Rotman Criollo

https://orcid.org/0000-0002-2535-4695

Also known as

Rotman Criollo, R. Criollo Manjarrez, Rotman Alejandro Criollo Manjarrez, R. C. Manjarrez, Rotman Criollo Manjarrez

Websites & Social Links

Mendeley (https://www.mendeley.com/profiles/rotman-criollo-manjarrez2/)

LinkedIn (https://es.linkedin.com/in/rotmancriollo)

Country

Spain

Keywords

Groundwater, Geothermal Energy, Geographic Information Systems

Other IDs

Scopus Author ID: 57140618200 (http://www.scopus.com/inward/authorDetails.url?authorID=57140618200&partnerID=MN8TOARS)

ResearcherID: V-3807-2018 (http://www.researcherid.com/rid/V-3807-2018)

Biography

Rotman A. Criollo Manjarrez (RCM) research focuses on the understanding and estimation of subsurface water processes. RCM combines field and laboratory experimentation, including innovative approaches for monitoring and data management, with numerical modeling. Integrating experiments and computational simulations allows RCM to embrace different problems involving subsurface fluid flow and transport processes, which provide a better understanding of the state and behavior of hydraulic resources at local and regional scales.

RCM was coordinator of the “Hydrogeological data management” subject at the International Course of Hydrogeology (FCIHS), where RCM supervised more than 10 MSc thesis, currently he continue as coordinator of the "Data Science" subject during the Master en Hidrogeologia y Modelización (MHGM) at the University of Barcelona (UB). These teaching experience lead him to participate in training activities at both academic and professional levels for water authorities and water professionals from different countries (e.g., Chile, Egypt or Italy).

RCM findings has been implemented in private and public companies to improve and optimize hydrogeological studies abroad. Collaborations related to water management with local and regional governing authorities, international water institutions and universities bring further insights of the leadership and engagement of RCM to seek continuous international collaborations.

Employment (4)

Institut Mediterrani d'Estudis Avançats: Esporles, Islas Baleares, ES
2021-07-16 to 2023-06-15 | Postdoctoral researcher
Employment
Source: Rotman Criollo

Instituto de Diagnóstico Ambiental y Estudios del Agua: Barcelona, Catalunya, ES
2018-10-17 to 2021-04-19 | Postdoctoral researcher (Institute of Enviromental Assessment and Water Research, IDAEA)
Employment
Source: Rotman Criollo

Barcelona Council: Barcelona, ES
2015-09-15 to 2018-09-15 | PhD candidate
Employment
Source: Rotman Criollo

Centro Internacional de Métodos Numéricos en Ingeniería: Barcelona, Catalunya, ES
2012-09-13 to 2015-09-13 | Scientific engineer (Hydrogeology Group, GHS)
Employment
Source: Rotman Criollo

Education and qualifications (5)

Universitat Politècnica de Catalunya: Barcelona, Catalunya, ES
2015-09-15 to 2019-03-08 | PhD (Department of Civil and Environmental Engineering)
Education
Source: Rotman Criollo

Universiteit Twente Chair Group of Water Engineering and Management: Enschede, Overijssel, NL
2017-01-11 to 2017-04-15 | Stage research (Faculty of Engineering Technology)
Qualification
Source: Rotman Criollo

Universitat Politècnica de Catalunya: Barcelona, Catalunya, ES
2012-02-01 to 2013-02-01 | Master Degree in Geotechnical Engineering and Earthquake Engineering (Department of Geotechnical Engineering and Geo-Sciences)
Education
Source: Rotman Criollo

Universitat Politècnica de Catalunya: Barcelona, Catalunya, ES
2011-04 | Geological Engineering (Civil Engineering (UPC) and Geology (UB))
Education
Source: Rotman Criollo

Universitat Politècnica de Catalunya: Barcelona, ES
2011 to 2011 | Private Management of Infrastructures (Postgraduate)
Qualification

Source: Rotman Criollo

Invited positions and distinctions (3)

Ajuntament de Barcelona: Barcelona, Catalunya, ES
2021-03-16 | Research and Innovation Grant (Culture, Education, Science and Community)
Distinction
Source: Rotman Criollo

Instituto Universitario de Investigación de Ingeniería del Agua y Medio Ambiente: Valencia, Comunidad Valenciana, ES
2020-09-28 | Accéssit Water and City
Distinction
Source: Rotman Criollo

Agència de Gestió d'Ajuts Universitaris i de Recerca: Barcelona, ES
2019-03-07 | Industrial Doctorate Thesis Diploma. Recognition of doctoral students of R+D projects
Distinction
Source: Rotman Criollo

Membership and service (4)

The Geothermal Iberoamerican network (RIGS-CYTED): Azul, Buenos Aires, AR
Membership
Source: Rotman Criollo

Associació de Geòlegs de les Illes Balears: Palma de Mallorca, Islas Baleares, ES
2022-04-01 to present | Socio
Membership
Source: Rotman Criollo

International Association of Hydrological Sciences: Wallingford, GB
2019-06-26 to present
Membership
Source: Rotman Criollo

International Association of Hydrogeologists: Reading, Reading, GB
2019-05-06 to present
Membership
Source: Rotman Criollo

Funding (3)

Margalida Comas Grant
Direcció General de Política Universitària i Recerca, Govern Illes Balears (Esporles)
2021-06 to 2023-06|Salary award
GRANT_NUMBER: PD/036/2020
Source: Rotman Criollo

ASSET-WATER. Assessing SUDS Efficiency to reduce Urban Runoff Water Contamination
Barcelona City Council (Barcelona, Catalonia)
2019 to 2020|Grant
URL: https://www.researchgate.net/project/ASSET-WATER-Assessing-SUDs-Efficiency-to-Reduce-Urban-Runoff-Water-Contamination (https://www.researchgate.net/project/ASSET-WATER-Assessing-SUDs-Efficiency-to-Reduce-Urban-Runoff-Water-Contamination)
Source: Rotman Criollo

Catalan Industrial Doctorates Plan
Secretariat for Universities and Research, Ministry of Economy and Knowledge of the Generalitat de Catalunya (Barcelona, Catalunya)
2015-09 to present|Contract
URL: http://doctoratsindustrials.gencat.cat/en/pages/home (http://doctoratsindustrials.gencat.cat/en/pages/home)
Source: Rotman Criollo

Works (73 of 73)

An open source library for environmental isotopic modelling using machine learning techniques
2023-05-15 | preprint
DOI: 10.5194/egusphere-egu23-1672
Source: Crossref

Possible effects of shallow geothermal systems installed at coastal zones
2023-05-15 | preprint
DOI: 10.5194/egusphere-egu23-16094
Source: Crossref

The importance of snowmelt in the water balance of the Toconao sub-basin, Salar de Atacama
2023-05-15 | preprint
DOI: 10.5194/egusphere-egu23-315
Source: Crossref

Author Correction: Potential of low-enthalpy geothermal energy to degrade organic contaminants of emerging concern in urban groundwater
Scientific Reports
2023-04 | journal-article
DOI: 10.1038/s41598-023-33394-7
Part of ISSN: 2045-2322
Source: Rotman Criollo *via* Crossref Metadata Search

An open source Python library for environmental isotopic modelling
Scientific Reports
2023-02-02 | journal-article
DOI: 10.1038/s41598-023-29073-2
Part of ISSN: 2045-2322
Source: Rotman Criollo *via* Crossref Metadata Search

Potential of low-enthalpy geothermal energy to degrade organic contaminants of emerging concern in urban groundwater
Scientific Reports
2023-02 | journal-article
DOI: 10.1038/s41598-023-29701-x
Part of ISSN: 2045-2322
Source: Rotman Criollo *via* Crossref Metadata Search

Sources of Contaminants of Emerging Concern in Groundwater of Barcelona Urban Area
Advances in Geosciences
2023-01-03 | journal-article
DOI: 10.5194/adgeo-59-59-2023
Source: Crossref

Almacenamiento de co2 en zonas volcánicas profundas
Red Iberoamericana de Geotermia Somera
2023 | conference-paper
SOURCE-WORK-ID: CSIC-GB838593
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Applied multivariate statistical analysis as a tool for assessing groundwater reactions in the Niebla-Posadas aquifer, Spain
Hydrogeology Journal
2023 | journal-article
DOI: 10.1007/S10040-022-02580-8
WOSUID: WOS:000909440000001
Source: Web of Science Researcher Profile Sync

Occurrence, data-based modelling, and risk assessment of emerging contaminants in an alluvial aquifer polluted by river recharge
Environmental Pollution
2023 | journal-article
DOI: 10.1016/J.ENVPOL.2022.120504
WOSUID: WOS:000881808400006
Source: Web of Science Researcher Profile Sync

ASSET project: assessing sustainable urban drainage system (SUDS) efficiency to reduce urban runoff water contamination
Advances in Geosciences
2022-11-18 | journal-article
DOI: 10.5194/adgeo-59-37-2022
Source: Crossref

Insights on the hydrological cycle and its interaction with anthropic pressures: the Katari basin and minor Titicaca lake
Advances in Geosciences
2022-11-15 | journal-article
DOI: 10.5194/adgeo-59-17-2022
Source: Crossref

Influence of shallow geothermal energy on the behaviour of organic contaminants of emerging concern in urban aquifers
Advances in Geosciences
2022-10-19 | journal-article
DOI: 10.5194/adgeo-59-9-2022
Source: Crossref

Occurrence of pharmaceuticals and risk assessment in urban groundwater
Advances in Geosciences
2022-10-14 | journal-article
DOI: 10.5194/adgeo-59-1-2022
Source: Crossref

Unsolved Problems in Hydrology (UPH) – a Latin American perspective
IAHS-AISH Scientific Assembly 2022
2022-09-23 | conference-abstract
DOI: 10.5194/iahs2022-602

Source: Rotman Criollo

Evaluation of the efficiency and impact of a shallow geothermal installation. Case of Can Batlló, Barcelona.
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-7838
Source: Crossref

Factors that control the isotopic composition of precipitation in northern Chile
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-9346
Source: Crossref

Hydrochemistry and presence of emerging organic pollutants in groundwater of the urban Barcelona area
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-11353
Source: Crossref

Occurrence and fate of pharmaceuticals in urban groundwater
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-7595
Source: Crossref

Occurrence and Removal of Emerging Contaminants in Urban Stormwater Runoff
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-12636
Source: Crossref

On the influence of shallow geothermal energy on the behaviour of contaminants of emerging concern
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-9140
Source: Crossref

Validation, systematization and support for the implementation of a hydrological and hydrogeological model of the Katari basin and minor Titicaca lake
2022-03-28 | preprint
DOI: 10.5194/egusphere-egu22-7982
Source: Crossref

ASSET project. Assessing SUDs Efficiency to Reduce Urban Runoff Water Contamination.
2022-03-27 | preprint
DOI: 10.5194/egusphere-egu22-5474
Source: Crossref

Spatial distribution of meteorological factors controlling stable isotopes in precipitation in Northern Chile
Journal of Hydrology
2022-02 | journal-article
DOI: 10.1016/j.jhydrol.2021.127380
Part of ISSN: 0022-1694
Source: Rotman Criollo

An automatic geological 3D cross-section generator: Geopropy, an open-source library
Environmental Modelling & Software
2022-01 | journal-article
DOI: 10.1016/j.envsoft.2022.105309
Part of ISSN: 1364-8152
Source: Rotman Criollo

ASSET project. Assessing SUDs Efficiency to Reduce Urban Runoff Water Contamination.
Egu2022
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584722
HANDLE: 10261/306766
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Contribución del deshielo a la recarga de aguas subterráneas en la cuenca del Salar de Atacama, Chile
Congreso Ibérico de Las Aguas Subterráneas (cias2022)
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584754
HANDLE: 10261/308776
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Evaluation of the efficiency and impact of a shallow geothermal installation. Case of Can Batlló, Barcelona.
General Assembly 2022 of The European Geosciences Union (egu)
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584461
HANDLE: 10261/303799

Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Facing Urban Contamination: Detection and Quantification of Organic Contaminants in Urban Water From Barcelona City (Spain) Using Lc-Hrms/Ms Orbitrap
Setac
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584863
HANDLE: 10261/330155
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Factors that control the isotopic composition of precipitation in northern Chile
Egu2022
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584766
HANDLE: 10261/308946
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Geopropy: An open source tool to generate 3D geological cross sections
Egu2022
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584451
HANDLE: 10261/309029
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Hidrogeologia de l\'entron de la ciutat Barcelona
Geologia de la Ciutat de Barcelona
2022 | book-chapter
SOURCE-WORK-ID: CSIC-GB781391
HANDLE: 10261/329754
Part of ISBN: 9788419326881
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Hidrogeologia de l'entorn de la ciutat de Barcelona
Monografia tècnica ICGC número 11 "Geologia de la ciutat de Barcelona"
2022 | book-chapter
Part of ISBN: 978-84-19326-88-1
Source: Rotman Criollo

Hydrochemistry and presence of emerging organic pollutants in groundwater of the urban Barcelona area
Egu2022
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584860
HANDLE: 10261/309369
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Impacts and opportunities of the energy transition into coastal aquifers
Symposium On Interdisciplinary Approaches In Coastal Research: Interdisciplinary Approaches As Game Changers For Coastal System Research
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB748293
HANDLE: 10261/309856
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Occurrence and Removal of Emerging Contaminants in Urban Stormwater Runoff
Egu2022
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584819
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Occurrence, Data-Based Modelling and Risk Assessment of Emerging Contaminants in an Alluvial Aquifer Polluted by River Recharge
SSRN
2022 | other
EID: 2-s2.0-85132977266
Part of ISSN: 15565068
Source: Rotman Criollo *via* Scopus - Elsevier

On the influence of shallow geothermal energy on the behaviour of contaminants of emerging concern
General Assembly 2022 of The European Geosciences Union
2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584457
HANDLE: 10261/303823
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Validation, systematization and support for the implementation of a hydrological and hydrogeological model of the Katari basin and minor Titicaca lake
Egu2022

2022 | conference-paper
SOURCE-WORK-ID: CSIC-GB584738
HANDLE: 10261/310135
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Executable "Spatial Distribution of Factors Controlling Stable Isotopes in Precipitation in Northern Chile"
2021-08-23 | data-set
DOI: 10.20350/digitalCSIC/13975
Source: Rotman Criollo

Isotope dataset "Spatial Distribution of Factors Controlling Stable Isotopes in Precipitation in Northern Chile"
2021-03-26 | data-set
DOI: 10.20350/digitalCSIC/13827
Source: Rotman Criollo

Meteorological dataset "Spatial Distribution of Factors Controlling Stable Isotopes in Precipitation in Northern Chile"
2021-03-26 | data-set
DOI: 10.20350/digitalCSIC/13826
Source: Rotman Criollo

Free and open-source GIS-integrated hydrogeological analysis tool: an application for coastal aquifer systems
Environmental Earth Sciences
2020-07 | journal-article
DOI: 10.1007/s12665-020-09092-2
Part of ISSN: 1866-6280
Part of ISSN: 1866-6299
Source: Rotman Criollo

Estado actual del sector de la geotermia somera en España
Estado actual del sector energético y de la geotermia somera en distintos países de Iberoamérica (online). Medellín.
2020-06-12 | conference-paper
Source: Rotman Criollo

Customization, extension and reuse of outdated hydrogeological software
Geologica Acta
2020-06-02 | journal-article
DOI: 10.1344/geologicaacta2020.18.9
Part of ISSN: 1696-5728
Part of ISSN: 1695-6133
Source: Rotman Criollo

JPI_URBANWAT project. Tools and criteria for URBAN groundWATer management
2020-03-23 | other
DOI: 10.5194/egusphere-egu2020-8958
Source: Crossref

Geothermal Anomaly Identified Under a Dense Urban Area in the Metropolitan Region of Barcelona, Spain
Geothermal Congress. 2020. Reykjavik
2020 | conference-paper
Source: Rotman Criollo

Drivers of rainfall isotope composition in the northern Chilean Central Andes
46th IAH Congress. Málaga
2019 | conference-paper
Part of ISBN: 978-84-938046-3-3
Source: Rotman Criollo

Enhancement on the hydrogeological data management and analysis
46th IAH Congress. Málaga
2019 | conference-paper
Part of ISBN: 978-84-938046-3-3
Source: Rotman Criollo

Finding geothermal resources under an urban area (Barcelona)
46th International Association of Hydrogeologists Congress
2019 | conference-paper
SOURCE-WORK-ID: CSIC-GB697932
Source: C.S.I.C. - Consejo Superior de Investigaciones Científicas

Finding geothermal resources under an urban area (Barcelona)
46th IAH Congress. Málaga
2019 | conference-paper
Part of ISBN: 978-84-938046-3-3
Source: Rotman Criollo

AkvaGIS: An open source tool for water quantity and quality management

Computers & Geosciences
2018-11 | journal-article
DOI: 10.1016/j.cageo.2018.10.012
Part of ISSN: 0098-3004
Source: Rotman Criollo *via* Crossref Metadata Search

Integrating free and open source tools and distributed modelling codes in GIS environment for data-based groundwater management
Environmental Modelling & Software
2018-09 | journal-article
DOI: 10.1016/j.envsoft.2018.06.007
Source: Crossref

FREEWAT, a Free and Open Source, GIS-Integrated, Hydrological Modeling Platform
Groundwater
2018-03-31 | journal-article
DOI: 10.1111/gwat.12654
Source: Rotman Criollo

Integration of groundwater by-pass facilities in the bottom slab design for large underground structures
Tunnelling and Underground Space Technology
2018-01 | journal-article
DOI: 10.1016/j.tust.2017.07.020
Part of ISSN: 0886-7798
Source: Rotman Criollo *via* Crossref Metadata Search

AkvaGIS application in the Walloon region (Belgium)
Open Science Framework
2018 | data-set
DOI: 10.17605/OSF.IO/7URC9
Source: Rotman Criollo

Urban groundwater quality. Update of the Barcelona city
EGU General Assembly 2018
2018 | conference-paper
Source: Rotman Criollo

Spatial analysis and simulation tools for groundwater management: the FREEWAT platform
Acque Sotterranee - Italian Journal of Groundwater
2017-09 | journal-article
DOI: 10.7343/as-2017-293
Part of ISSN: 2280-6458
Source: Rotman Criollo *via* Crossref Metadata Search

A loosely coupled GIS and hydrogeological modeling framework
Environmental Earth Sciences
2017 | journal-article
DOI: 10.1007/s12665-017-6709-3
Source: Rotman Criollo

Quantification of groundwater recharge in urban environments
Science of the Total Environment
2017 | journal-article
DOI: 10.1016/j.scitotenv.2017.03.118
EID: 2-s2.0-85015453834
Source: Rotman Criollo *via* Scopus - Elsevier

Gb-SAR interferometry displacement measurements during dewatering in construction works. Case of La Sagrera railway station in Barcelona, Spain
Engineering Geology
2016-04 | journal-article
DOI: 10.1016/j.enggeo.2016.02.014
Source: Rotman Criollo *via* Crossref Metadata Search

An integrated GIS-based tool for aquifer test analysis
Environmental Earth Sciences
2016-03 | journal-article
DOI: 10.1007/s12665-016-5292-3
Source: Crossref

Hidroquímica i contaminació dels aqüífers urbans de l'àrea de Barcelona
Geoquímica ambiental a Catalunya
2016 | book-chapter
Part of ISBN: 9788439394716
Source: Rotman Criollo

HYYH. Spatial analysis and management of pumping tests

2016 | patent

Source: Rotman Criollo

Integración de medidas correctoras: efecto barrera y subpresión en un único diseño. Caso de La Sagrera (Barcelona, Spain)

HIDROGEOLOGÍA EMERGENTE Aniversario 50 CIHS 2016. Nuevos campos en la investigación y el desarrollo sostenible de las aguas subterráneas

2016 | book-chapter

Part of ISBN: 978-84-921469-3-2

Source: Rotman Criollo

Open source and free software for water resource management: the H2020 FREEWAT platform (invited).

COP22. Water and Climate Day

2016 | conference-abstract

Source: Rotman Criollo

Plataforma para la gestión de datos hidrogeológicos en entornos urbanos

HIDROGEOLOGÍA EMERGENTE Aniversario 50 CIHS 2016. Nuevos campos en la investigación y el desarrollo sostenible de las aguas subterráneas

2016 | book-chapter

Part of ISBN: 978-84-921469-3-2

Source: Rotman Criollo

MJ-Pumpit

2015 | patent

Source: Rotman Criollo

Desarrollo de herramientas de análisis de datos hidrogeológicos en un entorno SIG

II Congreso Ibérico de las Aguas subterráneas (CIAS 2014)

2014 | book-chapter

Part of ISBN: 978-84-9048-239-1

Source: Rotman Criollo

Herramientas de interpretación de ensayos hidráulicos en un entorno SIG

II Congreso Ibérico de las Aguas subterráneas (CIAS 2014)

2014 | book-chapter

Part of ISBN: 978-84-9048-239-1

Source: Rotman Criollo

GIS-based hydrogeological analysis tools

The Fifth International Conference on Advanced Geographic Information Systems, Applications, and Services. GEOProcessing 2013

2013 | conference-paper

Part of ISSN: 2308-393X

Source: Rotman Criollo

GIS-based hydrogeological analysis tools

INFOCOMP 2013: The Third International Conference on Advanced Communications and Computation

2013 | book-chapter

Part of ISBN: 978-1-61208-310-0

Source: Rotman Criollo

A water isotopic modelling library for environmental studies

other

DOI: 10.22541/essoar.167590831.19426646/v1

Source: Rotman Criollo *via* Crossref Metadata Search

Peer review (2)

- review activity for **Hydrogeology journal. (4)**
- review activity for **SN Applied Sciences (1)**

Record last modified May 15, 2024, 10:16:57 AM