

Research evaluation

## FINAL SUMMARY OF THE EVALUATION ON THE RESEARCH UNIT: Laboratoire Jean Kuntzmann (LJK)

# UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Centre National de la Recherche Scientifique -CNRS

Université Grenoble Alpes - UGA Institut polytechnique de Grenoble - Grenoble INP

## EVALUATION CAMPAIGN 2019-2020 GROUP A

Report published on March, 10 2020



In the name of Hcéres<sup>1</sup>:

Nelly Dupin, acting President In the name of the experts committee<sup>2</sup>: Serge Nicaise, Chairman of the committee

Under the decree No.2014-1365 dated 14 November 2014,

<sup>1</sup> The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

<sup>2</sup>The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).



Tables in this document were filled with data submitted by the supervising body on behalf of the unit.

### **UNIT PRESENTATION**

Unit name:	Laboratoire Jean Kuntzmann
Unit acronym:	LJK
Current label and N°:	UMR 5224
ID RNSR:	200711891Z
Application type:	Renewal
Head of the unit (2019-2020):	Mr Stéphane Labbé
Project leader (2021-2025):	Mr Jean-Guillaume Dumas
Number of teams and/or themes:	18 teams

### **EXPERTS COMMITTEE MEMBERS**

Chair:	Mr Serge Nicaise, Université Polytechnique Hauts-de-France, Valenciennes
Experts:	Mr Roland Becker, Université de Pau et des Pays de l'Adour, Pau
	Ms Julie DELON, Université Paris-Descartes, Paris (representative of CoNRS)
	Mr Jean-Francois Dupuy, INSA Rennes, Rennes (representative of CNU)
	Mr Yann Gousseau, Télécom ParisTech, Paris
	Mr Mihai Gradinaru, Université Rennes 1, Rennes
	Mr Mounir Haddou, INSA Rennes, Rennes
	M. Victor Ostromoukhov, Université Claude Bernard Lyon 1, Lyon
	Mr Guénaël Renault, École Polytechnique, Palaiseau
	Ms Lucia Romanı, University of Bologna, Italy
	Ms Delphine Scнміп, CNRS, Strasbourg

# **HCÉRES REPRESENTATIVE**

Mr Marc QUINCAMPOIX



### **REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES**

Ms Isabelle DHE, CNRS DR 11 Mr Frédéric DUFOUR, Grenoble INP Ms Catherine MATIAS, CNRS INSMI Mr Eric SAINT AMAN, Université Grenoble Alpes



## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Laboratoire Jean Kuntzmann (LJK) was founded in 2007 and is the merge of three former laboratories: LMC (Laboratoire de Modélisation et Calcul), LABSAD (Laboratoire de Statistique et Analyse des Données) and GRAVIR (Laboratoire d'informatique graphique, vision et robotique). It is a CNRS unit (UMR 5224) affiliated to UGA, GRENOBLE INP, CNRS and Inria. It is currently organized in three departments (AMAC, DATA, GI) which gather 18 research teams. 11 of them are EPCs (Equipe Projet Commune with Inria, i.e., common research teams with Inria): one in DATA, five in GI and five in AMAC. The laboratory is dispatched up into three locations which are geographically distant ones the others: seven teams in Saint-Martin d'Hères, nine teams in Montbonnot and one team in Minatech complex in Grenoble. The LJK is part of the MSTIC Pôle (MSTIC: Mathematics, Sciences and Technology of Information and Communication), which brings together several research entities. It has also specific collaborations with the laboratories and institutes of the region, in particular with the Institut Fourier.

#### MANAGEMENT TEAM

The current head of the Laboratory is Stéphane Labbé, the deputy heads are Eric Blayo and Valérie Perrier. The expected head for the next contract is Jean-Guillaume Dumas.

### HCÉRES NOMENCLATURE

ST1 – Mathématiques.

#### THEMATICS

The laboratory is specialized in research in applied mathematics and computer science. LJK gathers 18 research teams: seven in AMAC (Algorithmes, Modèles, Analyse et Calcul, oriented both CNU sections 26 and 27), five in DATA (Données et Aléatoire, Théorie et Applications, mostly oriented CNU section 26) and six in GI (Géométrie et Images, oriented CNU section 27 and also 26).

AMAC's research activity focuses on Analysis, Numerical Analysis, Scientific Computing, High Performance Computing, Modelling, Symbolic Computing, Cryptology, Inverse Problems.

DATA's research activity focuses on Statistics, Applied Probability, Machine learning, Signal and Image Processing, Data Mining, Optimization.

GI's research activity focuses on Computer Graphics, Rendering, Visualization, Image Processing, Machine Learning, Applied Geometry.

Researchers from LJK are also involved in interdisciplinary projects with applications in glaciology, seismology, biology (AMAC), genetics (DATA) as well as physics and biomechanics (GI).

#### UNIT WORKFORCE

Laboratoire Jean Kuntzmann (LJK)		
Active staff	Number 06/30/2019	Number 01/01/2021
Full professors and similar positions	24	23
Assistant professors and similar positions	42	40
Full time research directors (Directeurs de recherche) and similar positions	14	14
Full time research associates (Chargés de recherche) and similar positions	28	28



Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	
High school teachers	1	1
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	24	23
Permanent staff	133	129
Non-permanent professors and associate professors, including emeritus	8	NA
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	19	NA
PhD Students	109	NA
Non-permanent supporting personnel	7	NA
Non-permanent staff	143	NA
Total	276	129

## **GLOBAL ASSESSMENT OF THE UNIT**

The LJK is a highly qualified research unit which gathers internationally recognized researchers in its various areas of activity. The remarkable reputation of LJK is testified by many distinctions and prizes, many national and international grants (ERC, ANR, ...), participations of its members in editorial boards and numerous national and international collaborations. The average production of publications and software packages is excellent, both in quality and in quantity. The unit has an exceptional level of interactions between applied mathematics and computer science, and is involved in many fruitful multidisciplinary activities. The committee wants to stress the outstanding and numerous industrial collaborations and the beneficial interactions between academia and industry.

The unit has a strong regional anchorage in its environment due to several collaborations with local research units, and is one of the major actors at national level in the majority of fields developed by its members. LJK also benefits from the support of the Labex Persyval and the Idex Université Grenoble-Alpes to develop its scientific programs. Hosting MaiMoSiNE (Maison de la modélisation et de la simulation, Nanosciences et Environnement, the university structure which promotes multidisciplinary partnership research between academic teams and industry, in the field of modelling and numerical simulation) and AMIES (Agence pour les Mathématiques en Interaction avec l'Entreprise et la Société) is an additional asset.

The present governance of LJK is efficient and the social atmosphere is nice and fruitful. The organization of LJK in three departments is clearer and better justified than in the previous evaluation. Nevertheless, the scientific coherence of AMAC department has still to be consolidated.

LJK members have a strong implication in the development of the local higher education. In particular, due to the small number of Professors and the large number of training offers, Maîtres de Conférences take on many academic responsibilities: study directions, student supervision, development of educational innovations, etc. All this significantly increases their administrative duties and thus weakens their research activity. The committee emphasizes this critical situation which, if it continues to progress in this way, could become highly problematic.

LJK is situated in a rich scientific environment and the creation of the new university (Université Grenoble-Alpes), unifying present institutions, and the Multidisciplinary Institute in Artificial Intelligence (MIAI) will hopefully offer new opportunities.

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