Curriculum Vitæ

Personal Information

Given Name, Family Name	Kacper Pluta (*pron. : Casper Pluta*)
E-mail	kacper.pluta@gmail.com
Web page	copyme.github.io
Mother tongue	Polish
Other languages	English – professional (academic) French – satisfactory level (professional context)

Professional career

▷ Period	2021–now
○ Employer	**Inria Sophia Antipolis** (France)
○ Position	Researcher engineer
○ Responsibilities	Research – support of the BIM2TWIN project
○ Type of contract	Full-time, fixed term
▷ Period	2018–2021
○ Employer	**Technion – Israel Istitute of Technology** (Israel)
○ Position	Postdoctoral researcher
○ Responsibilities	Research
○ Type of contract	Full-time, fixed term
▷ Period	2017–2018
○ Employer	**Université Paris-Est Marne-la-Vallée** (France)
○ Position	Temporary Research and Teaching Attaché
○ Responsibilities	Research and teaching
○ Type of contract	Full-time, fixed term
▷ Period	2012–2013
○ Employer	**Łódź University of Technology** (Poland)
○ Position	Oracle (PL/SQL) and Delphi developer
○ Responsibilities	Development and maintenance of the internal systems
○ Type of contract	Full-time, fixed term

▷ Period	2010–2012
○ Employer	**Ostrów Wielkopolski District Sanitary and Epidemiological Office** (Poland)
○ Position	IT Administrator
○ Responsibilities	Maintenance of internal IT infrastructure
○ Type of contract	Full-time, permanent term

EDUCATION

▷ Period	2014–2017
○ Acquired qualification	**Ph.D.** in Computer Science
○ Institution	Université Paris-Est
○ Dissertation title	Rigid Motions on Discret Spaces
○ Supervisors	Yukiko Kenmochi (CNRS) and Pascal Romon (Université Paris-Est Marne-la-Vallée)
▷ Period	2013–2014
○ Acquired qualification	**Master** in Computer Science
○ Institution	Université Paris-Est Marne-la-Vallée
○ Program	Labex Bézout – international track in computer science and maths
○ Specialisation	Signal, Image, Synthesis
○ Comments	Obtained with honors (mention très bien)
▷ Period	2009–2013
○ Acquired qualification	**Bachelor (Polish engineer's degree)** in Computer Science
○ Institution	University of Computer Sciences and Skills in Łódź
○ Specialisation	Programming and databases
○ Comments	Several scholarships of the Polish Ministry of Higher Education for the best students

PUBLICATIONS

▷ International journal	Trzeciak M., **Pluta K.**, Fathy Y., Alcalde L., Chee S., Bromley A., Brilakis I., Alliez P.: ConSLAM: Construction Dataset for SLAM. *Journal of Computing in Civil Engineering*, vol. 37(3), doi : 10.1061/JCCEE5.CPENG-5212
▷ International journal	**Pluta K.**, Edelstein M., Vaxman A., Ben-Chen M. : PH-CPF: Planar Hexagonal Meshing using Coordinate Power Fields. *ACM Transactions on Graphics*, 2021, vol. 40(4), pp. 1–19, doi : 10.1145/3450626.3459770. Presented during SIGGRAPH 2021
▷ International journal	Domej G., Bouedeau C., Lenti L., Salvatore M., **Pluta K.**: Shape and Dimension Estimations of Landslide Rupture Zones via Correlations of Characteristic Parameters. *Geosciences*, 2020, vol. 10(5), pp. 198–221, doi : 10.4408/10.3390/geosciences10050198
▷ International journal	**Pluta K.**, Roussillon T., Cœurjolly D., Romon P., Kenmochi Y., Ostromoukhov V. : Characterization of Bijective Digitized Rotations on the Hexagonal Grid. *Journal of Mathematical Imaging and Vision*, 2018, vol. 60, pp. 707–716, doi : 10.1007/s10851-018-0785-1
▷ International journal	**Pluta K.**, Romon P., Kenmochi Y., Passat N. : Bijective Digitized Rigid Motions on Subsets of the Plane. *Journal of Mathematical Imaging and Vision*, 2017, vol. 59, pp. 84–105, doi : 10.1007/s10851-017-0706-8
▷ International journal	**Pluta K.**, Janaszewski M., Postolski M. : New Algorithm for Modeling of Bronchial Trees. *Image Processing & Communications*, 2012, vol. 17(4), pp. 179–190, doi : 10.2478/v10248-012-0045-8
▷ National journal	Domej G., Bouedeau C., Lenti L., **Pluta K.**: Mean Landslide Geometries Inferred From a Global Database of Earthquake- and Non-earthquake-Triggered Landslides. *Italian Journal of Engineering Geology and Environment*, 2017, vol. 2, pp. 87–108, doi : 10.4408/IJEGE.2017-02.O-05
▷ Conference proceedings	Trzeciak M., **Pluta K.**, Fathy Y., Alcalde L., Chee S., et al.. : ConSLAM: Periodically Collected Real-World Construction Dataset for SLAM and Progress Monitoring. *Lecture Notes in Computer Science*. ECCV, 2022

▷ Conference proceedings	Passat N., Kenmochi Y., Ngo P., **Pluta K.**: Rigid Motions in the Cubic grid: a Discussion on Topological Issues. *Lecture Notes in Computer Science*. DGCI, 2019, vol. 11414, pp. 127–140, doi : 10.1007/978-3-030-14085-4_11
▷ Conference proceedings	**Pluta K.**, Romon P., Kenmochi Y., Passat N. : Honeycomb Geometry: Rigid Motions on the Hexagonal Grid. *Lecture Notes in Computer Science*. DGCI, 2017, vol. 10502, pp. 33–45, doi : 10.1007/978-3-319-66272-5_4
▷ Conference proceedings	**Pluta K.**, Moroz G., Kenmochi Y., Romon P. : Quadric Arrangement in Classifying Rigid Motions of a 3D Digital Image. *Lecture Notes in Computer Science*. CASC, 2016, vol. 9890, pp. 426–443, doi : 10.1007/978-3-319-45641-6_27
▷ Conference proceedings	**Pluta K.**, Romon P., Kenmochi Y., Passat N. : Bijectivity Certification of 3D Digitized Rotations. *Lecture Notes in Computer Science*. CTIC, 2016, vol. 9667, pp. 30–41, doi : 10.1007/978-3-319-39441-1_4
▷ Conference proceedings	**Pluta K.**, Romon P., Kenmochi Y., Passat N. : Bijective Rigid Motions of the 2D Cartesian Grid. *Lecture Notes in Computer Science*. DGCI, 2016, vol. 9647, pp. 359–371, doi : 10.1007/978-3-319-32360-2_28
▷ National cnference proceedings	**Pluta K.**, Postolski M., Janaszewski M. : Bronchial Tree Modeling Algorithms. *Science Bulletin of the College of Computer Science in Łódź*, SMiSKT, 2012, vol. 11(1), pp. 152–170
▷ Technical raport	**Pluta K.**, Kenmochi Y., Passat N., Talbot H., Romon P.: Topological Alterations of 3D Digital Images under Rigid Transformations. HAL, 2016, hal:hal-01333586
▷ Abstract	**Pluta K.** et Domej G. : From Point Clouds to Surfaces : Overview on a Case Study. *European Geosciences Union*, 2021, doi : 10.5194/egusphere-egu21-1523
▷ Abstract	Domej G., Bourdeau C., Lenti L., **Pluta K.** : A Global Database of Seismically and Non-seismically Triggered Landslides for 2D/3D Numerical Modeling. *European Geosciences Union*, 2017, vol. 17

▷ Bachelor thesis	**Pluta K.**: Algorytmy Modelowania Geometrii Drzew Oskrzelowych w Przestrzeni 3D. University of Computer Science in Łódź, 2013
▷ Technical magazine	**Pluta K.**: Static Content Management Systems. *Polish Edition of Linux+ Magazine*, 2010
▷ Technical magazine	**Pluta K.**: Preview of eyeOS. *Polish Edition of Linux+ Magazine*, 2010
▷ Technical magazine	**Pluta K.**: Survey of antivirus software for Linux Desktops. *Polish Edition of Linux+ Magazine*, 2010

TALKS

▷ Seminary	Planar Hexagonal Meshing, Inria Sophia-Antipolis, France, 2021
▷ Seminary	La grille hexagonale : moins populaire mais néanmoins utile, Université Savoie-Mont-Blanc, Chambéry, 2021
▷ Seminary	Tangent Estimation of 3D Digital Curves, Technion, Haifa, 2018
▷ Seminary	Rigid Motions on 3D Digital Space, Technion, Haifa, 2017
▷ International conference	PH-CPF: Planar Hexagonal Meshing Using Coordinate Power Fields, SIGGRAPH, Los Angeles (online), 2021
▷ International conference	Honeycomb Geometry: Rigid Motions on the Hexagonal Grid, DGCI, Vienna, 2017
▷ International conference	Quadrics Arrangement in Classifying Rigid Motions of a 3D Digital Image, CASC, Bucharest, 2016
▷ International conference	Bijectivity Certification of 3D Digitized Rotations, CTIC, Marseilles, 2016
▷ International conference	Bijective Rigid Motions of the 2D Cartesian Grid, DGCI, Nantes, 2016
▷ Seminary	Quadrics Arrangement in Classifying Rigid Motions of a 3D Digital Image, INRIA, Nancy, 2016

▷ National working group day	Bijectivity Certification of 3D Digitized Rotations, Journée du GéoDis, Marseilles, 2016
▷ National working group day (Poster)	Bijective Rigid Motions of the 2D Cartesian Grid, Journée du GDR-IM, Villetaneuse, 2016
▷ National zorking group day	Bijective Rigid Motions of the 2D Cartesian Grid, Journée du GéoDis, Lyon, 2015
▷ National project workshop	Local Characterization of Rigid Motions in 2D Cartesian Grid, KIDICO, Obernai, 2015
▷ National working group day	Topological Alterations of 3D Digital Images under Rigid Transformations, Journée du GéoDis, Reims, 2014
▷ National conference (Poster)	New Algorithm for Modeling of Bronchial Trees, SŁOK, Słok, 2012
▷ National Conference	Bronchial Tree Modeling Algorithms, SMiSKT, Łódź, 2012
▷ Doctoral school students' workshop	Bijectivity Certification of 3D Digitized Rotations, Noisy-le-Grand, 2016
▷ Doctoral school students' workshop	Honeycomb Geometry: Rigid Motions on the Hexagonal Grid, Noisy-le-Grand, 2017

TEACHING

▷ Labs (Mixed level)	Matter of Perspective (programming and design with Rhino), Technion (Israel), Spring 2021, **with**: Mierla Ben-Chen, Gershon Elber, Yoav Sterman
▷ Labs (Bachelor 3)	Databases, University Paris-Est Marne-la-Vallée, 12h, 2017/18, **head**: Claire David
▷ Labs (Bachelor 1)	Algorithmic and Programming 1, University Paris-Est Marne-la-Vallée, 36h, 2017/18, **head**: Antoine Meyer
▷ Labs (Master 2)	Digital Geometry, University Paris-Est Marne-la-Vallée, 5h, 2017/18, **with**: Yukiko Kenmochi
▷ Labs (Master 1)	Linux API, University Paris-Est Marne-la-Vallée, 24h, 2017/18, **head**: Sylvain Cherrier

▷ Labs (Master 1)	Object-Oriented Programming 1, University Paris-Est Marne-la-Vallée, 48h, 2017/18, **head**: Sylvain Cherrier
▷ Labs (Master 1)	Workshop on C Programming, University Paris-Est Marne-la-Vallée, 4h, 2017/18
▷ Lectures & Labs (Master 1)	Introduction to Computational Geometry, ESIEE Paris, 16h, 2016/17, **head**: Nabil Mustafa
▷ Labs (Master 2)	Digital Geometry, University Paris-Est Marne-la-Vallée, 5h, 2016/17, **with**: Yukiko Kenmochi
▷ Lectures & Labs (Master 1)	Object-Oriented Programming 1, University Paris-Est Marne-la-Vallée, 48h, 2016/17, **head**: Sylvain Cherrier
▷ Project (Master 1)	Image Analysis and Synthesis, ESIEE Paris, Leading a group of 3 students for 8 weeks, 2015/16, **head**: Jean Cousty
▷ Labs (Master 1)	Introduction to Computational Geometry, ESIEE Paris, 8h, 2015/16, **head**: Nabil Mustafa
▷ Lectures & Labs (Master 1)	Graphical Interface Programming, ESIEE Paris, 16h, 2015/16, **head**: Nabil Mustafa
▷ Labs (Bachelor 3)	Algorithms and Programming, University Paris-Est Marne-la-Vallée, 24h, 2014/15 Fall, **head**: Éric Laporte

PRICES

▷ 2016	Symposium on Geometric Processing Software Prize, awarded for the DGtal programming library. Winners (collective prize, in alphabetical order) : P.H. Cerdan, D. Cœurjolly, R. Denis, P. Gueth, B. Kerautret, J.-O. Lachaud, J. Levallois, **K. Pluta**, I. Sivignon, T. Roussillon.

PARTICIPATION IN FUNDED PROJECTS

▷ 2021–present	**Project** : BIM2TWIN. **Funding** : Horizon 2020 (grant agreement no. 958398)

▷ 2018–2021	**Project** : Operator Based Representations for Geometry Processing (OPREP). **Funding** : European Research Council (ERC)
▷ 2015–2018	**Project** : Métriques convergentes pour le calcul digital (CoMeDiC). **Funding** : Agence Nationale de la Recherche (ANR)

MISSIONS ABROAD

▷ 2018-2019	Three visits at the Unversity of Utrecht (the Netherlands). **Total duration** : around two months. **Host** : Amir Vaxman

ABILITIES

PROGRAMMING LANGUAGES	C/C++, Python, Maple, Wolfram Language, Delphi, Oracle (PL/SQL), Shell scripts, Visual Basic, LaTeX, TiKZ
CASE AND OTHER TOOLS	git, svn, Valgrind, GNU Debugger, Visual Studio, GCC
HOBBIES	reading, biking, hiking, music, cooking, art and painting, equitation, horology, medieval Iberia and the Dutch golden age