

Marco Livesu

Born

August 11th, 1983, Cagliari (Italy)

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Work address

CNR - IMATI

Consiglio Nazionale delle Ricerche

Istituto di Matematica Applicata e Tecnologie Informatiche

Via de Marini, 6

16149, Genoa, Italy

RESEARCH INTERESTS

My main research topic is computer graphics, with special focus on geometry processing. Most of my publications relate to the following problems:

- mesh generation and optimization [TR3, IJ8, IJ7, IJ6, IJ5, IJ14, IJ15, IP5]
- surface and volumetric maps [IJ13, IJ10, IJ4]
- digital fabrication [TR4, B1, IJ18, IJ12, IJ9, IP6, TR1]
- computer animation [IJ17, IP5, TR6]
- shape analysis [IJ1, IJ3, IP3]

CURRENT POSITION

Tenured Researcher

(since Dec 2016)

Institute for Applied Mathematics and Information Technologies (IMATI)

National Research Council of Italy (CNR)

PREVIOUS POSITIONS

Researcher

(Nov 2016 - Dec 2016)

Institute for Applied Mathematics and Information Technologies (IMATI)

National Research Council of Italy (CNR)

Post-Doctoral Fellow, with Dott. Michela Spagnuolo

(Oct 2015 - Oct 2016)

Institute for Applied Mathematics and Information Technologies (IMATI)

National Research Council of Italy (CNR)

Post-Doctoral Fellow, with Prof. Riccardo Scateni

(Mar 2015 - Sep 2015)

University of Cagliari, Italy

Post-Doctoral Fellow, with Prof. Alla Sheffer

(Jun 2014 - Jan 2015)

University of British Columbia, Vancouver, Canada

VISITING

Visiting Academic at New York University, USA

(Feb 2019 - Mar 2019)

Host: Prof. Daniele Panozzo

Visiting Academic at University of Genoa, Italy

(Feb 2015 - Sep 2015)

Host: Prof. Enrico Puppo

Visiting Phd Student at University of British Columbia, Canada

(Sep 2012 - Apr 2013)

Host: Prof. Alla Sheffer

EDUCATION

PhD in Mathematics and Computer Science at University of Cagliari, Italy (Jan 2010 - May 2014)

Grade: Excellent

Thesis: Understanding the Structure of 3D Shapes: PolyCubes and Curve-Skeletons

Advisor: Prof. Riccardo Scateni

Reviewers: Prof. Konrad Polthier, Prof. Leila De Floriani

Master of Computer Science at University of Cagliari, Italy (Oct 2008 - Sep 2010)

Grade: 110/110 cum laude

Thesis: Automatic 3D Skeletonization Using Multiple Views (see IJ1)

Advisor: Prof. Riccardo Scateni

Bachelor of Computer Science at University of Cagliari, Italy (Oct 2005 - Jul 2008)

Grade: 110/110 cum laude

Thesis: Digital Terrain Models Construction Using Delaunay Triangulations

Advisor: Prof. Riccardo Scateni

LANGUAGES

Italian (mother tongue), English (proficient)

AWARDS

1. Winner of the CNR Short Term Mobility Grant (2018)
spent visiting Prof. Daniele Panozzo at New York University from Feb 10, 2019 to Mar 03, 2019
2. Article *Gradient Field Estimation on Simplicial Meshes* (IP7)
was selected among the best STAG 2018 papers, and shortlisted for journal extended version (IJ16)
3. Article *slice2mesh : meshing sliced data for the simulation of AM Processes* (IP6)
was selected among the best STAG 2018 papers, and shortlisted for journal extended version (IJ15)
4. Elsevier Reviewer of Distinction (2018)
Awarded by The Editors of Computers & Graphics Journal
5. Special mention at the IEEE TVCG Best Reviewer Award (2017)
6. Elsevier Outstanding Contribution in Reviewing (2017)
Awarded by The Editors of Computers & Graphics Journal
7. Article *Heat Flow Based Relaxation of n Dimensional Discrete Hyper Surfaces* (IP4)
was selected among the best STAG 2017 papers, and shortlisted for journal extended version (IJ11)
8. Co-advisor (with Prof. Riccardo Scateni) of the thesis *Polycubes Optimization*,
authored by Gianmarco Cherchi and awarded as Best Master Thesis in Computer Graphics
at the Eurographics Italian Chapter conference (STAG2016)
9. Winner of an Alain Bensoussan 12 months PostDoctoral Fellowship (2015/2016), funded by
European Research Consortium for Informatics and Mathematics (ERCIM)
refused due to another offer
10. Three years PhD scholarship, funded by
P.O.R. Sardegna F.S.E. Operational Programme of the Autonomous Region of Sardinia
European Social Fund 2007-2013 - Axis IV Human Resources, Objective 1.3, Line of Activity 1.3.1

OPEN SOURCE PROJECTS

1. *CinoLib* – A generic programming header only C++ library for processing polygonal and polyhedral meshes
<https://github.com/mlivesu/cinolib> (214 ★, 16 forks)

2. *HexaLab* – An Online Viewer for Hexahedral Meshes
www.hexalab.net (34★, 14 forks)
3. *Slice2Mesh* – A Direct Meshing Tool for the Simulation of Additive Manufacturing Processes
<https://github.com/mlivesu/slice2mesh> (14★, 1 forks)
4. *CageLab* – An Interactive Tool for Cage-Based Deformations
<https://github.com/cordafab/Cagelab2018> (2★, 2 forks)

TALKS

1. *From 3D Models to 3D Prints: an Overview of the Processing Pipeline*
invited talk at University of Verona
November, 2018 - Verona, Italy
Host: Prof. Andrea Giachetti
2. *slice2mesh : meshing sliced data for the simulation of AM Processes*
paper presented at Smart Tools and Applications in Graphics (STAG)
October, 2018 - Brescia, Italy
(presenting [IP6])
3. *slice2mesh : meshing sliced data for the simulation of AM Processes*
invited talk at EGIT PhD School on Graphics and Geometry Processing for AM
October, 2018 - Brescia Italy
4. *From 3D Models to 3D Prints: an Overview of the Processing Pipeline*
invited talk at EGIT PhD School on Graphics and Geometry Processing for AM
October, 2018 - Brescia Italy
with Jonas Martínez (INRIA)
5. *Fabrication-Aware Shape Decomposition*
invited talk at EGIT PhD School on Graphics and Geometry Processing for AM
October, 2018 - Brescia Italy
6. *Fabrication-Aware Shape Decomposition*
invited talk at Mini-Symposia on Mathematical Aspects of 3D Printing - Curves and Surfaces (C&S)
June, 2018 - Arcachon, France
Host: Georg Muntingh
7. *Cinolib – A generic programming header only C++ library for processing polygonal and polyhedral meshes*
invited talk at University of Cagliari
February, 2018 - Cagliari, Italy
Host: Prof. Riccardo Scateni
8. *Research and Challenges in Polygonal/Polyhedral Mesh Generation*
talk at ERC CHANGE Workshop
January, 2018 - Leysin, Switzerland
Host: Prof. Annalisa Buffa
9. *Heat Flow Based Relaxation of n Dimensional Discrete Hyper Surfaces*
paper presented at Smart Tools and Applications in Graphics (STAG)
September, 2017 - Catania, Italy
(presenting [IP4])
10. *CAzMan: Computer Aided Technologies for Additive Manufacturing*
paper presented at Smart Tools and Applications in Graphics (STAG)
September, 2017 - Catania, Italy
11. *Explicit Cylindrical Maps for General Tubular Shapes*
paper presented at Solid and Physical Modeling (SPM)
June, 2017 - Berkeley, USA
(presenting [IJ10])
12. *From 3D Models to 3D Prints: an Overview of the Processing Pipeline*
paper presented at Eurographics 2017
April, 2017 - Lyon, France
(presenting [IJ9])

13. *European Projects at CNR IMATI*
talk at Eurographics 2016
May, 2016 - Lisbon, Portugal
14. *Practical Medial Axis Filtering for Occlusion-Aware Contours*
paper presented at Smart Tools and Applications in Graphics
October, 2015 - Verona, Italy
(presenting [IP3])
15. *Practical Hex-Mesh Optimization via Edge-Cone Rectification*
paper presented at ACM SIGGRAPH
August, 2015 - Los Angeles, USA
(presenting [IJ6])
16. *Coarse Layouts for Structured Surface and Volumetric Meshing*
invited talk at INRIA
June, 2015 - Sophia-Antipolis, France
Host: Pierre Alliez
17. *Automatic Generation of Hexahedral Meshes of Articulated Objects*
invited talk at CNR-IMATI
May, 2015 - Genoa, Italy
Hosts: Michela Spagnuolo, Marco Attene
18. *PolyCut: Monotone Graph-Cuts for PolyCube Base-Complex Construction*
paper presented at ACM SIGGRAPH Asia
November, 2013 - Hong Kong
(presenting [IJ4])
19. *Extracting curve-skeletons from digital shapes using occluding contours*
paper presented at Computer Graphics International (CGI)
June, 2013 - Hannover, Germany
(presenting [IJ3])
20. *Rigid registration of different poses of animated shapes*
paper presented at Winter School of Computer Graphics (WSCG)
June, 2013 - Plzen, Czech Republic
(presenting [IJ2])
21. *Reconstructing the Curve-Skeleton of 3D Shapes Using the Visual Hull*
invited paper presented at Eurographics Symposium on Parallel Graphics and Visualization (EGPGV)
May, 2013 - Girona, Spain
(presenting [IJ1])

EDITORIAL ACTIVITIES

Editor:

- Guest Editor, Computers & Graphics (Special Issue on STAG 2018) 2019
- Associate Academic Editor, PLOS One 2019, 2018
- Guest Academic Editor, PLOS One 2017

Chair:

- Awards Chair, Smart Tools and Apps in Computer Graphics (STAG) 2019
- Student Volunteer Chair, Eurographics (EG) 2019
- Program Chair, Smart Tools and Apps in Computer Graphics (STAG) 2018
- Session Chair, Smart Tools and Apps in Computer Graphics (STAG) 2018
- Session Chair, Shape Modeling International (SMI) 2017

Committees:

- Local Organizing Committee, Eurographics (EG) 2019
- PC Member, SIBGRAPI 2017
- PC Member, Int. Conference on Computer Graphics Theory and Applications (GRAPP) since 2017
- PC Member, Smart Tools and Apps in Computer Graphics (STAG) 2019, 2017, 2016
- Best Thesis Award Jury, Smart Tools and Apps in Computer Graphics (STAG) 2018, 2017, 2016

Reviewer:

— SIGGRAPH	2019, 2018, 2016
— SIGGRAPH Asia	2017, 2016
— ACM Transactions on Graphics (TOG)	2018, 2017, 2016, 2015
— IEEE Transactions on Visualization and Computer graphics (TVCG)	2018, 2017, 2016
— Computer-Aided Design (CAD)	2015, 2014
— EuroGraphics (EG)	2019, 2017, 2016
— IEEE Access	2019
— Computer Graphics Forum (CGF)	2019, 2017, 2016
— Symposium on Geometry Processing (SGP)	2016, 2015
— Pacific Graphics (PG)	2019, 2018, 2017, 2016
— CAD Conference	2019, 2018
— T&F, Computer Methods in Biomechanics and Biomedical Engineering	2016, 2015
— Robotics and Computer Integrated Manufacturing	2017
— PLOS One	2017
— Numerical Algorithms	2017, 2016
— Computers & Graphics (C&G)	2019, 2018, 2017, 2016, 2015, 2013
— Shape Modeling International (SMI)	2016
— Intern. Conf. on Geometric Modeling and Processing (GMP)	2016
— The Visual Computer	2016
— Graphical Models	2015
— Computer-Aided Design and Applications	2018
— Intern. Conf. on Comp. Graphics Theory and Appl. (GRAPP)	2017, 2016, 2015
— WSCG	2015

EDUCATIONAL ACTIVITIES**Teaching:**

— Lecturer, Geometry Processing for Digital Manufacturing, <i>EGIT PhD School</i>	2018
— Teaching assistant, Advanced Data Structures, <i>University of Cagliari, Italy</i>	2015, 2013, 2011, 2010
— Teaching assistant, Computer Architectures, <i>University of Cagliari, Italy</i>	2011, 2010

PhD Thesis Committee Member (1):

— Alvaro Fuentes Suarez (INRIA, Université Cote D'Azur)	2019
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Thesis Supervision (15):

1. E. Pau - *HoloSculpt: un Tool per Modellazione 3D di Mesh Fabbicabili* (2019)
Master Thesis - University of Cagliari
2. S. Staglianò - *Temporal Integration Analysis in Geodesic Distances Comput. through Heat Eq.*(2017)
Master Thesis - University of Genoa
3. G. Cherchi - *PolyCubes Optimization* (2015)
Master Thesis - University of Cagliari (now PhD student at University of Cagliari)
- full paper published at Symposium on Geometry Processing 2016 [IJ8]
- awarded as Best Master Thesis in computer Graphics at STAG 2016
4. F. Winkelmolen - *Hexahedral Meshes from Curve-Skeletons* (2015)
Master Thesis - University of Genoa (now at Amazon)
- full paper published at Pacific Graphics 2016 [IJ7]
5. S. Casti - *CageLab: Interactive Tool for Cage-based Animation* (2015)
Master Thesis - University of Cagliari (now PhD student at University of Cagliari)
6. F. Corda - *CageLab: Interactive Tool for Cage-based Animation* (2015)
Master Thesis - University of Cagliari (now researcher at University of Cagliari)
7. S. Volpe - *Building Anisotropic Cages for Digital Character animation* (2015)
Master Thesis - University of Genoa

8. A. Muntoni - *Simplifying the Shape of Triangle Meshes for Unfolding, Milling and Fabrication* (2014)
Master Thesis - University of Cagliari (now PhD student at University of Cagliari)
9. D. Cabiddu - *Detecting Shape Features from Meshes Using JMAPT* (2012)
Master Thesis - University of Cagliari (now researcher at IMATI-CNR)
10. G. Marcias - *Detecting Shape Features from Meshes Using JMAPT* (2012)
Master Thesis - University of Cagliari (now researcher at ISTI-CNR)
11. S. Podda, *Semplificazione Concorrente di Mesh Poligonali con Connettività Fissa* (2012)
Bachelor Thesis - University of Cagliari (now PhD student at University of Cagliari)
12. F. Usai - *A novel Technique for Shape Matching Based on Skeletal Feature Points* (2011)
Master Thesis - University of Cagliari (now developer at MoneyFarm)
13. G. Broccia - *Riconoscimento di Gestioni Umani per la Guida di Robot* (2011)
Bachelor Thesis - University of Cagliari (now co-founder at Lively & freelance Android consultant)
- full paper published at Eurographics Italian Chapter 2011 [IP2]
14. T. Puggioni - *Studio ed Implementazione dello Smoothing Basato sul Mean Curvature Flow* (2011)
Bachelor Thesis - University of Cagliari
15. E. Alimonda - *CGView: un Agile Visualizzatore di Mesh* (2010)
Bachelor Thesis - University of Cagliari

RESEARCH PROJECTS

1. **CHANGE** (2.2M€) (from Oct 2016)
New CHallenges for PDE solvers: the interplay of ANalysis and GEometry.
ERC Advanced Grant
Co-investigator
2. **CaxMan** (7.1M€) (Oct 2015 - Sep 2018)
Computer Aided Technologies for Additive Manufacturing.
Horizon 2020 - Research and Innovation action - Grant Agreement N° 680448
Co-investigator
3. **Automated Hexahedral Meshing** (124K\$) (Jun 2014 - Jan 2015)
NSERC Idea to Innovation (I2I)
Co-investigator
4. **Virtuoso** (300K€) (Mar 2015 - Sep 2015)
Un osservatore sanitario virtuale per la prevenzione di malattie cardio-metaboliche nella pratica di attività fitness & wellness nei centri turistici.
Funded by Sardinia Regional Government (CUP F78C13000530002)
Co-investigator

PUBLICATIONS and PATENTS

Legend:

- B Book
- P Patent
- IJ Peer-reviewed International journal
- IP Proceedings of a peer-reviewed international conference
- PD Project Deliverable
- TR Technical Report

Books (1):

- [B1] Design, Representations and Processing for Additive Manufacturing
M. Attene, M. Livesu, S. Lefebvre, T. Funkhouser, S. Rusinkiewicz, S. Ellero, J. Martínez, A. H. Bermano
Morgan & Claypool Publishers - Synthesis Lectures on Visual Computing, 2018

Patents (2):

- [P2] *Methods and Systems for Hex-mesh Optimization via Edge-cone rectification*
M. Livesu, A. Sheffer, N. Vining
US Patent *US20170024931 A1*
- [P1] *Methods and Systems for Generating PolyCube Segmentations from Input Meshes of Objects*
M. Livesu, A. Sheffer, N. Vining, J. Gregson
US Patent *US20160240001 A1*

Peer-reviewed International Journals (19):

- [IJ19] CinoLib: a generic programming header only C++ library for processing polygonal and polyhedral meshes
M. Livesu
Lecture Notes in Computer Science. Transactions on Computational Science XXXIV, 2019
- [IJ18] Surface2Volume: Surface Segmentation Conforming Assemblable Volumetric Partition
C. Araujo, D. Cabiddu, M. Attene, M. Livesu, N. Vining, A. Sheffer
ACM Transactions on Graphics, 2019 (SIGGRAPH, Los Angeles, USA)
- [IJ17] Skeleton Based Cage Generation Guided by Harmonic Fields
S. Casti, M. Livesu, N. Mellado, N. Abu Rumman, R. Scateni, L. Barthe, E. Puppo
Computers & Graphics, 2019
- [IJ16] A Comparison of Methods for Gradient Field Estimation on Simplicial Meshes
C. Mancinelli, M. Livesu, E. Puppo
Computers & Graphics 80, 2019 (extended version of [IP7])
- [IJ15] slice2mesh: a Meshing Tool for the Simulation of Additive Manufacturing Processes
M. Livesu, D. Cabiddu, M. Attene
Computers & Graphics 80, 2019 (extended version of [IP6])
- [IJ14] Hexalab.net: an Online Viewer for Hexahedral Meshes
M. Bracci, M. Tarini, N. Pietroni, M. Livesu, P. Cignoni
Computer Aided Design 110, 2019
- [IJ13] Topology-Driven Shape Chartification
T. Sorgente, S. Biasotti, M. Livesu, M. Spagnuolo
Computer Aided Geometric Design 65, 2018
- [IJ12] Axis-Aligned Height-Field Block Decomposition of 3D Shapes
A. Muntoni, M. Livesu, R. Scateni, A. Sheffer, D. Panozzo
ACM Transactions on Graphics 37(5), 2018 (presented at SIGGRAPH Asia, Tokyo, Japan)
- [IJ11] A Heat Flow Based Relaxation Scheme for n Dimensional Discrete Hyper Surfaces
M. Livesu
Computers & Graphics 71, 2018 (extended version of [IP4])
- [IJ10] Explicit Cylindrical Maps for General Tubular Shapes
M. Livesu, M. Attene, G. Patanè, M. Spagnuolo
Computer Aided Design 90, 2017 (Solid and Physical Modeling, Berkeley, USA)

- [IJ9] From 3D Models to 3D Prints: an Overview of the Processing Pipeline
M. Livesu, S. Ellero, J. Martínez, S. Lefebvre, M. Attene
Computer Graphics Forum 36(2), 2017 (Eurographics STAR, Lyon, France)
- [IJ8] Polycube Simplification for Coarse Layouts of Surfaces and Volumes
G. Cherchi, M. Livesu, R. Scateni
Computer Graphics Forum 35(5), 2016 (Symposium on Geometry Processing, Berlin, Germany)
- [IJ7] Skeleton-driven Adaptive Hexahedral Meshing of Tubular Shapes
M. Livesu, A. Muntoni, E. Puppo, R. Scateni
Computer Graphics Forum 35(7), 2016 (Pacific Graphics, Okinawa, Japan)
- [IJ6] Practical Hex-Mesh Optimization via Edge-Cone Rectification
M. Livesu, A. Sheffer, N. Vining, M. Tarini
ACM Transactions on Graphics 34(4), 2015 (SIGGRAPH, Los Angeles, USA)
- [IJ5] Extraction of the Quad Layout of a Triangle Mesh Guided by its Curve-Skeleton
F. Usai, M. Livesu, E. Puppo, M. Tarini, R. Scateni
ACM Transactions on Graphics 35(1), 2015 (presented at SIGGRAPH Asia, Kobe, Japan)
- [IJ4] PolyCut: Monotone Graph-Cuts for PolyCube Base-Complex Construction
M. Livesu, N. Vining, A. Sheffer, J. Gregson, R. Scateni
ACM Transactions on Graphics 32(6), 2013 (SIGGRAPH Asia, Hong Kong)
- [IJ3] Extracting curve-skeletons from digital shapes using occluding contours
M. Livesu, R. Scateni
The Visual Computer 29(9), 2013 (Computer Graphics International, Hannover, Germany)
- [IJ2] Rigid registration of different poses of animated shapes
M. Livesu, R. Scateni
Journal of WSCG 21(1), 2013 (WSCG, Plzen, Czech Republic)
- [IJ1] Reconstructing the Curve-Skeleton of 3D Shapes Using the Visual Hull
M. Livesu, F. Guggeri, R. Scateni
IEEE Transactions on Visualization and Computer Graphics 18(11), 2012

Peer-reviewed International Conferences (8):

- [IP8] FETI-DP preconditioners for the Virtual Element Method on general 2D meshes
D. Prada, S. Bertoluzza, M. Pennacchio, M. Livesu
Lecture Notes in Computational Science and Engineering, 2019
Numerical Mathematics and Advanced Applications - ENUMATH 2017
- [IP7] Gradient Field Estimation on Simplicial Meshes
C. Mancinelli, M. Livesu, E. Puppo
Smart Tools and Applications in Graphics, 2018 (Brescia, Italy)
- shortlisted for journal extended version (see [IJ16])
- [IP6] slice2mesh : meshing sliced data for the simulation of AM Processes
M. Livesu, D. Cabiddu, M. Attene
Smart Tools and Applications in Graphics, 2018 (Brescia, Italy)
- shortlisted for journal extended version (see [IJ15])

- [IP5] CageLab: An Interactive Tool for Cage-based deformations
S. Casti, F. Corda, M. Livesu, R. Scateni
Smart Tools and Applications in Graphics, 2018 (Brescia, Italy)
- [IP4] Heat Flow Based Relaxation of n Dimensional Discrete Hyper Surfaces
M. Livesu
Smart Tools and Applications in Graphics, 2017 (Catania, Italy)
- shortlisted for journal extended version (see [IJ11])
- [IP3] Practical Medial Axis Filterig for Occlusion-Aware Contours
M. Livesu, R. Scateni
Smart Tools and Applications in Graphics, 2015 (Verona, Italy)
- [IP2] Gestural Interaction for Robot Motion Control
G. Broccia, M. Livesu, R. Scateni
Proceedings of the 9th Eurographics Italian Chapter, 2011 (Salerno, Italy)
- [IP1] Tools and Applications for Teaching and Research in Computer Graphics
F. Guggeri, M. Livesu, R. Scateni
Proceedings of the 8th Eurographics Italian Chapter, 2010 (Genoa, Italy)

EU Project Deliverables (7):

- [PD7] Deliverable n. D3.4 — AM Process Plan Assessment
J. C. Morel, M. Attene, M. Livesu, T. Ventura
CAxMan (H2020-FoF-2015-680448)
- [PD6] Deliverable n. D2.6 — Analysis Based Optimization Tools
L. Tamellini, M. Attene, M. Martinelli, M. Chiumenti, F. Marini, M. Livesu,
P. Pietra, M. Pennacchio, S. Bertoluzza, V. Skytt, O. Barrowclough, C. Altenhofen
CAxMan (H2020-FoF-2015-680448)
- [PD5] Deliverable n. D1.6 — Cloud Infrastructure Version 3
S. Bergweiler, J. Hjelmervik, C. Altenhofen, F. Loosmann, M. Livesu,
D. Cabiddu, M. Martinelli, E. Neiva, J. Cauchois, M. North, N. Arcontara, A. Mata
CAxMan (H2020-FoF-2015-680448)
- [PD4] Deliverable n. D2.5 — Analysis Tools for AM, Non-Linear Setting
L. Tamellini, R. Vazquez, M. Martinelli, F. Marini, P. Pietra, M. Pennacchio,
S. Bertoluzza, M. Attene, M. Livesu, V. Skytt, O. Barrowclough, M. Chiumenti
CAxMan (H2020-FoF-2015-680448)
- [PD3] Deliverable n. D3.3 — First Implementation of Process Planning Workflows
M. Attene, O. Barrowclough, D. Cabiddu, J. Cauchois, S. Ellero,
J. Haenisch, M. Livesu, J.C. Morel, T. Ventura
CAxMan (H2020-FoF-2015-680448)
- [PD2] Deliverable n. D3.2 — AM Process Planning Workflows
M. Attene, D. Cabiddu, J. Cauchois, S. Ellero, M. Livesu, J.C. Morel
CAxMan (H2020-FoF-2015-680448)
- [PD1] Deliverable n. D3.1 — Requirement: Process Planning for AM
S. Ellero, T. Zerbi, M. Attene, M. Livesu, M. Spagnuolo, O. Barrowclough,

T. Dokken, J.C. Morel, B. Ellingsen, D. Sørlie, S. Canard
CAxMan (H2020-FoF-2015-680448)

Technical Reports (6):

- [TR6] Real-time Deformation with Coupled Cages and Skeletons
F. Corda, J.M. Thiery, M. Livesu, E. Puppo, T. Boubekeur, R. Scateni
arXiv:1909.02807
- [TR5] Benchmark of Polygon Quality Metrics for Polytopal Element Methods
M. Attene, S. Biasotti, S. Bertoluzza, D. Cabiddu, M. Livesu,
G. Patanè, M. Pennacchio, D. Prada, M. Spagnuolo
arXiv:1906.01627
- [TR4] Parametric shape optimization for combined additive-subtractive manufacturing
C. Altenhofen, M. Attene, O. J. D. Barrowclough, M. Chiumenti,
M. Livesu, F. Marini, M. Martinelli, V. Skytt, L. Tamellini
arXiv:1907.01370
- [TR3] Loopy Cuts: Surface-Field Aware Block Decomposition for Hex-Meshing
M. Livesu, N. Pietroni, E. Puppo, A. Sheffer, P. Cignoni
arXiv:1903.10754
- [TR2] TopChart: from Functions to Quadrangulations
T. Sorgente, S. Biasotti, M. Livesu, M. Spagnuolo
CNR IMATI Technical Report 18-05
- [TR1] A Study of the State of the Art of Process Planning for Additive Manufacturing
M. Livesu, M. Attene, M. Spagnuolo, B. Falcidieno
CNR IMATI Technical Report 39