Dr. J. de Curtò.

IEEE Member. ACM & SIGGRAPH Member. AAAI Member. SIAM Member.
COIT & AEIT Member. IEEE Computer Society. IEEE Robotics and Automation Society.
IEEE Aerospace and Electronic Systems Society. IEEE Information Theory Society.
IEEE Signal Processing Society. IEEE Communications Society.
IEEE Computational Intelligence Society. IEEE Vehicular Technology Society.
IEEE Intelligent Transportation Systems Society. SIAM Activity Group on Data Science.
SIAM Activity Group on Discrete Mathematics. SIAM Activity Group on Imaging Science.
SIAM Activity Group on Computational Science and Engineering.
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curto.2@my.cityu.edu.hk   web.comillas.edu/profesor/jdecurto   grc.webs.upv.es/members/decurto
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GENERAL INFORMATION

DE CURTÒ Y DÍAZ Joaquim de Tots els Sants.
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Webpage: www.decurto.tw

CAREER (SELECTED)

BARCELONA Supercomputing Center. Barcelona.
Recognised Researcher. March 2024 - till now.
Department of Computer Applications in Science and Engineering.

Universidad Pontificia Comillas. Madrid.
Profesor Asociado. January 2024 - till now.
Department of Electronics, Control Systems and Communications.

GOETHE-Universität Frankfurt am Main. Frankfurt am Main.
Research Associate (E13, Level 3). March 2023 - December 2023.
Department of Computer Science and Mathematics.

CIMDA. City University of Hong Kong. HK Science Park. Hong Kong.
Research Assistant. September 2021 (grant conferred); January 2022 - January 2023.
Joint center with the Mathematical Institute at the University of Oxford.
Funded under the Research Talent Hub for ITF projects: highly prestigious research support initiative by the HK Special Administrative Region.

CUHK. Hong Kong.
Research Assistant. October 2017 - February 2018.
Department of Computer Science and Engineering.

Carnegie Mellon. Pittsburgh.
Research Assistant. June 2017 - July 2017.
School of Computer Science. Robotics.

City University of Hong Kong. Hong Kong.
Senior Research Assistant. January 2017 - May 2017.
Department of Electrical Engineering.

ETH Zürich. Zürich.
Graduate Research Assistant. April 2015 - September 2016.
Laboratory of Computer Vision.

City University of Hong Kong. Hong Kong.
Research Associate. July 2015 - August 2015.
Department of Computer Science.

Carnegie Mellon. Pittsburgh.
Research Associate I. June 2014 - August 2014.
School of Computer Science. Robotics.

EDUCATION
(SELECTED)

GOETHE-Universität Frankfurt am Main. Frankfurt am Main.

PhD in Computer Science (Visiting Research Scholar) / Postdoctoral Scholar. January 2023 - June 2024.
Department of Computer Science and Mathematics.

Universitat Politècnica de València (UPV). València.

Doctor of Science in Computer Science. September 2021 - December 2023.

Research Group on Unmanned Aerial Vehicles.
Thesis: Frontiers of Large Language Models: Empowering Decision Optimization, Scene Understanding, and Summarization Through Advanced Computational Approaches.

ETH Zürich. Zürich.

Doctor of Science. April 2015 - March 2017 [PhD Candidacy].
Laboratory of Computer Vision.
Department of Information Technology and Electrical Engineering.

Academic Distinctions:

- Awarded full scholarship from D-ITET to pursue doctoral studies.

Universitat Oberta de Catalunya (UOC). Barcelona.

Master in Data Science. September 2021 - .
Studies of Computer Science, Multimedia and Telecommunications.

Academic Distinctions:

- Awarded first class honors and honorary scholarship (worth 6 ECTS towards next matriculation) at the compulsory subject 'Tipology and life cycle of data' covering topics in data science and statistics during first semester 21/22 corresponding to 9.7/10 A (Honors. Matrícula d'Honor (MH)).

Carnegie Mellon. Pittsburgh.

Master of Science (exchange). May 2014 - February 2015.
School of Computer Science. Robotics and ML Department.

Thesis: A Library for Fast Kernel Expansions with Applications to Computer Vision and Deep Learning.

Academic Distinctions:

- HKPFS 2014-2015
  Highly prestigious HK Fellowship to pursue PhD studies at HKUST during academic years 2015-2018. Department of Computer Science and Engineering. Declined.
- SINGA PhD Fellowship 2014.
  Highly prestigious international award to pursue PhD studies at NTU Singapore during academic years 2015-2019. School of Electrical and Electronic Engineering. Declined.

City University of Hong Kong. Hong Kong.

Master of Science. September 2013 - February 2015.
Department of Electrical Engineering.
GPA: 4.12 (0-4 scale).
Classification of Award: Distinction (1/+100).
Specialization in Signal Processing, Detection and Estimation in Communications and Embedded Systems. College of Engineering.

Academic Distinctions:

- Top Achiever 2015.
  Award for being the first with regard to academic performance.
- MS Internship Sponsorship 2014.
  Award for top performing students. Robotics. Carnegie Mellon. Pittsburgh.
- MS Entrance Scholarship 2013/2014.
  Award given to the three most excellent students.

Chartered Engineer of Telecommunication.
COIT collegiate number C20543. AEIT associate number 22779. 2013. Attained professional qualification of engineer of telecommunication with full legal capacity.

Universitat Autònoma de Barcelona (UAB). Cerdanyola del Vallès (Barcelona).

5-year Degree in Engineering of Telecommunication, Second Cycle. 2011 - 2013.
Specialization in Communications, Signal Processing and Microwave Engineering.
School of Engineering.

Interdisclinary thesis of research completed in collaboration with the Faculty of Sciences (Dept. of Mathematics).

Thesis: Construction and Performance of Network Codes.

Grade: Excellent. First Class with Distinction.

Universitat Politècnica de Catalunya (UPC). Barcelona.

5-year Degree in Engineering of Telecommunication, First Cycle. 2006 - 2009.

Coursework in advanced mathematics, physics, electronics, electromagnetism, signals and systems, computer networks, computer architecture, communications, RF systems, analog and digital circuits, optics, data transmission, operating systems.

Academic Distinctions:

- Awarded two internship placements and a research scientist position at CELLS Alba Synchrotron during years 09/10 funded by a CELLS grant co-financed by the central administration of Espanya and regional government of Catalunya.

- Awarded an internship placement at the department of Signal Theory and Communications (UPC) during year 09. Advisor: J. M. Rius.

- Awarded an internship placement at the department of Computer Architecture (UPC) during years 06/07. Advisors: P. Bofill and M. Farreras.

- Top performance during the selection stage, a first year very selective curricula where the majority of the candidates drop the studies.

- Awarded first class honors and honorary scholarship (worth 1.5 credits towards next matriculation) at the subject 'Telecommunications Engineering' during first semester 06/07 corresponding to 10/10 A (Honors. Matrícula d'Honor (MH)).

- Admitted to pursue concurrently with my degree in engineering a Bachelor of Business Administration at ESADE Business School. Honors in the entrance examinations of the program (Sufficiency of Information, Numerical Analysis, Logical Reasoning and English). Declined.

University Entrance Examination.
Average Grade: 9.22/10. First Class with Distinction.

Academic Distinctions:

- First year scholarship for university studies. Ministry of Education.
  This award is given to the top nationwide first year university students and covers the full amount of tuition during the first year of university at the given university of choice (9.7/10; in my case at Universitat Politècnica de Catalunya (UPC); Superior Engineering of Telecommunication).

- First year scholarship for university studies. Caixa Manresa.
  This award was given to the top university entrance examination average grades in the region of Catalunya (in my case 9.22/10) and provided a proper amount to cover part of tuition and living expenses during first year of university studies.

- University scholarship for an outstanding academic performance. Technological Baccalaureate. Government of Salou. This award is given to the top students in each graduation year (in my case ranked first of the school; 9.7/10) by the local authority.

Technological Baccalaureate. 2004 - 2006.
Average Grade: 9.7/10. First Class Degree and Honorary Scholarship.

Academic Distinctions:

- Outstanding Thesis of Research. Development and Design of a Virtual Shop in Visual Basic on the .NET Framework.

- Outstanding Curriculum.

PUBLICATIONS

scholar.google:

citations: 314 (as of 24/09/2024)

h-index: 10

manuscripts: 47

DISSERTATIONS

Doctor of Science.
Frontiers of Large Language Models: Empowering Decision Optimization, Scene Understanding, and Summarization Through Advanced Computational Approaches.
https://riunet.upv.es/handle/10251/202200
https://doi.org/110.6084/m9.figshare.26470072
UPV. València. 2023.

Master of Science.
A Library for Fast Kernel Expansions with Applications to Computer Vision and Deep Learning.
Carnegie Mellon. Pittsburgh. 2014.
https://doi.org/10.6084/m9.figshare.21778676.v1
decurto.tw/c/slides_decurto.pdf

5-year Degree in Engineering of Telecommunication.
Construction and Performance of Network Codes.
Universitat Autònoma de Barcelona. Cerdanyola del Vallès (Barcelona). 2013.
https://hal.archives-ouvertes.fr/tel-03167326/document
decurto.tw/c/slides_pfc_decurto.pdf

LANGUAGES

English -

TOEFL Internet Based test. 26-11-2016. **Score 114/120.**

First Certificate in English. December 2005. **Grade: A.**

SERVICES

ICLR 2021. Virtual Conference. Formerly in Vienna. 03/05 - 07/05. 2021.

Attendee.

CoRL. Virtual Conference. Formerly in Cambridge. 16/11 - 18/11. 2020.

Attendee.

ROS World. Virtual Conference. 12/11. 2020.

Attendee.

ICML 2020. Virtual Conference. Formerly in Vienna. 12/07 - 18/07. 2020.

Attendee.

Robotics: Science and Systems. Virtual Conference. Formerly in Corvallis. 12/07 - 16/07. 2020.

Attendee.

SIAM Conference on Imaging Science. Virtual Conference. Formerly in Toronto. 06/07 - 17/07. 2020.

Attendee.

IEEE International Symposium on Information Theory. Virtual Symposium. Formerly in Los Angeles. 21/06 - 26/06. 2020.

Attendee.

IEEE Conference on Computer Vision and Pattern Recognition. Virtual Conference. Formerly in Seattle. 14/06 - 19/06. 2020.

Attendee.

IEEE International Conference on Communications. Virtual Conference. Formerly in Dublin. 07/06 - 11/06. 2020.

Attendee.

IEEE International Conference on Robotics and Automation. Virtual Conference. Formerly in Paris. 31/05 - 04/06. 2020.

Attendee.

SIAM Conference on Mathematics of Data Science. Virtual Conference. Formerly in Cincinnati. 04/05 - 30/06. 2020.

Attendee.

IEEE International Conference on Acoustics, Speech, and Signal Processing. Virtual Conference. Formerly in Barcelona. 04/05 - 08/05. 2020.

Attendee.

ICLR 2020. Virtual Conference. Formerly in Addis Ababa. 26/04 - 01/05. 2020.

Attendee.
Oral presentation at the Social Virtual Event on Open source tools and practices in state-of-the-art DL research.
Slides with Q&A annotations: www.decurto.tw/c/iclr2020_DeCurto.pdf

First European Training School in Network Coding: Random Network Coding and Designs over $GF(q)$. IEEE Information Theory Society. Universitat Autònoma de Barcelona. Cerdanyola del Vallès (Barcelona). 04/02 - 08/02. 2013.

From designs over $GF(q)$ to applications of networking: a cross-road for mathematics, computer science and engineering.
Attendee and Volunteer.

ESOF 2008. Barcelona. 18/07 - 22/07. 2008.

Scientific Volunteer.

PROGRAMMING

C, C++, Java, MATLAB, Python, HTML, VHDL and Assembly.

SOFTWARE

LATEX, Maple, PSpice and ADS.