

# Damien Rohmer

CV

LIX, Bat. Alan Turing  
1 rue Honoré d'Estienne d'Orves  
91120 Palaiseau, France

☎ (+33) 1 69 35 69 62

✉ [damien.rohmer@polytechnique.edu](mailto:damien.rohmer@polytechnique.edu)

🌐 <https://damienrohmer.com>

ORCID: 0000-0002-3302-5197

[github.com/drohmer](https://github.com/drohmer)

## Current status

Status **Professeur**, *École Polytechnique, Institut Polytechnique de Paris.*  
Department of Informatics (DIX)

Research **Computer Graphics.**

3D Modeling, Real-time Animation & Simulation, User Interaction.

Lab **LIX**, *Laboratoire d'Informatique de l'École polytechnique, UMR 7161, CNRS.*

Team **VISTA**, *Visual Worlds: Temporal Analysis, Animation & Authoring.*

## Main ongoing responsibilities

2023 - **Vice President DIX.**

In charge of the teaching for the Department of Informatics of École polytechnique

2019 - **Head of the VISTA research team at LIX.**

Computer Graphics and Vision team, 3 permanents and about 25 people.

2018 - **Coordinator of the Image, Vision & Machine Learning program.**

3rd year (master level) specialization at École Polytechnique (IVA).

## Education and Diplomas

2017 **HdR**, *Grenoble University.*

Habilitation à Diriger des Recherches

Interactive High-Level models for 3D Virtual Shape Creation & Animation

Developed within the LJK/Inria Grenoble lab, team IMAGINE.

Spécialité Informatique et Mathématique Appliquées

2007–2011 **PhD**, *Grenoble University.*

Active Geometry for Animation and Modeling

Developed within the LJK/Inria Grenoble lab, team EVASION.

Spécialité Mathématiques et Informatique

2006-2007 **Master**, *Université de Saint-Etienne.*

Optics, Image and Vision

2003-2007 **Engineer**, *CPE Lyon.*

Engineering degree in Electronics, Telecommunication & Informatics.

Specialization in Image and Algorithmics.

---

## Employment

- 2017- **Professeur**, *École polytechnique*.  
Département d'Informatique (DIX)  
Researcher at the Laboratoire d'Informatique de l'École Polytechnique (LIX)  
*Equivalent tenured Associate Professor/Full Professor.*
- 2010-2017 **Enseignant Chercheur**, *CPE Lyon*, eq. Maitre de Conférence.  
Département Electronique, Telecom, Informatique (ETI)  
*Equivalent tenured Assistant Professor.*  
Research associated to Inria Rhone-Alpes (Imagine team)  
2016-2017: Full time Invited Researcher at Inria Rhone-Alpes (délégation)
- 2007-2010 **Moniteur**, *Polytech Grenoble*.  
Part-time Teaching Assistant. Involved in class at Polytech Grenoble, ENSIMAG, UFR-IMAG.
- 2005-2006 **Research Assistant**, *LBNL*, Berkeley.  
Gap year as Research Assistant at the Lawrence Berkeley National Laboratory. Part of the Medical Imaging Group.

---

## Paper Awards

- 2023 **AFIG/EGFR**, *2nd Best Paper Award*, Théo Cheynel.  
Sparse Motion Semantics for Contact Aware Retargeting
- 2023 **ICCV - CVAAD**, *Best Poster Award*, Arnaud Gueze.  
Floor Plan Reconstruction from Sparse Views: Combining Graph Neural Network with Constrained Diffusion
- 2022 **AFIG/EGFR**, *Best Paper Award*, Jiayi Wei.  
Robust-statistics Based Approach for Pointset Denoising
- 2022 **SCA**, *Best Paper Honorable Mention Award*, Eduardo Alvarado.  
Generate Real-Time Characters Making their way through Dynamic Environments
- 2022 **GI**, *Best Paper, Michael Sweeney Award*, Niranjana Kalyanasundaram.  
Acceleration Skinning: Kinematics-Driven Cartoon Effects for Articulated Characters
- 2021 **AFIG/EGFR**, *Best Paper Award*, David-Henri Garnier.  
Growing Optimized Anisotropic Microstructure with Reaction/Diffusion
- 2021 **EUROGRAPHICS**, *Best Paper Honorable Mention Award*, Damien Rohmer.  
Velocity Skinning for Real-time Stylized Skeletal Animation
- 2019 **MIG**, *Best Presentation Award*, Adrien Nivaggioli.  
Animation Synthesis Triggered by Vocal Mimics
- 2016 **AFIG/EGFR**, *3rd Best Paper Award*, Amélie Fondevilla.  
Modeling Symmetric Developable Surfaces from a Single Photo
- 2012 **AFIG/EGFR**, *Best Paper Award*, Rodolphe Vaillant.  
Déformation de la peau d'un personnage avec prise en compte des contacts
- 2007 **Univ. Lyon**, *Master Thesis Award*, Damien Rohmer.  
Animation de personnages par skinning à volume constant

---

## PhD Student supervision

---

### Current PhD Student

- 2023 - **Rodrigo Stevenson**, *Deforming and Animating Multi-Material Objects Using Multi-Valued Field Functions*.  
Co-supervision with Marie-Paule Cani.
- 2023 - **Arnaud Gueze**, *Complex interior scene reconstruction from sparse multimodal data*.  
CIFRE Homiwoo. Co-supervision with Marie-Paule Cani and Matthieu Ospici.
- 2022 - **Théo Cheynel**, *Video-Based Synthesis and Editing of 3D Animated Humanoid Characters*.  
CIFRE Kinetix. Co-supervision with Marie-Paule Cani.
- 2020 - **David-Henri Garnier**, *Interactive 3D Modeling of Evolutionary and Emergent Bio-Inspired Shapes*.  
CIFRE Dassault Systèmes.

---

### Former PhD Student

- 2020-2023 **Eduardo Alvarado**, *Groups of humans and animals in natural environments: a multi-scale approach*.  
Currently: PostDoc at MPI
- 2020-2023 **Jiayi Wei**, *Novel representations for surface Modeling and Analysis*.
- 2019-2023 **Maud Lastic**, *Simulation and Authoring of Consistent Volcanic Phenomena*.
- 2017-2021 **Thomas Buffet**, *Field-Based approaches for the collision-free animation of layered and dynamic clothing*.  
Currently: Engineer at 2K, Video Games, California.
- 2017-2020 **Corentin Mercier**, *Geometric Modeling, Simplification, and Visualization of Brain White Matter Tractograms*.  
Currently: Engineer at Unity, Game Engine, Paris.
- 2016-2019 **Amélie Fondevilla**, *Reverse-Engineering Fashion Products : From a single-view Sketch to a 3D Model*.  
Currently: Engineer at Les fées Spéciales, Animation Studio, Montpellier
- 2013-2016 **Camille Schreck**, *Interactive Deformation of Virtual Paper*.  
Currently: Inria Researcher (ISFP), MFX team, Nancy
- 2013-2016 **Ulysse Vimont**, *Novel methods for the interactive design of complex objects and animations*.  
Currently: Engineer at Anatoscope, Digital Anatomy, Grenoble.

---

## Grants and industrial contracts

---

### Public Grants

- 2023-2027 **ANR AnimationConductor**, *Project Member, Local PI, 174k€*.  
Conducting animations using voice and gestures

- 2023-2027 **ANR MultiForm**, *Project Member, Local PI, 165k€.*  
MultiVariate Implicit Function deformation
- 2020-2023 **H2020 ITN CLIPE**, *Project Member, 550k€.*  
Creating Lively Interactive Populated Environments
- 2017-2019 **Paris-Saclay DIGICOSME MetaTracts**, *Project Member, Local PI, 73k€.*  
Multi-Resolution representation of brain tractograms
- 2016-2021 **ANR Fold-Dyn**, *Project Member, Local PI, 160k€.*  
Field-Oriented Layered Dynamics animating 3D characters
- 2016-2020 **ANR eRoma**, *Project Member, 160k€.*  
Expressive restoration of Gallo-Romanian statues by virtual sculpture and animation
- 2015-2018 **ARC6 POTASSE**, *Project Member.*  
From acquisition of digital assembly to CAD models.

---

### Industrial Collaboration

- 2023-2026 **CIFRE Homiwoo**, *PI, 45k€.*  
Reconstructing of complex interior scenes from sparse multimodal data.
- 2022-2025 **CIFRE Kinetix**, *PI, 45k€.*  
Improving arbitrary human motion reconstruction from monocular acquisition.
- 2022 **ModaLive**, *PI, <10k€.*  
3D Garment completion.
- 2020-2023 **CIFRE Dassault Systèmes**, *PI, 80k€.*  
Generation and Modeling of 3D Bio-Inspired Structures.
- 2020-2023 **FUI Collodi 2**, *Member.*  
Collaboration with TeamTo and Mercenaries Engineering

---

### Steering committee of Chairs

- 2018 - 2022 **Chair ScienceXGames with Ubisoft**, *CoPil Member.*  
Involvement in the creation of new courses, projects, and workshop organization.

---

### Teaching

*I have always been highly involved in teaching, spending time to develop and improve classes, as well as proposing tools related to teaching. In general, I have been teaching about 200 hours of class per year since 2010. In the vast majority of the cases, I am the main responsible and I create from scratch all the lectures and technical labs. This allows me to propose lectures that can be tightly connected to the practical labs.*

---

### Administration of teaching

- 2024-present Member of the Conseil de perfectionnement MSc&T X, École polytechnique.  
General discussion and evolution of the master of science and technologies.
- 2020-present **IGD Master Steering committee member**, IP Paris.  
IGD: Master program in "Interaction, Graphics & Design" at IP Paris. Part of the program evolution, and selection committee.

- 2018-present **Coordinator Image, Vision & Machine Learning (IVA) program**, *École polytechnique*.  
In charge of the 3rd year (master level) IVA filière/specialization at École Polytechnique.
- 2014-2017 **Coordinator of the Math, Image and Signal domain**, *CPE Lyon*.

---

### Ongoing classes

- 2018-2024 **INF585 Computer Animation**, X3A, Lecture & Labs, Open-Source Course, 36h, 50 Students.  
Include students from X3A, M1 & M2 IGD IP Paris, M1 MSc&T AI-ViC, EuroTeQ.
- 2018-2024 **INF443 Graphique 3D**, X2A, Labs, 40h, 120 students.
- 2017-2024 **CSE104 Web Programming**, BX1, Lecture & Labs, 24h, 50 students.
- 2019-2024 **ANI3D Animation 3D**, EPITA, Lecture & Labs, 16h, 50 students.

---

### Former classes

- 2019-2023 **MPRI-2.39 Computer Graphics and Scientific Visualization**, M2 MPRI, Lecture & Labs, 15h, 10 students.
- 2018-2023 **INF630 Refresher in CS**, M2 AI-ViC, Lecture & Labs, 15h, 5 students.
- 2017-2017 **INF473J Modélisation Expressive pour la Fabrication 3D**, X2A, Labs, 45h, 12 students.
- 2013-2016 **Développement logiciel**, CPE ETI3, Lecture & Labs, 44h, 130 students.
- 2013-2016 **Traitement et Synthèse d'images**, CPE 4ETI, Lecture & Labs, 36h, 110 students.
- 2015-2016 **Rendu Graphique**, CPE 5ETI, Lecture & Labs, 24h, 30 students.
- 2015-2016 **Animation et Simulation**, CPE 5ETI, Lecture & Labs, 24h, 30 students.
- 2015-2016 **Projet en Image, Modelisation et Informatique**, CPE 5ETI, Project, 40h, 30 students.
- 2014-2016 **Introduction à l'Infographie**, CPE 4ETI, Lecture & Labs, 24h, 40 students.
- 2014-2016 **Modélisation et géométrie**, CPE 4ETI, Lecture & Labs, 24h, 30 students.
- 2014-2016 **Programmation générique en C++**, CPE 4ETI, Lecture & Labs, 24h, 30 students.
- 2014-2015 **Analyse numérique**, CPE 4ETI, Lecture & Labs, 12h, 30 students.
- 2014-2015 **Projet VR/AR**, CPE 4ETI, Project, 16h, 30 students.
- 2010-2014 **Synthèse d'images**, CPE 5ETI, Lecture & Labs, 40h, 15 students.
- 2010-2014 **Projets en image**, CPE 5ETI, Projects, 15h, 15 students.
- 2010-2013 **Système d'exploitation**, CPE 4ETI, Labs, 40h, 28 students.
- 2010-2013 **Traitement du signal**, CPE 4ETI, Labs, 35h, 25 students.
- 2009-2009 **Visualisation et multirésolution**, Polytech RICM5, Lecture & Labs, 60h, 25 students.
- 2008-2009 **Algorithmique en ADA**, ENSIMAG 1A, Labs, 27h, 25 students.
- 2008-2009 **IHM en Java**, ENSIMAG 1A, Labs, 27h, 25 students.

---

## Special courses

- 2024 **Research School in Animation for Graphics.**  
Organisation of three days of lecture and labs offered at the national level in collaboration with the GRD IG-RV.
- 2015 **Invited course on Computer Graphics, Collegium Da Vinci, Posnan.**
- 2014-2015 **Python course, CEPEC.**  
Formation for the teachers in high-school for the speciality Informatique et Science du Numérique.
- 2013-2014 **Python course, CPE.**  
Formation for the journée prof de prépa.

---

## Main personal contributions

- 2022 **Open-Source course in 3D Animation & Simulation.**  
I have developed a fully open-source course linked to the "INF585 - Computer Animation" course that I created and handled for the X3A students at École Polytechnique from 2018 to 2024. The class is fully available online, and I provide the source material for the online slide content, labs structure, and associated code frameworks. Lab lectures are also available as pre-recorded videos and available on YouTube. The pre-recorded videos were started during covid period, the lab codes rely on the CGP framework, and the slides and lab descriptions are made using the Static Website generator with LHTML language. The class could be followed by onsite students from various level (X3A, IGD M1, IGD M2, AI-ViC M1), as well as offsite students from the EuroTeQ consortium that have been attending it asynchronously.
- Course Webpage: [https://damienrohmer.com/data/teaching/2022\\_2023/x-inf585/](https://damienrohmer.com/data/teaching/2022_2023/x-inf585/)
  - Slides source material: [https://github.com/drohmer/inf585\\_lecture\\_slides](https://github.com/drohmer/inf585_lecture_slides)
  - Lab exercise source: [https://github.com/drohmer/inf585\\_lab\\_class](https://github.com/drohmer/inf585_lab_class)
  - Lab code source: [https://github.com/drohmer/inf585\\_lab\\_code](https://github.com/drohmer/inf585_lab_code)
- 2013 **Creation of the specialty Image, Modeling and Computing at CPE Lyon.**  
I've been particularly involved in the development of a new specialization at CPE Lyon (equivalent Master 1 and Master 2 level). This Image, Modeling & Computing (IMI) program replaced the previous specialization in "Image & Algorithm". It gave a greater emphasis to computer science and software development, digital analysis and computer graphics (image synthesis). My role has been to propose and describe the program contents, find the teacher of the classes, manage the class for which I am responsible, and handle the presentation of the program to the students. The number of students choosing the IMI specialization has risen from around ten a year to over 30. The IMI is still in place at CPE Lyon today.
- 2013 **Automatized correction and feedback tool for large CS class.**  
Along with the creation of a new class dedicated to "Software Development in C" at CPE Lyon that I handled between 2013 and 2015, I have been developing and setting up a series of Python and Bash scripts to automatize the tasks to check and grade student code. Each student was able to receive a personalized feedback email describing the success and failure of his code. This allowed fast, regular feedback, plagiarism detection, and precise grading for 130 students every week.

---

## Software

---

### Main developer for general tools

*I am regularly invested in the development of various tools to automatize tasks. In some cases, I try to provide a clean open-source solution that can be beneficial to the general community.*

2019 - **CGP - Computer Graphics Programming Library.**

I develop since 2019 the CGP (Computer Graphics Programming) library as an open-source code framework to help teaching and research in Graphics. CGP provides an "as simple as possible" low level multi-platform, set of functions and classes in C++ to generate 3D scene using OpenGL while remaining easy to use, read, and debug.

- Link: <https://imagecomputing.net/cgp/>
- Github repository: <https://github.com/drohmer/cgp>

2021 - **LHTML - Lightweight HTML.**

I develop a parser for a custom description language called "lightweight HTML" that I use to quickly describe webpage for both slides and website. LHTML is inspired from markdown, but provides additional functionalities to integrate full and quick CSS control.

- Github repository: <https://github.com/drohmer/lhtml>

2021 - **Static Website LHTML Generator.**

I propose a static website generator tool written in Python and relying upon the Jinja template language and compatible with the LHTML description language. The static website generator adds functionality to generate slides and webpage with automatic menus and navigation tools.

- Github repository: [https://github.com/drohmer/static\\_website\\_lhtml](https://github.com/drohmer/static_website_lhtml)

2023 - **HAL webpage generator.**

I propose a tool extracting and formatting HAL data on publication. Compared to the default tool provided by HAL, I added specific functionalities useful in Graphics with: Video thumbnails, awards, Coupled conference and journal publication, code link, video/presentation/project page links. The tool can work as a single Javascript script, and can be linked to additional local modifier described in YAML.

- Github repository: [https://github.com/drohmer/publication\\_listing\\_hal](https://github.com/drohmer/publication_listing_hal)
- Example of result: <https://www.lix.polytechnique.fr/vista/publications/index.html>

2015 - **AFIG - Job listing.**

I developed an online PHP tool allowing the community to post and see job openings. It is currently used within the AFIG community, and helpful for students looking for internship, PhD, or engineering positions.

- Job Listing: <https://www.asso-afig.fr/site/offres/>

2015 - **AFIG - Company listing.**

I developed a online tool relying on YAML and github task automatization to allow easy listing for CG companies (as well as master and online courses).

- Company listing: <https://www.asso-afig.fr/site/entreprises/>
- Github: <https://github.com/Afig-Asso/entreprises>
- Master listing: <https://github.com/Afig-Asso/formations-graphique>
- Online CG courses listing: <https://github.com/Afig-Asso/cours-online>

---

## Open-source research codes

*When possible, I try to provide and encourage my student to provide their research code as open-source. The following listing gives some code related to the projects I have been supervising. Note that in most of the cases, the PhD students are the main developer of these codes, not me.*

- 2020-2024 **Velocity Skinning**, *Damien Rohmer*, EG, C++, JavaScript.  
I developed multiple open-source code and demonstrators for the Velocity/Dynamic Skinning project. The Eurographics paper was associated with the replicability Stamp.  
◦ *Velocity Skinning Webpage*: <https://velocityskinning.com/>
- 2023 **Robust Pointset Denoising via Line Processes**, *Jiayi Wei*, Eurographics, C++.  
<https://github.com/kwwei/line-process-pointset-denoising>
- 2022 **Real-Time Locomotion on Soft Grounds With Dynamic Footprints**, *Eduardo Alvarado*, Frontiers, Unity.  
<https://github.com/edualvarado/unity-footprints>
- 2021 **Acceleration Skinning**, *Niranjan Kalyanasudaram*, GI, C++.  
[github.com/nkmultimedia/acceleration-skinning](https://github.com/nkmultimedia/acceleration-skinning)
- 2021 **Volcanic plume**, *Maud Lastic*, I3D, C++.  
<https://gitlab.com/mlastic/volcanicplume>
- 2019 **Dendry: A Procedural Model for Dendritic Patterns**, *Mathieu Gaillard*, I3D, C++.  
<https://github.com/mgaillard/Noise>
- 2019 **Implicit Untangling : A Robust Method for Modeling Layered Clothing**, *Thomas Buffet*, SIGGRAPH, C++.  
<https://gitlab.com/TBuffet/implicit-untangling>
- 2019 **NEM - Nested Explorative Maps**, *Pauline Olivier*, SMI, JavaScript.  
Link to NEM demonstrator
- 2018 **Neural-Meta-Tracts - Fiber Reductor**, *Corentin Mercier*, VCBM, C++.  
<https://github.com/CorentinMercier/neural-meta-tracts>
- 2015 **Replaceable Substructures for Efficient Part-Based Modeling**, *Han Liu, Ulysse Vimont*, Eurographics, C++, Blender.  
Code ZIP

---

## Faculty administration and management

---

### Main administrative responsibility

- 2023 - **Vice-President DIX.**  
Vice-President of the Department of Informatics. In charge of teaching.
- 2019 - **Head of VISTA.**  
In charge of the research team VISTA at LIX.



---

## Working groups

- 2020 - **Conseil de Laboratoire LIX**, *Member*.  
General discussion and evolution of the lab.
- 2020 - **Comission Informatique LIX**, *Member*.  
Problems related to IT resources at the lab.
- 2020 - **Comission Web LIX**, *Member*.  
Evolution of the lab website.

---

## Involvement in Scientific Community and Associations

---

### Administration and steering committee

- 2023 - **MIG**, *Chair of Steering Committee*.  
Permanent chair of the steering committee for the Motion, Interaction and Games annual conference, with the sponsor of ACM SIGGRAPH/Eurographics.
- 2015 - **AFIG**, *Steering Committee Member*.  
Association Francaise d'Informatique Graphique.  
In charge of website, communication, jobs and company listings.
- 2021 - **AFIG-teaching**, *Member*.  
Working group about teaching aspects in CG at the National level.

---

### Award Jury

- 2024 - **EGFR Best Thesis**, *Jury Member*.  
Member of the jury for the Best thesis award of EGFR in association with the GDR IG-RV.
- 2020-2024 **EGFR Young Research Fellow**, *Jury Member*.  
Young Research Fellow committee member for GDR IGRV and EGFR (Eurographics France)
- 2022 **Eurographics Best Paper**, *Jury Member*.
- 2012-2019 **EGFR/AFIG Best Paper**, *Jury Member*.  
Reviewer and member of the committee to select the best paper for the AFIG annual conference.

---

## Conferences

---

### International conference chair

- 2023 **IMET**, *Program Chair*, Barcelona.
- 2021 **MIG**, *Program Chair*, Lausanne.
- 2018 **SCA**, *General Chair*, Paris.

---

### National conference organization

- 2019 **GTMG**, *Co-Organizer*, Paris.
- 2015 **JIG**, *Co-Organizer*, Marnes la vallée.
- 2011 **GTMG**, *Co-Organizer*, Grenoble.

---

## International Program Committee Member

### **Eurographics.**

- *Full papers*: 2021, 2022
- *Short papers*: 2014, 2015, 2021
- *Doctoral consortium*: 2021

### **SIGGRAPH.**

- *General submission*: 2020, 2022

### **SIGGRAPH Asia.**

- *Technical Brief and Posters*: 2013, 2014, 2015, 2018
- *Course*: 2021, 2022

### **SCA, Symposium on Computer Animation.**

2019, 2020, 2021, 2022, 2024

### **MIG, Motion, Interaction and Games.**

2020, 2022, 2023

### **Pacific Graphics.**

2023

### **SMI, Shape Modeling International.**

2021

*SMI-FASE (Fabrication and Sculpting Event)*: 2016, 2017, 2018, 2019

### **SPM, Solid and Physical Modeling.**

2016, 2017

### **CASA, Computer Animation and Social Agents.**

2023

### **IMET, Interactive Media, Smart Systems and Emerging Technologies.**

2022

---

## Review

I am a regular reviewer for the conference mentioned previously when not in their IPC. In addition, I am a regular reviewer for the following journals: ACM TOG, CGF, IEEE TVCG, CG&A.

---

## Invited Talk

- 2023 **LIX Seminar**, *Talk*, Real-Time Expressive Dynamic Animation for Skeleton Based Character.
- 2023 **Inria Sophia Antipolis Workshop**, *Talk*, Real-Time Expressive Dynamic Animation for Skeleton Based Character.
- 2022 **AFIG, Bordeaux**, *Short Talk*, CGP library for teaching Graphics. Intervention in the round-table at the journées d'informatique graphique.
- 2022 **GTAS, Vannes**, *Short Talk*, CGP library for teaching Graphics.
- 2022 **Roblox visit, Paris**, *Short Talk*, Research in Video Games.

- 2022 **Ubisoft, workshop chair ScienceXGames, Paris**, *Short Talk*, Research in Video Games.
- 2021 **Clemson University, School of Computing Events**, *Talk*, Velocity Skinning.
- 2019 **CLIFE Summer School**, *Talk*, Expressive character animation.
- 2017 **SIAM-GD**, *Keynote*, Efficient Developable Surface Modeling: From Garment Design to Paper Animation.
- 2016 **R3iLAB**, *Talk*, Virtual Garment Design.

---

## Dissemination to the general public

---

### General presentation

- 2023 **Table ronde CNAM**, *Paris*, Les Mathématiques des jeux & jeux vidéo.
- 2022 **Presentation ENS Paris Saclay**, Recherche en informatique graphique.
- 2019 **Presentation Semaine des Maths**, *Annonay*, Créer et interagir avec les mondes virtuels 3D.
- 2018 **Presentation Fête de la science**, *Annonay*, Les mondes virtuels 3D.
- 2016 **Presentation Maison des Mathématiques et de l'Informatique**, *Lyon*, Production d'images scientifiques.
- 2016 **Presentation ENS Lyon**, Recherche en informatique graphique.
- 2014 **Article in diffusion journal Quadrature**.
- 2008-2009 **Journal Universitaire Vision Croisées**.  
Member of the editorial committee

---

### Specific topics

- 2022-2023 **Generative AI impacts**.  
I have been interviewed to discuss about the impact on Generative AI on the society.
  - **2023, Science & Vie** Le bouleversement ChatGPT : quels impacts sur le monde réel ?
  - **2022, France Culture** Quel sera l'impact de Dall-E sur les métiers de la création d'images?

## 2012-2020 **Flat Torus, Hevea project.**

I have been involved in the Hevea project (<https://hevea-project.fr/>) regarding the first generation of the Flat Torus, and in the subsequent article about the reduced sphere. This led to wide coverage from scientific and general public press that have been illustrated by the images I generated.

- Major covers:
  - **Cover of the Proceedings of the National Academy of Sciences** PNAS, 109(19) 2012.
  - **Movie Documentary "Ils ont eu raison du tore" - 52 min** Geoffroy & Dominique Garing, 2020.
- In press:
  - **Pour la Science**, Les fractales lisses, un nouvel objet mathématique, n. 245, 2013.
  - **La Recherche**, Les 10 plus belles découvertes de l'année, n. 471, 2013.
  - **La Recherche**, Le tore plat carré visualisé grâce à l'informatique, n. 467, 2012.
  - **Science et Vie**, Le tore plat n'a plus de secret, n. 1138, 2012.
  - **CNRS Le Journal**, Une beauté fractale en 3D, n. 267, 2012.
- Covered during special events:
  - Presentation for the **Prix Abel** decerned to **John Nash**, 2015.
  - Displayed on the large corridor in **Station Montparnass metro**, from January to march 2014.
  - **Fête de la science** in Paris and Lyon, 2013.

---

## Recruitment committee (COS)

- 2024 **Université de Bordeaux**, *MdC en informatique graphique*, Membre.
- 2024 **École polytechnique**, *Professeur et professeur assistant temps incomplet*, Président.
- 2024 **École polytechnique**, *Professeur et professeur assistant en cybersécurité*, Membre.
- 2024 **ENSTA**, *Professeur et professeur assistant*, Membre.
- 2023 **École polytechnique**, *Professeur et professeur assistant temps incomplet*, Président.
- 2023 **Paris 8**, *MdC en informatique graphique*, Membre.
- 2022 **École polytechnique**, *Professeur et professeur assistant temps incomplet*, Membre.
- 2021 **École polytechnique**, *Professeur et professeur assistant temps incomplet*, Membre.
- 2020 **École polytechnique**, *Professeur assistant en IA*, Membre.
- 2019 **École polytechnique**, *Professeur en Cybersécurité*, Membre.

---

## PhD Jury committee

- 2024 **Olivier Pradelle**, *Université de Lyon*, Président.
- 2023 **Lucas Mourot**, *Université de Rennes 1*, Rapporteur.
- 2023 **Tong Zhao**, *Université Cote d'Azur*, Rapporteur.
- 2023 **Emilie Yu**, *Université Cote d'Azur*, Rapporteur.
- 2023 **Clément Lemeunier**, *Université de Lyon*, Rapporteur.
- 2022 **Elie Michel**, *Institut Polytechnique de Paris*, Examineur.
- 2022 **Adèle Colas**, *Université de Rennes 1*, Rapporteur.
- 2021 **Raphael Charrodière**, *Université Grenoble Alpes*, Examineur.

- 2021 **Eloise Berson**, *Université Bretagne Loire*, Rapporteur.  
 2021 **Camille Brunel**, *Université de Bordeaux*, Rapporteur.  
 2020 **Xiyao Wang**, *Université Paris Saclay*, Président.  
 2019 **Clément Reverdy**, *Université Bretagne Sud*, Président.  
 2018 **Valentin Roussellet**, *Université Paul Sabatier, Toulouse*, Rapporteur.

## Bibliography - Peer-Reviewed International Journal & Conferences

- [1] Cilliers Pretorius, James Gain, Maud Lastic, Guillaume Cordonnier, Jiong Chen, Damien Rohmer, Marie-Paule Cani. Volcanic Skies: coupling explosive eruptions with atmospheric simulation to create consistent skylscapes. **Eurographics, Computer Graphics Forum**, 2024.
- [2] Auguste de Lambilly, Gabriel Benedetti, Nour Rizk, Chen Hanqi, Siyuan Huang, Junnan Qiu, David Louapre, Raphael Granier de Cassagnac, Damien Rohmer. Heat Simulation on Meshless Crafted-Made Shapes. **MIG**, 2023.
- [3] Xianjin Gong, Amal Dev Parakkat, Damien Rohmer. Collision Free Simplification for 2D Multi-Layered Shapes. **IMET**, 2023.
- [4] Jiayi Wei, Jiong Chen, Damien Rohmer, Pooran Memari, Mathieu Desbrun. Robust Pointset Denoising of Piecewise-Smooth Surfaces through Line Processes. **Eurographics, Computer Graphics Forum**, 2023.
- [5] David-Henri Garnier, Martin-Pierre Schmidt, Damien Rohmer. Growth of oriented orthotropic structures with reaction/diffusion. **Structural and Multidisciplinary Optimization**, 2022.
- [6] Eduardo Alvarado, Damien Rohmer, Marie-Paule Cani. Generating Upper-Body Motion for Real-Time Characters Making their Way through Dynamic Environments. **SCA, Computer Graphics Forum**, 2022.
- [7] Weijie Tao, Damien Rohmer, Grant T Gullberg, Youngho Seo, Qiu Huang. An Analytical Algorithm for Tensor Tomography from Projections Acquired about Three Axes. **IEEE Transactions on Medical Imaging**, 2022.
- [8] Niranjana Kalyanasundaram, Damien Rohmer, Victor Zordan. Acceleration Skinning: Kinematics-Driven Cartoon Effects for Articulated Characters. **Graphics Interface**, 2022.
- [9] Maud Lastic, Damien Rohmer, Guillaume Cordonnier, Claude Jaupart, Fabrice Neyret, Marie-Paule Cani. Interactive simulation of plume and pyroclastic volcanic ejections. **I3D, PACM-CGIT**, 2022.
- [10] Eduardo Alvarado, Chloé Paliard, Damien Rohmer, Marie-Paule Cani. Real-Time Locomotion on Soft Grounds With Dynamic Footprints. **Frontiers in Virtual Reality**, 2022.
- [11] Amélie Fondevilla, Damien Rohmer, Stefanie Hahmann, Adrien Bousseau, Marie-Paule Cani. Fashion Transfer: Dressing 3D Characters from Stylized Fashion Sketches. **Computer Graphics Forum**, 2021.
- [12] Damien Rohmer, Marco Tarini, Niranjana Kalyanasundaram, Faezeh Moshfeghifar, Marie-Paule Cani, Victor Zordan. Velocity Skinning for Real-time Stylized Skeletal Animation. **Eurographics, Computer Graphics Forum**, 2021.
- [13] Adrien Nivaggioli, Damien Rohmer. Animation Synthesis Triggered by Vocal Mimics. **MIG**, 2019.

- [14] Pauline Olivier, Renaud Chabrier, Damien Rohmer, Eric de Thoisy, Marie-Paule Cani. Nested Explorative Maps: A new 3D canvas for conceptual design in architecture. **SMI, Computer and Graphics**, 2019.
- [15] Mathieu Gaillard, Bedrich Benes, Eric Guérin, Eric Galin, Damien Rohmer, Marie-Paule Cani. Dendry: A Procedural Model for Dendritic Patterns. **I3D**, 2019.
- [16] Thomas Buffet, Damien Rohmer, Loic Barthe, Laurence Boissieux, Marie-Paule Cani. Implicit Untangling: A Robust Solution for Modeling Layered Clothing. **ACM SIGGRAPH, Transactions on Graphics**, 2019.
- [17] Corentin Mercier, Pietro Gori, D. Rohmer, Marie-Paule Cani, T Boubekeur, Jean-Marc Thiery, Isabelle Bloch. Progressive and Efficient Multi-Resolution Representations for Brain Tractograms. **VCBM**, 2018.
- [18] Evangelis Bartzos, Vincent Borrelli, Roland Denis, Francis Lazarus, Damien Rohmer, Boris Thibert. An Explicit Isometric Reduction of the Unit Sphere into an Arbitrarily Small Ball. **Foundations of Computational Mathematics**, 2018.
- [19] Camille Schreck, Damien Rohmer, Stefanie Hahmann. Interactive paper tearing. **Computer Graphics Forum**, 2017.
- [20] Amélie Fondevilla, Adrien Bousseau, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Patterns from Photograph: Reverse-Engineering Developable Products. **Computer and Graphics**, 2017.
- [21] Ulysse Vimont, Damien Rohmer, Antoine Begault, Marie-Paule Cani. Deformation Grammars: Hierarchical Constraint Preservation Under Deformation. **Computer Graphics Forum**, 2017.
- [22] Pierre-Luc Manteaux, Ulysse Vimont, Chris Wojtan, Damien Rohmer, Marie-Paule Cani. Space-time sculpting of liquid animation. **MIG**, 2016.
- [23] Camille Schreck, Damien Rohmer, Doug L James, Stefanie Hahmann, Marie-Paule Cani. Real-time sound synthesis for paper material based on geometric analysis. **SCA**, 2016.
- [24] Camille Schreck, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani, Shuo Jin, Charlie C.L. Wang, Jean-François Bloch. Non-smooth developable geometry for interactively animating paper crumpling. **ACM Transactions on Graphics**, 2015.
- [25] Pierre-Yves Rabattu, Benoit Massé, Federico Ulliana, Marie-Christine Rousset, Damien Rohmer, Jean-Claude Léon, Olivier Palombi. My Corporis Fabrica Embryo: An ontology-based 3D spatio-temporal modeling of human embryo development. **Journal of Biomedical Semantics**, 2015.
- [26] Han Liu, Ulysse Vimont, Michael Wand, Marie-Paule Cani, Stefanie Hahmann, Damien Rohmer, Niloy J. Mitra. Replaceable Substructures for Efficient Part-Based Modeling. **Computer Graphics Forum**, 2015.
- [27] Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Real-Time Continuous Self-Replicating Details for Shape Deformation. **Computer and Graphics**, 2015.
- [28] Amaury Jung, Stefanie Hahmann, Damien Rohmer, Antoine Begault, Laurence Boissieux, Marie-Paule Cani. Sketching Folds: Developable Surfaces from Non-Planar Silhouettes. **ACM Transactions on Graphics**, 2015.

- [29] Rodolphe Vaillant, Loic Barthe, Gael Guennebaud, Marie-Paule Cani, Damien Rohmer, Brian Wyvill, Olivier Gourmel, Mathias Paulin. Implicit Skinning: Real-Time Skin Deformation with Contact Modeling. **ACM SIGGRAPH, Transactions on Graphics**, 2013.
- [30] Archontis Giannakidis, Damien Rohmer, Alexander I. Veress, Grant T. Gullberg. Diffusion Tensor Magnetic Resonance Imaging-Derived Myocardial Fiber Disarray in Hypertensive Left Ventricular Hypertrophy: Visualization, Quantification and the Effect on Mechanical Function. **Book Chapter in Cardiac Mapping**, 2012.
- [31] Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Active Geometry for Game Characters. **MIG**, 2010.
- [32] Damien Rohmer, Tiberiu Popa, Marie-Paule Cani, Stefanie Hahmann, Sheffer Alla. Animation Wrinkling: Augmenting Coarse Cloth Simulations with Realistic-Looking Wrinkles. **ACM SIGGRAPH Asia, Transactions on Graphics**, 2010.
- [33] Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Exact volume preserving skinning with shape control. **SCA**, 2009.
- [34] Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Local volume preservation for skinned characters. **Pacific Graphics, Computer Graphics Forum**, 2008.
- [35] Damien Rohmer, Arkadiusz Sitek, Grant T Gullberg. Reconstruction and visualization of fiber and laminar structure in the normal human heart from ex vivo diffusion tensor magnetic resonance imaging (DTMRI) data. **Investigative Radiology**, 2007.
- [36] Damien Rohmer, Eisner Robert L., Grant T Gullberg. The effect of truncation on very small cardiac SPECT camerasystems. **Journal of Nuclear Medicine**, 2006.

## — Bibliography - Others: Short paper, posters, local journals and conferences

- [37] Arnaud Gueze, Matthieu Ospici, Damien Rohmer, Marie-Paule Cani. Floor Plan Reconstruction from Sparse Views: Combining Graph Neural Network with Constrained Diffusion. **ICCV Workshop on Computer Vision Aided Architectural Design**, 2023.
- [38] Ekaterina Borisova, David-Henri Garnier, Damien Rohmer. Interactive modeling of anisotropic bio-inspired shape. **GTMG**, 2023.
- [39] David-Henri Garnier, Martin-Pierre Schmidt, Damien Rohmer. Growing Optimized Anisotropic Microstructures with Reaction/Diffusion. **AFIG**, 2021.
- [40] Chloé Paliard, Eduardo Alvarado, Damien Rohmer, Marie-Paule Cani. Soft Walks: Real-Time, Two-Ways Interaction between a Character and Loose Grounds. **Eurographics Short Paper**, 2021.
- [41] Thomas Buffet, Damien Rohmer, Marie-Paule Cani. Une approche implicite pour la modélisation de couches de vêtements. **GTMG**, 2018.
- [42] Thomas Buffet, Damien Rohmer, Marie-Paule Cani. Untangling Layered Garments: An Implicit Approach. **SCA Poster**, 2018.
- [43] Amélie Fondévilla, Adrien Bousseau, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Towards developable products from a sketch. **EUROGRAPHICS Poster Proceedings**, 2017.

- [44] Mickaël Ly, Florence Bertails-Descoubes, Damien Rohmer. Unilaterally Incompressible Skinning. **Technical Report**, 2017.
- [45] Amélie Fondevilla, Adrien Bousseau, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Modeling Symmetric Developable Surfaces from a Single Photo. **AFIG**, 2016.
- [46] Camille Schreck, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Interactively animating crumpling paper. **womEncourage**, 2015.
- [47] Camille Schreck, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Synthèse de son de papier adaptée au mouvement et à la géométrie de la surface. **AFIG**, 2015.
- [48] Ulysse Vimont, Damien Rohmer, Marie-Paule Cani. Déformation d'objet complexe par graphe d'interaction. **GTMG**, 2015.
- [49] Camille Schreck, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Animation interactive de papier froissé. **GTMG**, 2015.
- [50] Damien Rohmer. Les surfaces gagnent du volume. **Quadrature**, 2014.
- [51] Nicole Cogo, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Duplication de détails pour la déformation de surfaces. **GTMG**, 2013.
- [52] Rodolphe Vaillant, Loic Barthe, Gael Guennebaud, Marie-Paule Cani, Damien Rohmer, Brian Wyvill. Déformation de la peau d'un personnage avec prise en compte des contacts. **REFIG**, 2012.
- [53] Archontis Giannakidis, Damien Rohmer, Alexander I. Veress, Grant T. Gullberg. Diffusion Tensor Magnetic Resonance Imaging-Derived Myocardial Fiber Disarray in Hypertensive Left Ventricular Hypertrophy: Visualization, Quantification and the Effect on Mechanical Function. **Book Chapter in Cardiac Mapping**, 2012.
- [54] Damien Rohmer, Marie-Paule Cani, Stefanie Hahmann, Boris Thibert. Folded Paper Geometry from 2D Pattern and 3D Contour. **Eurographics Short Paper**, 2011.
- [55] Damien Rohmer, Marie-Paule Cani, Stefanie Hahmann. Animation rapide de personnages et animaux : Skinning à volume constant, ajouts de plis pour la simulation de vêtements. **GTAS**, 2010.
- [56] Damien Rohmer, Marie-Paule Cani, Stefanie Hahmann, Boris Thibert. Génération de surfaces isométriques à un patron par découpage récursif. **GTMG**, 2010.
- [57] Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani. Déformation interactive par skinning à volume constant. **GTMG**, 2008.
- [58] Damien Rohmer, Grant T. Gullberg. A Bloch-Torrey Equation for Diffusion in a Deforming Media. **Technical Report LBNL**, 2006.
- [59] Damien Rohmer, Arkadiusz Sitek, Grant T Gullberg.. Simulation of the Beating Heart Based on Physically Modeling a Deformable Balloon. **Technical Report LBNL**, 2006.
- [60] Damien Rohmer, Arkadiusz Sitek, Grant T Gullberg.. Reconstruction and Visualization of Fiber and Sheet Structure with Regularized Tensor Diffusion MRI in the Human Heart. **Technical Report LBNL**, 2006.