dec. 2018 – present)

Postdoctoral Researcher, Chair for Interaction- and Communication-based Systems, Institute of Computer Science, University of St.Gallen; St.Gallen, Switzerland (Oct. 2018 – Jan. 2022)

Research Trainee, Web of Systems, Siemens Corporate Technology; Berkeley, CA, USA (Jun. 2017 - Dec. 2017)
- Primary investigator, system architect, and lead developer of a Web-based multi-agent system for industrial manufacturing. Topics: Web-based multi-agent systems, REST, Web of Things, Semantic Web, augmented reality.
- Results presented at the 17th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS 2018), the flagship venue of the AAMAS community (CORE2020 Ranking: A*)

Research and Teaching Fellow (Maître Assistant Associé), Connected Intelligence Team, Mines Saint-Étienne; Saint-Étienne, France (Apr. 2016 – May 2017)

Board of Directors, Romanian Association for Artificial Intelligence (ARIA); Bucharest, Romania (Secretary: Apr. 2011 – Feb. 2013; Vice-President: Feb. 2013 – Jan. 2016): http://aria-romania.org
- ARIA is the Romanian national scientific society in artificial intelligence and brings together members of the Romanian Academy, professors from several top Romanian universities, and young researchers. ARIA is also a member of the European Association for Artificial Intelligence (http://www.eurai.org).
- Responsibilities included: coordinating the main activities of the association; building a national team of volunteers (largest team: 21 volunteers); raising private and public funds; building academic, industry, and international relations. (Co-)initiated 2 international projects and 7 national projects.

Software Engineer Intern, PlayHaven (startup company); San Francisco, CA, USA (Jul. – Sep. 2012); PlayHaven was acquired by Upsight in 2013: http://www.upsight.com
- Worked on the PlayHaven Software Development Kit (SDK) for Android. Implemented and delivered several features: client-side caching, monitoring time spent by users, targeting users by connection.
- Received a broad range of responsibilities: conducting interviews with candidates for senior software engineering positions, participating in product meetings, interacting with customers to provide support.

Research Intern, ISCOD/LSTI, Mines Saint-Étienne; Saint-Étienne, France (Mar. – Jul. 2011)
- Research topics: normative multi-agent systems, privacy preservation, contextual integrity theory.
- Results published in: A. Ciortea, Y. Krupa, and L. Vercouter. Designing privacy-aware social networks: A multi-agent approach. In Proceedings of the 2nd International Conference on Web Intelligence, Mining and Semantics (WIMS), Volume 8, pages 1-8. ACM, 2012.

Software Developer, A.G.E. Games; San Diego, CA, USA (Dec. 2003 – Dec. 2004)
- Remote part-time collaboration during high school studies. Programming languages: C++, Visual Basic, HTML.

Current Research Topics

Hypermedia Systems, REST and the Web Architecture, Web-based Multi-Agent Systems, Web of Things

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Honors and Awards

Awarded several travel grants for 1-month visits with the WIMMICS team at INRIA Sophia Antipolis, France:
- Sep. 2020: travel grant for invited researchers from the Interdisciplinary Institute for Artificial Intelligence (3IA) Côte d'Azur: https://3ia.univ-cotedazur.eu/
- Dec. 2018 and Jun. 2019: travel grants through the Laboratory of Excellence (Labex) UCN@Sophia program for invited researchers: https://ds4h.univ-cotedazur.eu/about-us/labex-ucnsophia

Best Paper Award, the 6th International Conference on the Internet of Things (IoT 2016). Paper title: "Responsive Decentralized Composition of Service Mashups for the Internet of Things".

Laureate of the "Creativity Awards ArCub–UNATC" 2013 gala organized by the Cultural Center of the Bucharest Municipality (ArCub) and the National University of Arts in Bucharest (Bucharest, Dec. 2013).

- Nominated by University "Politehnica" of Bucharest for projects initiated in Romanian higher education through the Romanian Association for Artificial Intelligence

Honor at the 2009 Student Research Conference, Artificial Intelligence Section, University "Politehnica" of Bucharest. Paper title: "Adaptive Electronic Commerce".

Academic scholarships from the Faculty of Automatic Control and Computers, University "Politehnica" of Bucharest (fall semester 2005, spring semester 2009).

Research Grants

Conceptualization and scientific coordinator, "Hypermedia Communities of People and Autonomous Agents", grant award from the French National Research Agency (ANR-19-CE23-0030) and the Swiss National Science Foundation (#189474)
- Principal investigators: Olivier Boissier (France), Simon Mayer (Switzerland)
- Award: 436,203.00 EUR (France) and 583,167.00 CHF (Switzerland)

Scientific Community Service and Standardization

Founding member of the Romanian Association for Artificial Intelligence: http://aria-romania.org

Initiator and co-organizer of the Dagstuhl Seminar 21072 on "Autonomous Agents on the Web" (Feb. 14-19, 2021): https://www.dagstuhl.de/21072

Initiator and co-organizer of the Dagstuhl Seminar 202106034 on "Agents on the Web" scheduled for Feb. 19-24, 2023

Guest Editor for the ACM Transactions on Internet Technology (TOIT) Special Issue on "Multiagent Systems and Services in the Internet of Things" (ongoing)

Co-organizer of the All The Agents Challenge (ATAC) for the 20th International Semantic Web Conference (ISWC 2017): http://purl.org/atac/2021

Co-organizer of the First Workshop on Hypermedia Multi-Agent Systems (HyperAgents 2019) in conjunction with The Web Conference 2019: http://www2019.hyperagents.org/

Participant to the W3C Web of Things Working Group & Interest Group since Oct. 2016

Reviewer and sub-reviewer for various journals, conferences, and workshops in my areas of expertise, e.g.: IEEE Pervasive Computing, IEEE Transactions on Services Computing, IEEE Software, AAMAS 2019-2021, EMAS 2019-2021, WWW 2018-2020, WI 2019-2020, ISWC 2017, IoT 2017-2021, SmartIoT 2017, WoT 2016, WoT 2014.

Teaching Experience

Lectureships and tutorships:
- Co-instructor, Master course on "Web-based Autonomous Systems", Master Program in Computer Science, University of St.Gallen (Spring 2022); Responsible for course design, course lead, and lecture
- Invited lecturer, master course on "Ubiquitous Computing and the Internet of Things", Master Program in Business Innovation, University of St.Gallen (Spring 2019-2021)
- Teaching assistant, bachelor course on "Fundamentals and Methods of Computer Science for Business Studies", University of St.Gallen (Fall 2019, Spring 2020)
- Invited lecturer, master course on "Internet of Things", Master Programme in Cyber-Physical Social Systems, Mines Saint-Étienne (Fall 2016)
- Tutor, bachelor course on "Object-Oriented Programming", Mines Saint-Étienne (Fall 2016)
- Invited lecturer, master course on "Ambient Intelligence", Mines Saint-Étienne (Fall 2013)

Summer schools:
- Instructor, Summer School on "AI for Industry 4.0", organized by Mines Saint-Étienne, Université Jean Monnet Saint-Étienne, Friederich-Alexander Univeristät Erlangen-Nürnberg, and Fraunhofer IIS (about 30 graduate students; Jul. 2020)
- Co-organizer and invited lecturer, "The Multi-Agent Programming Summer School" at University "Politehnica" of Bucharest; organized by the Romanian Association for Artificial Intelligence and the International Foundation for Autonomous Agents and Multiagent Systems (about 15 graduate students, Sep. 2014)

Invited Seminars, Talks, and Panels

Invited talk, "Hypermedia Multi-Agent Systems: Rethinking Multi-Agent Systems for the World Wide Web", 15th Workshop-School on Agents, Environments, and Applications; Rio de Janeiro, RJ, Brazil, Aug. 2021.

Invited seminar, "The Forest Behind the Trees: Rethinking Multi-Agent Systems for the World Wide Web", Forum Numerica Seminar Series, Université Côte d'Azur, Sophia Antipolis, France, Jul. 2019. The recording is available online: https://bit.ly/3bxlxf1

Invited panelist, "About EMAS Papers & Reviews", 6th International Workshop on Engineering Multi-Agent Systems (EMAS), Stockholm, Sweden, Jul. 2018.

Invited talk, "The Web of Things", BeLinked: International Workshop on the Internet of Things, University "Politehnica" of Bucharest, Apr. 2014.

More than 30 talks at international conferences, workshops, and academic events.

Selected Publications

- **A. Ciortea**, S. Mayer, S. Bienz, F. Gandon, O. Corby. 2020. Autonomous Search in a Social and Ubiquitous Web. *Personal and Ubiquitous Computing*. Springer. https://doi.org/10.1007/s00779-020-01415-1

- **A. Ciortea**, S. Mayer, F. Gandon, O. Boissier, A. Ricci, A. Zimmermann. 2019. A Decade in Hindsight: The Missing Bridge between Multi-Agent Systems and the World Wide Web. In *Proceedings of the 18th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS'19)*. IFAAMAS. Richland, SC, 1659-1663.

- **A. Ciortea**, O. Boissier, A. Ricci. 2019. Engineering World-Wide Multi-Agent Systems with Hypermedia. In: Mascardi V., Ricci A., Weyns D. (eds) *Engineering Multi-Agent Systems. EMAS 2018*. Lecture Notes in Computer Science, vol 11375. Springer, Cham.

- **A. Ciortea**, S. Mayer, F. Michahelles. 2018. Reconfiguring Manufacturing Lines On-the-fly with Multi-agent Systems for the Web of Things. In *Proceedings of the 17th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS'18)*. IFAAMAS, Richland, SC, 813-822.

- **A. Ciortea**, O. Boissier, A. Zimmermann, A. M. Florea. 2016. Responsive Decentralized Composition of Service Mashups for the Internet of Things. In *Proceedings of the 6th International Conference on the Internet of Things (IoT)*, pages 53-61. ACM. **Best Paper Award**

Social Entrepreneurship (Selected Projects)

Among other responsibilities, the following projects included: conceptualization of the project, organizing and motivating a group of volunteers, fundraising, and building relations with private companies.

Co-initiator, "Career in Science?", co-located with the Bucharest Science Festival, Romania (Sep. 2014): https://www.bucharestsciencefestival.ro/
- Event promoting tech science to youth, organized by the Romanian Association for Artificial Intelligence in partnership with **Discovery Channel Romania**.
- Responsibilities included: establishing and handling the partnership with Discovery Channel Romania, constructing the event's agenda with invited speakers from **CERN**, **Google**, the **Romanian Academy**, and the **University "Politehnica" of Bucharest**.

Co-initiator, Bridging Organizations and National Societies in Artificial Intelligence (BONSAI); Râșnov, Romania (March – June 2013): http://bonsai.aria-romania.org
- Initiative for enhancing transnational cooperation in artificial intelligence (AI) research in Europe. The project was organized by the **Romanian Association for Artificial Intelligence (ARIA)** together with AI societies from **France (AFIA)**, **Greece (EETN)**, and **Spain (ACIA)**.
- The project was funded through the Youth in Action program coordinated by the European Commission and private sponsorship from **Eau de Web** (https://eaudeweb.ro/).
- Responsibilities included: contributing to defining the project concept and proposal, establishing and coordinating the partnership between the four AI societies, raising private funding in addition to European funding, advising and supporting the organizing team.

Initiator, AI-MAS Winter Olympics; Bucharest, Romania (Oct. 2009 – Feb. 2013): http://www.aiolympics.ro
- International AI event organized by the AI-MAS Laboratory (University "Politehnica" of Bucharest) with the support of the **Romanian Academy**, several top Romanian universities, and well-known companies from the IT industry, among which: **Google**, **Facebook**, **Adobe**, **IBM**, **BitDefender**, **Kaspersky**, **HP**, and **Thales**.
- 3 editions organized in 2010, 2011, and 2013; led teams of 7, 21, and 16 volunteers respectively.
- This event series led to the founding of the **Romanian Association for Artificial Intelligence**.

Co-initiator, ST' Basketball Challenge; Bucharest, Romania (Oct. – Dec. 2006)
- Basketball cup organized with the support of the Sports Department, University "Politehnica" of Bucharest and several sponsors: **Gatorade**, **Sport Arena**, **Leonte & Comp**.
- Official video: https://www.facebook.com/andrei.ciortea/videos/124080529491

Language Skills

English	Proficient user: primary work language since 2011
French	Independent user: secondary work language during my Ph.D. studies in France
Romanian	Mother tongue

Other Activities and Interests

Delegate of the Romanian Association for Artificial Intelligence (ARIA) for the 2011 General Assembly of the European Artificial Intelligence Association (EurAI); Barcelona, Spain, 2011.

- My duty was to present an overview of artificial intelligence research in Romania and to motivate the acceptance of ARIA into EurAI. ARIA was accepted into EurAI as a result.

Participant to the W3C Technical Plenary / Advisory Committee (TPAC) Meetings Week in 2016 (Lisbon, Portugal) and 2017 (San Francisco, CA, USA).

Delegate of the Romanian Association for Artificial Intelligence for the 2013 Young Innovators Unconvention event organized at the European Parliament by the European Young Innovators Forum (Brussels, Belgium, 2013).

Volunteer at IWA Charity Christmas Bazaar in 2008, 2009, 2010.

- The Charity Christmas Bazaar is an annual fundraising event organized with the participation of the foreign embassies in Bucharest.

Member of the Ilfov county skydiving team of the Romanian Aeroclub in 2009 and 2010.

Played for the basketball team of Saint Sava National College in several competitions.

Other interests: skydiving (license from the United States Parachute Association), hiking, skiing, basketball, jazz.