Thomas HUET PhD

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Curriculum Vitae

Prehistory, Computational Archaeology & Knowledge Representation (programming languages, GIS databases)

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FIELDWORK EXPERIENCE (2012-)

2020 Survey of the medieval engravings of Saurí (Catalonia, Spain), 2nd campaign, Universitat Autónoma de Barcelona, Grup d'Arqueologia de l'Alta Muntanya (UAB-GAAM), Spain, 19 October — 24 October.

2019-20 Field engineering management of the oasis survey of Al-'Ula (oasis of Al-'Ula, Saudi-Arabia), Archaïos, AFALULA-RCU.

 ${\bf 2019}$ Survey of the medieval engravings of Sauri (Catalonia, Spain), 1^{st} campaign, Universitat Autónoma de Barcelona, Grup d'Arqueologia de l'Alta Muntanya (UAB-GAAM), Spain, 15 September — 15 October.

2019 Excavations of Nahal Efe (Negev Desert, Israel), Israel Antiquities Authorities (IAA) / Institución Milá y Fontanals - Consejo Superior de Investigaciones Científicas (IMF-CSIC), resp. J.K. Sharvit and F. Borrell, Ein Tamar, 29 April — 25 may.

2014 Inventory/Study of the archaeological artefacts of Ciari's shelter conserved in: Museo Civico – Cuneo; Superintendencia - Turin, in collaboration with N. Bianchi (Institute of Human Paleontology) and D. Binder (CEPAM-CNRS), 20-21 October.

- Paleoenvironmental coring, mont Bego archaeological site (Alpes-Maritimes, France), UMR 6249, Laboratoire Chrono-Environnement, Lac des Grenouilles, dir. B. Vanniére, 6 — 9 October.
- Photogrammetry and topography, archaeological hypogée de Vert-la-Gravelle (Marne, France), dir. R. Martineau, UMR 6298, ARTeHis, 15 — 30 August.
- Archaeological excavations, Ponteau-Gare archaeological settlement (Bouches-du-Rhône, France), dir. X. Margarit, SRA-PACA, 1 — 15 July.

2013 Aerial photogrammetry and topography of the medieval Church of Saint Colomban Monastery archaeological site, Haute-Saône, UMR 6298, ARTeHis – NUI Galway, dir. S. Bully and E. Marron, 6 — 8 August.

2012 Paleoenvironmental coring, mont Bego archaeological site, Lac Long Inférieur and Lac des Grenouilles (Alpes-Maritimes, France), UMR 6249, Laboratoire Chrono-Environnement, dir. M. Magny, 19 — 25 August

2 ACADEMIC & PROFESSIONAL POSITIONS (2014-)

2021 Specialist Research Support Technician, Departament de Prehistòria, Universitat Autónoma de Barcelona (UAB), Spain, 1 July — 31 December.

2020 Co-responsible of the survey of the medieval engravings of Sauri (Catalonia, Spain), 2^{nd} campaign, Universitat Autónoma de Barcelona (UAB), Spain, 19 October — 24 October.

2019-20 Researcher at Archaïos company, in charge of the database integration for the survey of Al-'Ula, Saudi-Arabia (Archaïos, AFALULA, RCU).

- **2019** Co-responsible of the survey of the medieval engravings of Sauri (Catalonia, Spain), 1^{st} campaign, Universitat Autónoma de Barcelona (UAB), Spain, 15 September — 15 October.
- Project designer for the creation of a technological hub in Emerging technologies for Humanities, UMR 8546 CNRS/PSL — AOrOc, Paris, resp. K. Gruel. Project granted.
- 2018 Research Associate (IR), UMR 7264 CEPAM—CNRS, Université Nice Sophia-Antipolis, project Céramiques Imprimées de Méditerranée occidentale (CIMO), resp. D. Binder, 1 May — 30 August and 1 October — 30 November.
- Research Associate (IR), UMR 5140, ASM-CNRS, Université Paul Valéry Montpellier 3, project EpiSpat (aka ArchaEpigraph), LabEx ARCHIMEDE, resp. C. Pellecuer, 1 April — 1 May and 1 — 30 September.
- 2017-18 Training, recording techniques of rock-art and engraved steles of South-West Iberic peninsula (Tecniques d'enregistrament de l'art rupestre de les esteles gravades del Sud-oest de la Peninsula ibèrica), Grupo de investigación "Arqueología de las dinámicas sociales", Institución Milá y Fontanals (IMF) - Consejo Superior de Investigaciones Científicas (CSIC), Barcelone, resp. S. Valenzuela, 1 September 2017 — 30 May
- 2017 Development of the Information system (GIS, datatabase, topography and photogrammetry), grotte de Pertus II, Alpes-de-Haute-Provence, UMR 7264 CEPAM-CNRS, Université Nice Sophia-Antipolis and Evéha, resp. C. Lepère, 7 — 27 July.
- 2016 Development of the information system (GIS, database, topography and photogrammetry) of Pertus II cave, Alpes-de-Haute-Provence, dir. C. Lepère, 1 — 15 August 2016.
- 2015-16 Postdoctoral fellow, LabEx ARCHIMEDE, UMR 5140 ASM-CNRS and University Paul-Valéry, Montpellier. Project: 'Study of Final Bronze Age figurative ceramic decorations in South France and Northeastern Spain', 1 October 2015 — 30 September 2016.
- 2015 Auditor in the research seminar "Regards croisés sur la notion de paysage", lector : S. Robert, EHESS, March — June.
- 2014 Research Associate (IR), project Archaepigraph project, UMR 6249 Chrono-Environnement, Université de Franche-Comté, dir. M.-J. Ouriachi and L. Nuninger, 1 September — 30 October.
- 2013-14 Research Assistant (IE), USR CNRS UB 3516, GeoBFC platform, MSH de Dijon, Université de Bourgogne, project OH-FET (Historical Object, Function, Space, Time), dir. L. Saligny, 1 June — 31 May.

EDUCATION (2003-)

- 2013 PhD prize for publication. CASDEN Banque Populaire (UFR LSH, Université Nice Sophia-Antipolis).
- 2006-12 PhD History and Archaeology, first level of distinction ("mention trés honorable avec les félicitations du jury"). PhD title: "Organisation spatiale et sériation des gravures piquetées du mont Bego", Université Nice Sophia-Antipolis, UMR 7264 CEPAM-CNRS.
- 2005-6 Master Research ('mention bien') "Sciences de l'Homme et de la Société Histoire et Archéologie", mention : "Sciences des Mondes Préhistoriques, Antiques et Médiévaux", Université Nice Sophia-Antipolis, CEPAM-CNRS UMR 7264.
- 2004-5 DUT (University Diploma of Technology) Informatics Engineering ("mention assez bien"), Conservatoire National des Arts et Métiers, Paris.
- 2003 Topography diploma, Universitad de Ingeniería, Lima, Peru.

4 P	UBLICATIONS (2014-)
	———— Books ———
	Γ., 2017, Les gravures piquetées du mont Bego (Alpes-Maritimes). Organisation spatiale et sériation millénaire av. JC.), Mémoire de la Société Préhistorique Française (SPF) 63, 166 p. url
	———— Book chapters ———
'pitoti', t	der C., Maretta A., Huet T. and C. Chippindale, 2021 , Rules of ordering and grouping in the the later prehistoric rock-engravings of Valcamonica (BS), Italy: from solitary figures through clusphic groups, and scenes to narrative, in I. Davidson and A. Nowell (eds), <i>Making scenes: global</i>

- perspectives on scenes in rock art, London: Berghahn Books. url
- · Huet T., 2018, Une revue de l'iconographie du début du Néolithique á la fin de l'âge du Bronze (ca. 5700-750 av. J.-C.) en France, in Guilaine J. et D. Garcia (dir.), La Protohistoire de la France, ed. Hermann, Paris, p. 221-249. hal-01983284

——— Indexed jour	nals ———
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- · Huet T., Pozo J. M., Alexander C., 2021, Analysis of Prehistoric Iconography with the R package iconr, JOSS, 10.21105/joss.03191
- · Nieto-Espinet A., Huet T., Trentacoste A., Guimaraes S., Orengo H. and Valenzuela-Lamas S., 2021, Resilience and livestock adaptations to demographic growth and technological change: A diachronic perspective from the Late Bronze Age to Late Antiquity in NE Iberia, PlosONE, 10.1371/journal.pone.0246201

- · Ibañez J.J., Muñiz J., **Huet T.**, Borrell Terra F., Santana Y., Teira Mayolini L.C. and R. Rosillo, **2020**, Flint Figurines in the Early Neolithic site of Kharaysin (Early 8th Millennium BC, Jordan), *Antiquity Journal*, *94*, *376* p. 880-899, 10.15184/aqy.2020.78
- \cdot Cicolani V. and **T. Huet, 2019**, Essai de modélisation des échanges et des réseaux de circulation dans les Alpes centrales au premier âge du Fer, in "La conquête de la montagne : des premiéres occupations humaines á l'anthropisation du milieu", CTHS éditions, halshs-02314978
- \cdot Huet T., 2018, Geometric Graphs to Study Ceramic Decoration, in M. Matsumoto and E. Uleberg (eds), Exploring Oceans of Data, *Proceedings of the 44*nd Conference on Computer Applications and quantitative Methods in Archaeology (CAA 2016), Oxford: Archaeopress Archaeology, 311-323.hal-02913656
- \cdot **Huet T., 2016**, New perspectives on the chronology and the meaning of Mont Bego's rock-art (Alpes-Maritimes, France), Cambridge Archaeological Journal 41, 1-23, 10.1017/s0959774316000524
- · **Huet T.** and N. Bianchi, **2016**, Reticolati, pelli e mappe topografiche, lo stato della ricerca al monte Bego, *Bollettino del Centro Camuno di Studi Preistorici* 41, 31-43. url
- · **Huet T.** and N. Bianchi, **2016**, A study of the Roche de l'Autel's pecked engravings, Les Merveilles sector, Mont Bego area (Alpes-Maritimes, France), *Journal of Archaeological Sciences: Reports* 5, 105-118, doi: 10.1016/j.jasrep.2015.11.006
- \cdot **Huet T., 2016**, Sériation des gravures piquetées du mont Bego, Archeologia~e~Calcolatori~27, 65-83. $<math display="inline">10.19282/\mathrm{AC}.27.2016.02$
- · **Huet T., 2015**, Le incisioni a martellina del monte Bego: approcci geografici e quantitativi, *Archeologia Postmedievale* 17, 329-338. url
- · Saligny L., Granjon L., **Huet T.**, Simon G., Rodier X. and B. Lefebvre **2015**, OH_FET: A Computer Application for Analysing Urban Dynamics Over Long Time Spans, in *Proceedings of the 42nd Conference on Computer Applications and quantitative Methods in Archaeology* (CAA 2014), eds. Giligny F., Djindjian F., Costa L., Moscati P. et S. Robert, Oxford: Archaeology, 381-392.halshs-01146871
- · **Huet T.** and C. Alexander, **2015**, Méthodes informatiques pour l'étude des gravures rupestres : les exemples du Valcamonica (Italie) et du mont Bego (France), in *Recherches sur l'âge du Bronze. Nouvelles approches et perspectives. Actes de la journée d'étude de l'APRAB, Bulletin de l'APRAB, suppl. 1, 15-29.*
- · Ouriachi M.-J., Favory F., Garmy P., Ouzoulias P., Pasqualini A., Christol M., **Huet T**., Nuninger L., Bertoncello F., Häussler R.. **2014**, ArchaEpigraph : l'épigraphie spatiale au service de l'étude des dynamiques des territoires, in *Revue archéologique de Narbonnaise*, tome 47, pp. 35-49.url
- · **Huet T., 2014**, Use of quantitative methods to study an Alpine rock art site: the Mont Bego region, in *Proceedings of the 40th Conference on Computer Applications and quantitative Methods in Archaeology* (CAA 2012), eds. Earl G., Sly T., Chrysanthi A., Murrieta Flores P., Papadopoulos C., Romanowska I. et D. Wheatley, Southampton, UK, 26-30 March 2012, Amsterdam: Pallas Publications, , 584-591.
- · **Huet T., 2014**, Organisation spatiale et sériation des gravures piquetées du mont Bego Résumé de thése, Bulletin de la Société Préhistorique Française 110, 146-148.url

Scientific Conferences & Seminars (2014-)

(i)	international	audience	$ (\mathbf{n}) $	national	audience	
		– Organisa	ation		_	

- **2016** Séminaire d'équipe ASM-CNRS (UMR 5140), équipe Sociétés de la Préhistoire et de la Protohistoire, Analyser et interpréter les décors des céramiques pré- et protohistoriques. Approches croisées, co-organisé avec T. Lachenal et K. Peche-Quichilini, Université Paul-Valéry, Montpellier, 27 May. (n)
- **2014** Session n° 20 : "(Re)building past networks: archaeological science, GIS and network analysis", coorganised with C. Alexander, S. Robert, E. Mermet, 42^{th} international congress of the Computer Applications and Quantitative Methods in Archaeology (CAA 2014), Université Sorbonne, France, 22-25 April. (i)

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Communications ———

- **2021** "Managing and analysing pictorial documentation with GIS and graphs", co-presented with C. Alexander and J. Pozo, International congress of the *Computer Applications and Quantitative Methods in Archaeology* (CAA 2021), Cyprus University of Technology, Cyprus, 14 March-18 June (i)
- "Between Celtic, Italic and Etruscan worlds. Re-thinking Boundaries and Models of Interaction across the Alps", co-presented with V. Cicolani and L. Zamboni, Adaptation and Creativity along Border Zones, Charles University, Prague, 31 May 3 June (i)
- "Paisatges de conflicte i de poder. Els gravats medievals del Solà de Saurì (Pallars Sobirà)", co-presented with E. Gassiot Ballbè and O. Augé Martínez, Tribuna d'Arqueologia, Barcelona, 21 April (n)
- 2019 "Diacronia delle incisioni rupestri preistoriche e protostoriche della regione del monte Bego (Tenda, Alpi Marittime, Francia)", co-presented with J. Masson Mourey J. and N. Bianchi, LIV Riunione scientifica, Archeologia del cambiamento. Modelli, processi, adattamenti nella Preistoria e Protostoria, Roma, 23-26 October. (i)
- "The North-western Impressed Wares: a chrono-cultural overview", co-presented with D. Binder, L. Angeli, L. Gomart, R. Maggi, C. Manen, I.M. Muntoni, E. Natali, C. Panelli, G. Radi, F. Radina, C. Tozzi, S. Tusa, 1st conference on the Early Neolithic of Europe (ENE2019), Barcelona, 6-9 November. (i)

- "L'Impresso-cardial du nord-ouest et ses rapports avec la "zone-source" : une synthése chrono-culturelle", co-presented with D. Binder, L. Angeli, L. Gomart, R. Maggi, C. Manen, I. Maria Muntoni, E. Natali, C. Panelli, G. Radi, F. Radina, C. Tozzi, S. Tusa, Séance de la Société Préhistorique Française, Nice, 18-20 March. (i)
- "Territorialité, mobilité, interactions : apports croisés des sous-systémes lithiques et céramiques", copresented with D. Binder, C. De Stefanis, P. Fernandes, B. Gratuze, R. Maggi, C. Tozzi, Séance de la Société Préhistorique Française, Nice, 18 20 March. (i)
- **2018** "Pastoral graffiti and "protohistoric" engravings in Mont Bego region: a study of marking practices over long time spans", co-presented with N. Magnardi, 20^e international rock-art congress organisation (ifrao), Darfo Boario Terme, 29 August-2 September. (i)
- 2017 "Las representaciones iconográficas en Francia del Neolítico antiguo a la fin del Edad del Bronce (5700-750 BC)", SEMINARIOS Grupo de investigación "Arqueología de las dinámicas sociales", Institución Milá y Fontanals (IMF) Consejo Superior de Investigaciones Científicas (CSIC), Barcelone, 12 December. (n)
- "Interactions culturelles au Premier âge du Fer dans les Alpes occidentales : essai de modélisation des échanges par la théorie des réseaux ", co-presented with V. Cicolani, 142^e congrés du *Comité des Travaux Historiques et Scientifiques* (cths), Pau, 24-29 April. (n)
- **2016** "Geometrical and planar graphs in ancient iconography studies, a heuristic tool", 44^{th} international congress of the *Computer Applications and Quantitative Methods in Archaeology* (CAA 2016), University of Oslo, Sweden, 29 March-2 April. (i)
- "L'étude des décors céramiques figuratifs du Mailhac I et des décors apparentés (Bronze final IIIb). Contextes, méthodes et premiers résultats" journée thématique Images et imaginaire á l'Âge du bronze en Europe, Association pour la Promotion de la Recherche sur l'Âge du Bronze (APRAB), Musée des Antiquités Nationales, Saint-Germain-en-Laye, 4 March. (n)
- **2015** "Les gravures rupestres néolithiques du mont Bego (Alpes-Maritimes) : identifications, comparaisons et significations supposées", L'art néolithique du Proche-Orient á l'Europe : nouvelles, approches théoriques et méthodologiques, round table of the Association pour le Développement des Rencontres et des Echanges Universitaires et Culturels (adreuc), Notre Dame de l'Abbaye, Carcassonne, 5 November. (n)
- "Familles aristocratiques dans la cité antique de Nîmes : un exemple de mise en réseaux des individus par les monuments épigraphiques (Ier siécle av. notre ére IIIe siécle)" co-présentée avec M.-J. Ouriachi, 140^{th} congress of the *Comité des Travaux Historiques et Scientifiques* (cths), Reims, 27 April-2 May. (n)
- 2014 "Ancient pastoral paths in mount Bego rock art area" Session (Re) building past networks: archaeological science, GIS and network analysis, 42^{th} international congress of the Computer Applications and Quantitative Methods in Archaeology (CAA 2014), Université Sorbonne, France, 22-25 April. (i)
- "OH-FET: a computer application to compare urban dynamics over long time spans (longue durée)", Session n° 18, co-presented with L. Saligny, L. Granjon, B. Lefebvre, G. Simon, X. Rodier, 42^{th} international congress of the *Computer Applications and Quantitative Methods in Archaeology* (CAA 2014), Université Sorbonne, France, 22-25 April. (i)
- "Méthodes informatiques en art rupestre. Etudes de cas : le Valcamonica et le mont Bego", co-presented with C. Alexander, thematic day *Recherches sur l'Âge du Bronze* of the *Association pour la Promotion de la Recherche sur l'Âge du Bronze* (APRAB), Musée des Antiquités Nationales, Saint-Germain-en-Laye, 28 February. (n)

5 ACADEMIC & RESEARCH PROGRAMS (2014-)

Teachings

- **2017** "Introduction to Geographic Information Systems: QGIS", *Grupo de Arqueologia de las Dinámicas Sociales*, Consejo Superior de Investigaciones Cientificas, Institución Milá i Fontanals (CSIC-IMF), 14-16 December (9 heures).
- "Les représentations d'attelages à l'âge du Bronze (Espagne, France, Italie), dans le cadre du Séminaire de formation doctorale du réseau interdisciplinaire AniMed, University seminar, Université Paul-Valéry, 26 January (1 hour).
- **2016** "Méthodes quantitatives en archéologie. L'approche processuelle : concepts, outils et cas d'étude" Master 2 Archéologie, Sciences pour l'Archéologie, ASM-UMR 5140, University seminar, Université Paul-Valéry, 5 December (4 hours).
- **2015** "L'apparition des décors figuratifs du Mailhac I et des groupes apparentés dans une Europe continentale largement aniconique (Bronze final IIIb, 950-750 av. J.-C.) : contextes, hypothéses et méthodes" Master 1 Recherche, Protohistoire méditerranéenne, ACTE UE 3-6, University seminar, Université de Bourgogne, 24 November (1 hour).
- "L'apport du SIG á l'étude de l'art rupestre du Mont Bego (Alpes-Maritimes)" Master 2 Recherche et Professionnel, Archéologie des Sociétés et Territoires en France Métropolitaine, Méthodes et approches nouvelles, LARA, CReAAH-UMR 6566, University seminar, Université de Nantes, Université de Rennes, 4 November (1 hour).
- "Les méthodes quantitatives en archéologie : de la *New Archaeology* au *Project Mosul*" Master 2 Recherche et Professionnel, Archéologie des Sociétés et Territoires en France Métropolitaine, Séminaire spécialisé : "Méthodes et approches nouvelles", LARA, CReAAH-UMR 6566, University seminar, Université de Nantes, Université de Rennes, 16 October (1 hour).
- "Data Paths", University workshop, Západočeská Universita (*University of West Bohemia*), Pilsen, Czech Republic, 12 March, (1 hour).

Research Programs

Academic committees

- Member of the PhD steering committee (2015-2020) of: Francis Bordas, University Toulouse 2, Doctoral section TESC, UMR TRACES, PhD title: "Les dépôts d'objets métalliques au Bronze final 3 dans l'espace atlantique français (950-800 av J.-C.) : modalités de constitution des dépôts français de l'étape de l'épée du type en langue de carpe."
- Tutor of the Master 2 steering committee (2018-2019) of: Marco Padovan, University Toulouse 2, "Formation aux outils de traitement 3D" dans le cadre du Master 2 de, Universitá degli studi di *Ferrara* (Italia), Master 2 title: "The Fabric of the Baume de Monthiver"

Journal committees

- Member of the editorial board of the *Préhistoires Méditerranéennes* journal (2021 ...)
- Reviewer for the Journal of Open Source Software (2021 ...)
- Reviewer for the Bulletin de la Société Préhistorique Française journal (2020 ...)
- Reviewer for the M@ppemonde journal (2019 ...)
- Reviewer for the CAA Review College (2014 ...)

Collective research projects

- Member of the SIG-SSLA Special Interest Group on Scientific Scripting Languages in Archaeology (2020 ...)
- Member of the Grup d'Arqueologia de l'Alta Muntanya (GAAM) (UAB, CSIC) (2021 ...)
- Member of the NeoNet collective research project, resp. J. Gibaja, M. Cubas (2020 ...)
- Former member of the Corpus des signes gravés néolithiques collective research project, resp. S. Cassen
- Former member of the Information Spatiale et Archéologie network (ISA)
- Former member of the "Faire Science avec l'Incertitude en SHS" work group, MSH Nice
- Former member of the Evolutions, transferts, inter-culturalités dans l'arc liguro-provençal : Matiéres premiéres, productions et usages, du Paléolithique supérieur á l'âge du Bronze ancien (ETICALP) collective research project (PCR), resp. D. Binder

6 IT RELEASES & INFORMATIC TOOLS

IT releases

Softwares and Packages



R package, v. 0.1.0 CRAN stable release, with Jose Pozo and Craig Alexander.

2014 OH-FET application v.1, a Python app to compare urban dynamics over long time spans (with Ludovic Granjon and Laure Saligny, MSH de l'Université de Bourgogne).

Web applications

2018 EpiSpat application RShiny interactive web application for multifactorial on-the-fly clustering of Roman epigraphic stelae.

2020 NEONET RShiny interactive web application for selecting, calibrating, summing and plotting on-the-fly radiocarbon dates. EUROEVOL_R parses the EUROEVOL database (Institute of Archaeology, UCL).

Web docs

 $\textbf{2021 Rock-art}, \ R + Markdown \ document. \ Multi-paradigm \ and \ multi-scalar \ management \ of \ rock-art \ data \ with \ open-source \ softwares \ (3DHOP, \ Leaflet, \ GitHub, \ etc.)$

2021~Gene-culture coevolution (GC-coev), R + Markdown document. Reuse of existing aDNA data and cross-analysis methods with radiocarbon dates and culture data

2021 NEONET R + Markdown tutorial document.

2021 Absolute dating, R + Markdown document. Web applications and databases review for archaeological radiocarbon and dendrochronological dates.

2020 Golasecca-net, R + Markdown document for archaeological data visualisation (maps, charts, spatial networks) of movable goods (personal ornements, imported/prestige goods) 10.5281/zenodo.4315328.

Informatic tools

(-) notions

OS | Programming languages

 $Windows,\ Linux^{\text{-}} \mid R,\ Python,\ JavaScript^{\text{-}},\ SQL,\ markup\ languages\ (JSON,\ XML,\ HTML,\ CSS,\ etc.)$

Servers | Databases development

Apache | PostgreSQL/GIS, FileMaker, SpatiaLite, Access, NoSQL databases

Software development

R package with continuous integration (GitHub, Travis-CI), Python to executable (.exe) with Pyinstaller

Web authoring & Data driven documents | Desktop publishing | Web platforms

Sweave, Rmarkdown, RShiny, Plotly, IPython-, | LATEX, Windows Office | RPubs, Zenodo

Images 2D and 3D

Infography | Images management & metadata

ImageMagick, ImageJ, and current graphic softwares (Gimp, Photoshop, Inkscape, Illustrator, etc.) \mid ExifTool, XnView, Piwigo, etc.

Photogrammetry/RTI | 3D creation | Web 3D

PhotoScan, MicMac-, RTIBuilder- | MeshLab, CloudCompare, Blender- | WebGL, 3DHOP, Potree-

Geographical Information Systems (GIS) | GeoCMS & Geoweb services | Geopositionning and topography

QGIS, ArcGIS | Leaflet, OpenLayers, WMS, WFS, WCS, etc. | Differential GPS, Total Station, Theodolite

Agent-based modeling (ABM)

NetLogo-, RNetLogo-

TRAINING COURSES ATTENDED

Statistics

2014 "R application", training of the *ElementR* group, UMR 8504 Géographie-cités, MSH de l'Université de Bourgogne (Dijon, France) 27-28 January.

2010 "Describe and analyse multifactorial data", Permanent training of the CNRS Delegation Côte d'Azur (Sophia-Antipolis, France), 7-9 September.

— "Decide and predict with multifactorial data: discriminant analysis and regressions", Permanent training of the CNRS Délégation Côte d'Azur (Sophia-Antipolis, France), 16-18 June.

2009 "Statistical processing of small samples", Permanent training of the CNRS Delegation Côte d'Azur (Sophia-Antipolis, France), 14-16 October.

— "Introduction to standard statistics", Permanent training of the CNRS Delegation Côte d'Azur (Sophia-Antipolis, France), 16-18 September. — "Statistical processing of design of experiments: analysis of variance", Permanent training of the CNRS Delegation Côte d'Azur (Sophia-Antipolis, France), 16-18 June.

Network analysis

2018 "MOSAIC^{NET} 2018: Networks in Archaeological Research", International Summer School at Bibracte, Ecole Européenne de Protohistoire (Glux-en-Glenne, France), 8-13 October.

Agent-based modeling

2016 "Agent-based modelling for archaeologists", workshop in parallel of the *Computer Applications and Quantitative Methods in Archaeology* (CAA 2016) international colloquium (Oslo, Sweden), 28-29 March.

3D / Photogrammetry

2016 "CloudCompare - manipulation of 3D clouds", workshop in parallel of the Journées informatique et archéologies de Paris (jiap), Institut d'Art et d'Archéologie (Paris, France), 8 June.

— "MeshLab - manipulation of 3D meshes", workshop in parallel of the Journées informatique et archéologies de Paris (jiap), Institut d'Art et d'Archéologie (Paris, France), 7 June.

2013 "Aerial photography by kite and helium balloon: shot, georeferencing and photogrammetry", CNRS Formations entreprises (Alés, Berrias et Casteljau, France), 28-30 May.

Image / Shape analysis

2013 "Detection of structures and spatio-morphological dynamics by image analyses: morpho-mathematics", training organised by ISA network, UMR 7264 CEPAM-CNRS and UMR 7300 ESPACE (Nice, France), 18-21 March.

— "ImageJ", Permanent training of the CNRS Delegation Côte d'Azur (Sophia-Antipolis, France), 11-13 February.

Archaeology

2017-18 "Record and wear analysis of engraving technics", training at the IMF-CSIC (Barcelona, Spain), 1 September - 30 May.

2010 "Traceology of pre- and protohistorical stone tools", UMR 7264 CEPAM-CNRS, Université Nice Sophia-Antipolis (Nice, France), 4-15 October.

 ${\bf 2008}\,$ "Statement of carvings in Valcamonica archaeological site", training of the Archaeoloical Cooperative "Le Orme dell Uomo" (Capo di Ponte, Italy), 1-15 July.

2007 "Technics for the archaeological cast", Musée municipal d'archéologie de Cimiez (Nice, France), 3-15 December.

LANGUAGES & COMPLEMENTARY INFORMATIONS

French: native

English, Spanish: good

Italian, Catalan: reading, listening

German: beginner dialectal Arabic: notions

Driving licence (permis B), Diving level 1, Animation Capacity Diploma (BAFA)