

# BIWEEKLY REPORT



## Applicant analysis: Regional differences in China



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# Index

Introduction	3
Part I: North China	4
Part II: Northeast China	7
Part III: East China	10
Part IV: Central China	13
Part V: South China	16
Part VI: Southwest China	19
Part VII: Northwest China	22
Conclusion	25

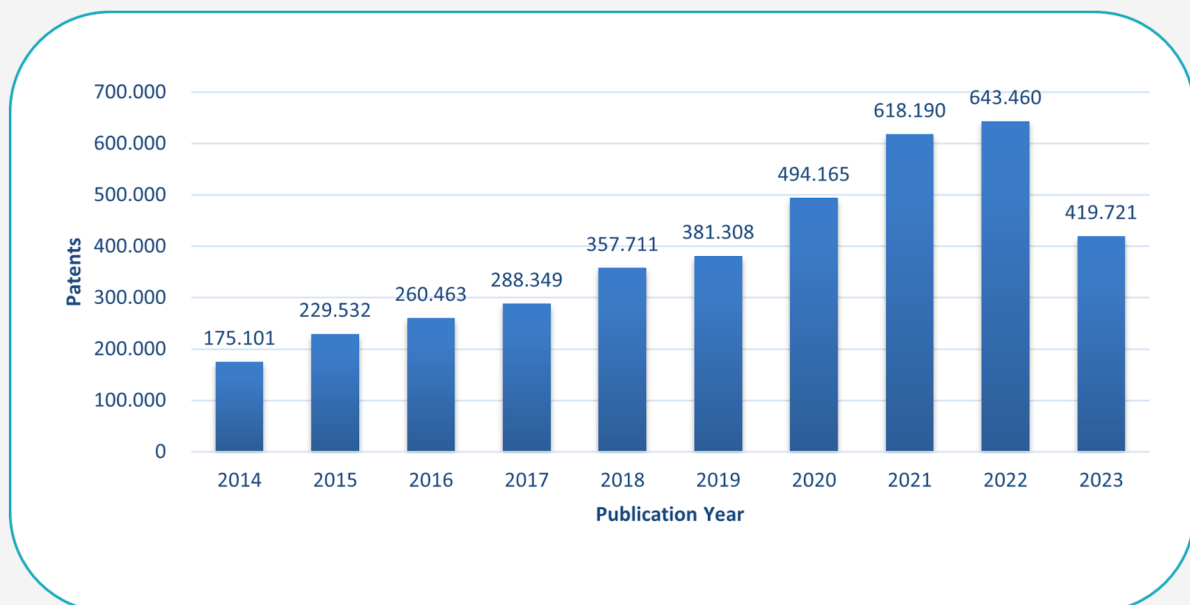
# Introduction

In a previous report, we analyzed the patent development in different provinces of China (please refer to: [Regional analysis Province developments China](#)) and found significant differences between different provinces. Based on the previous report, this report conducts an analysis of applicants from different regions in China by major administrative regions (Data as of August 25, 2023).



# Part 1: General information

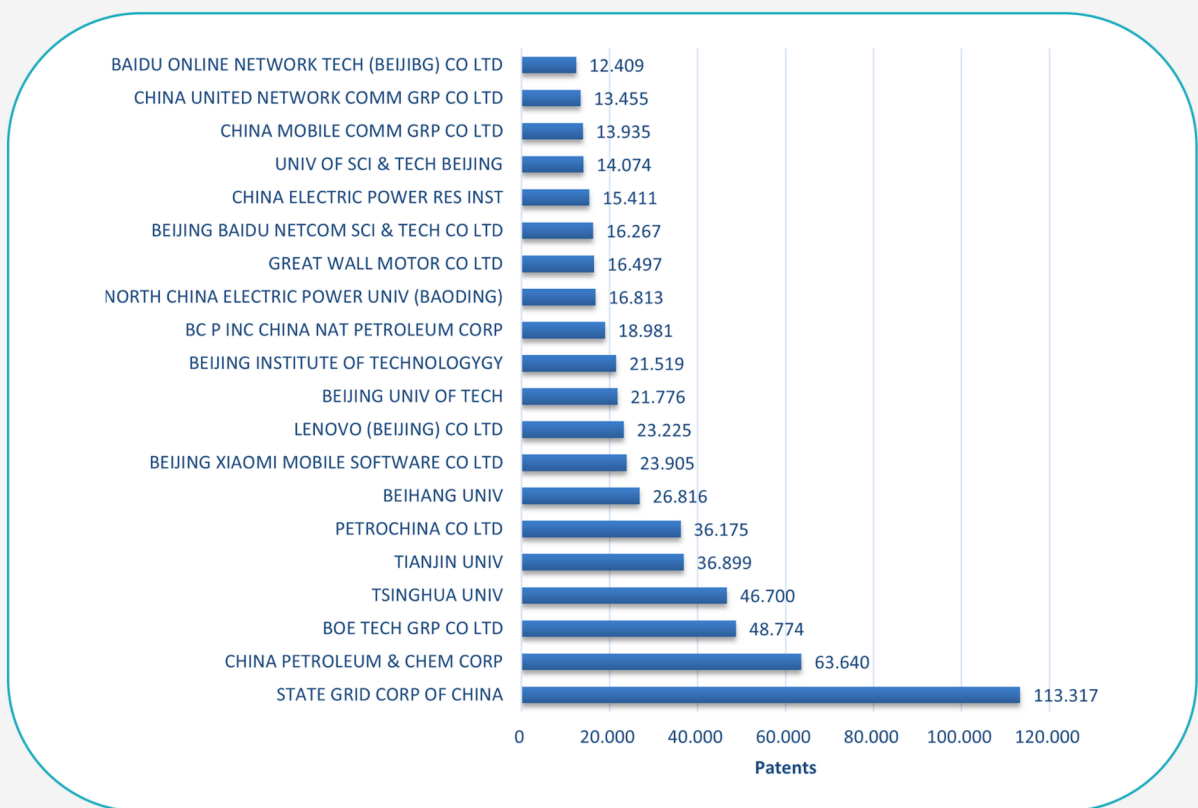
The North China region includes Beijing, Tianjin, Hebei province, and Shaanxi province. Over the past decade, the volume of patent applications in the region has maintained an upward trend, as shown in [Figure 1](#).



**Figure 1 Patent publication trend of North China**



According to statistics, the top 20 applicants in North China ranked in terms of application volume, including 7 universities and 13 companies, as shown in [Figure 2](#). It can be seen that State Grid (the world's largest electric utility company) has the highest volume of patent applications, reaching 113,317.



**Figure 2 The top 10 standardized current assignees of North China**

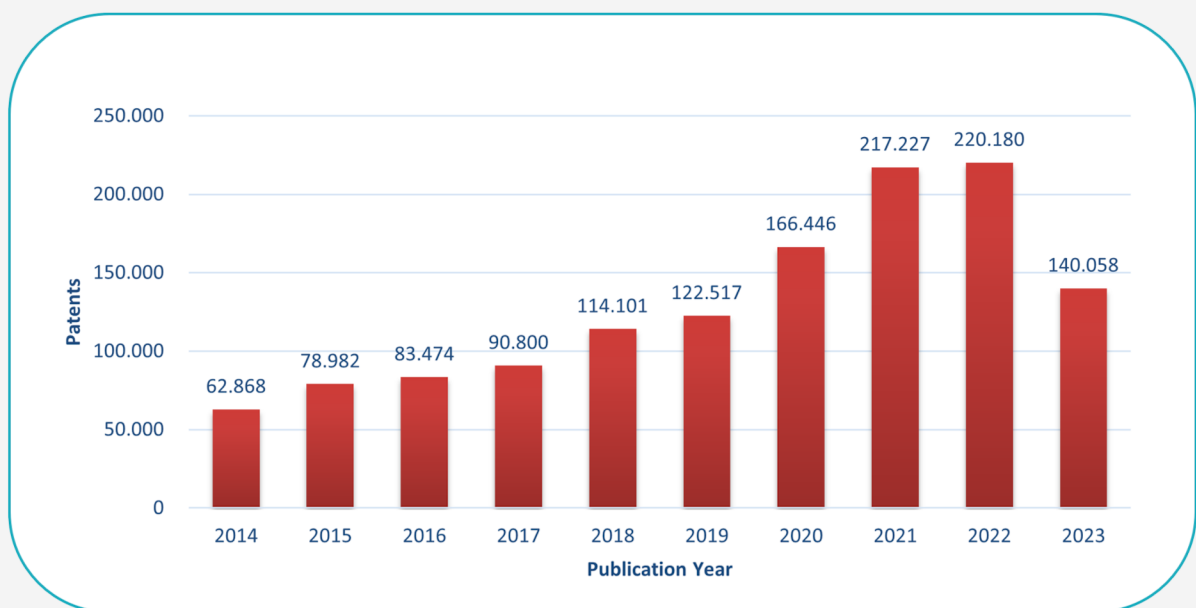
According to the IPC classification number, the technical fields of the patents of the main applicants in North China were statistically analyzed, and the results are shown in [Figure 3](#). It can be seen that the number of patents related to the processing of electronic digital data (G06F) is the highest.

G06F  ELECTRIC DIGITAL DATA PROCESSING, 72046,0	E21B  EARTH OR ROCK DRILLING; OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS, 29609,0	G01R  MEASURING ELECTRIC VARIABLES; MEASURING MAGNETIC VARIABLES, 23124,0	G06Q  INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] SPECIALLY ADAPTED FOR ADMINISTRATIVE, 22812,0
	H04L  TRANSMISSION OF DIGITAL INFORMATION, e.g. TELEGRAPHIC COMMUNICATION, 26155,0	B01J  CHEMICAL OR PHYSICAL PROCESSES, e.g. CATALYSIS OR COLLOID CHEMISTRY; THEIR RELEVANT APPARATUS, 21255,0	H02J  CIRCUIT ARRANGEMENTS OR SYSTEMS FOR SUPPLYING OR DISTRIBUTING ELECTRIC POWER; SYSTEMS FOR STORING ELECTRIC ENERGY, 19485,0
	G01N  INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES, 24053,0	H04W  WIRELESS COMMUNICATION NETWORKS, 20857,0	G06N  COMPUTING ARRANGEMENTS BASED ON SPECIFIC COMPUTATIONAL MODELS, 17683,0

**Figure 3** The top 10 IPC classification numbers of major applicants in North China

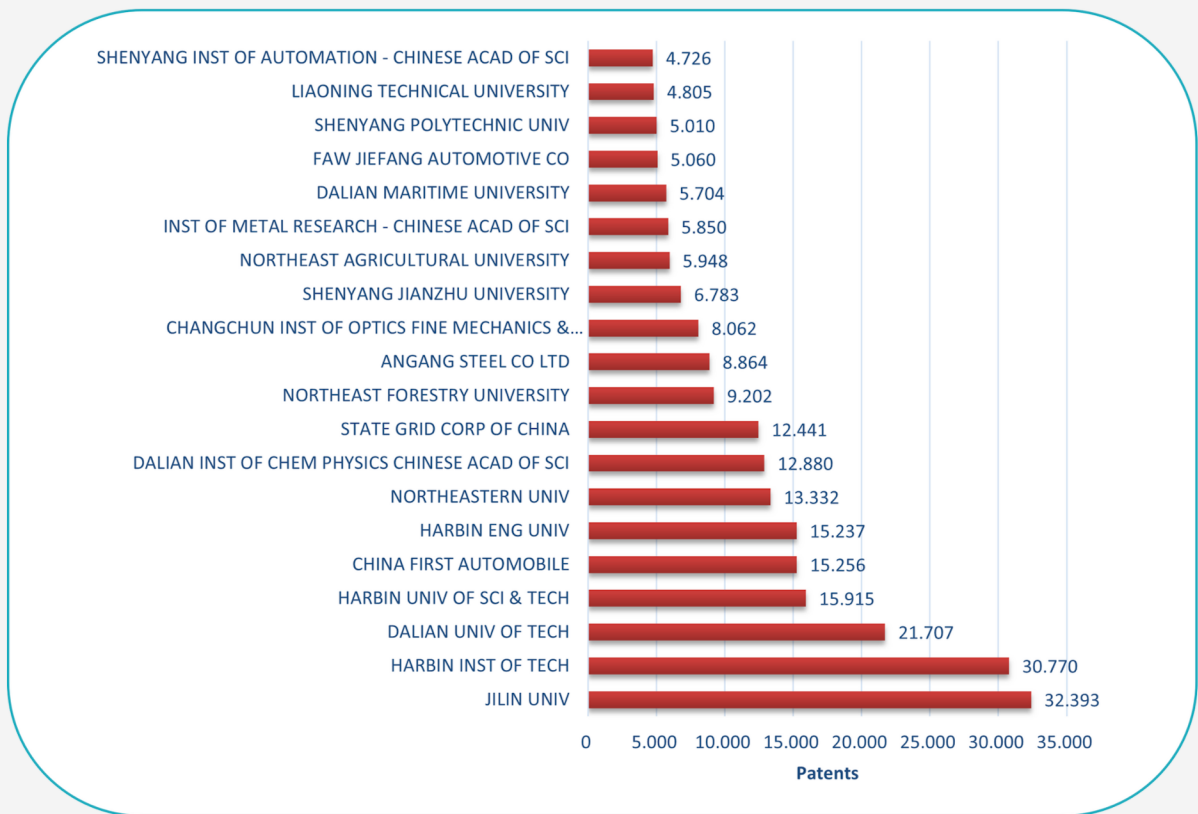
## Part 2: Northeast China

The Northeast region includes Inner Mongolia Autonomous Region, Heilongjiang Province, Liaoning Province, and Jilin Province, and its patent application volume in the past decade is shown in [Figure 4](#). It can be seen that in recent years, the volume of patent applications in Northeast China has been significantly lower than that in North China, but overall, it has also maintained a growth trend.



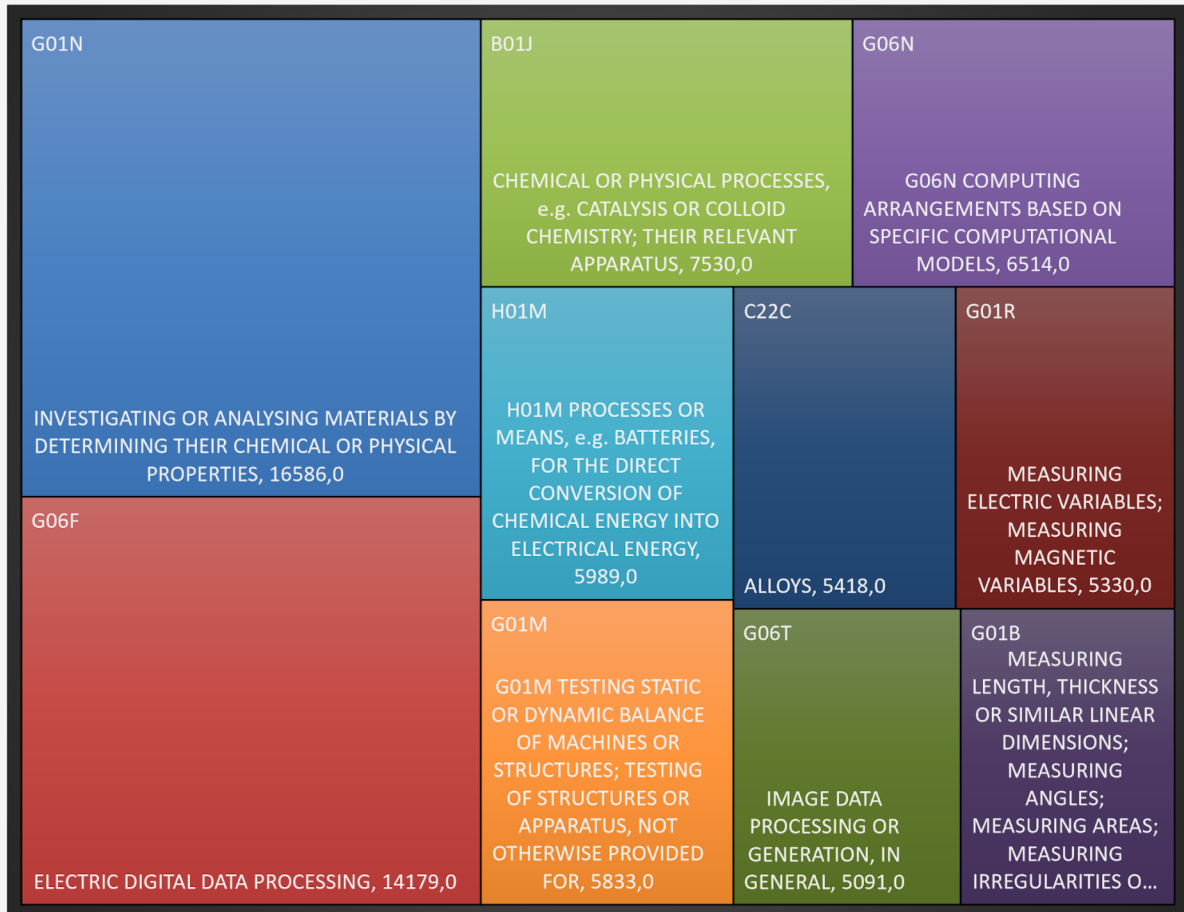
**Figure 4 Patent publication trend of Northeast China**

Figure 5 shows the situation of major applicants in Northeast China. It can be seen that university applicants in Northeast China dominate, with 12 out of the top 20 applicants being universities.



**Figure 5 The top 10 standardized current assignees of Northeast China**

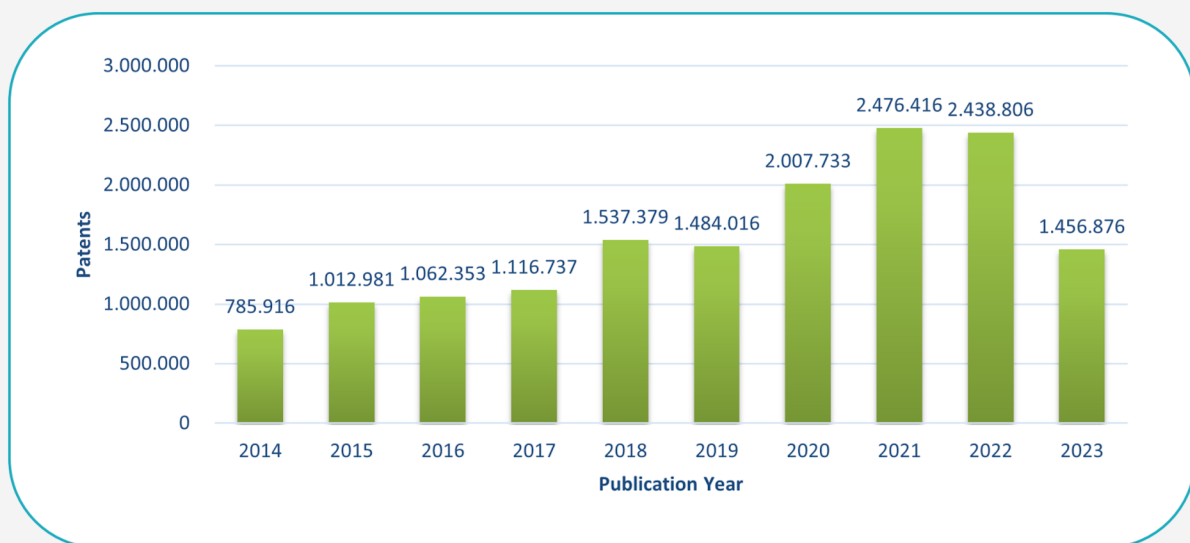
From a technical perspective, the main areas of interest for applicants in the Northeast China are material measurement and analysis (G01N) and electrical digital data processing (G06F), as shown in [Figure 6](#).



**Figure 6** The top 10 IPC classification numbers of major applicants in Northeast China

# Part 3: East China

The East China region includes Shanghai, Jiangsu province, Zhejiang province, Anhui province, Jiangxi province, Shandong province, and Fujian province, and its patent application volume in the past decade is shown in [Figure 7](#). It can be seen that the annual volume of patent applications in East China is very large, especially from 2020 to 2022, there were over 2 million patent applications every year.



**Figure 7 Patent publication trend of East China**

Figure 8 shows the situation of major applicants in East China. Similarly, universities in East China have applied for more patents, with Zhejiang University having the highest volume of patents, reaching 63,423.

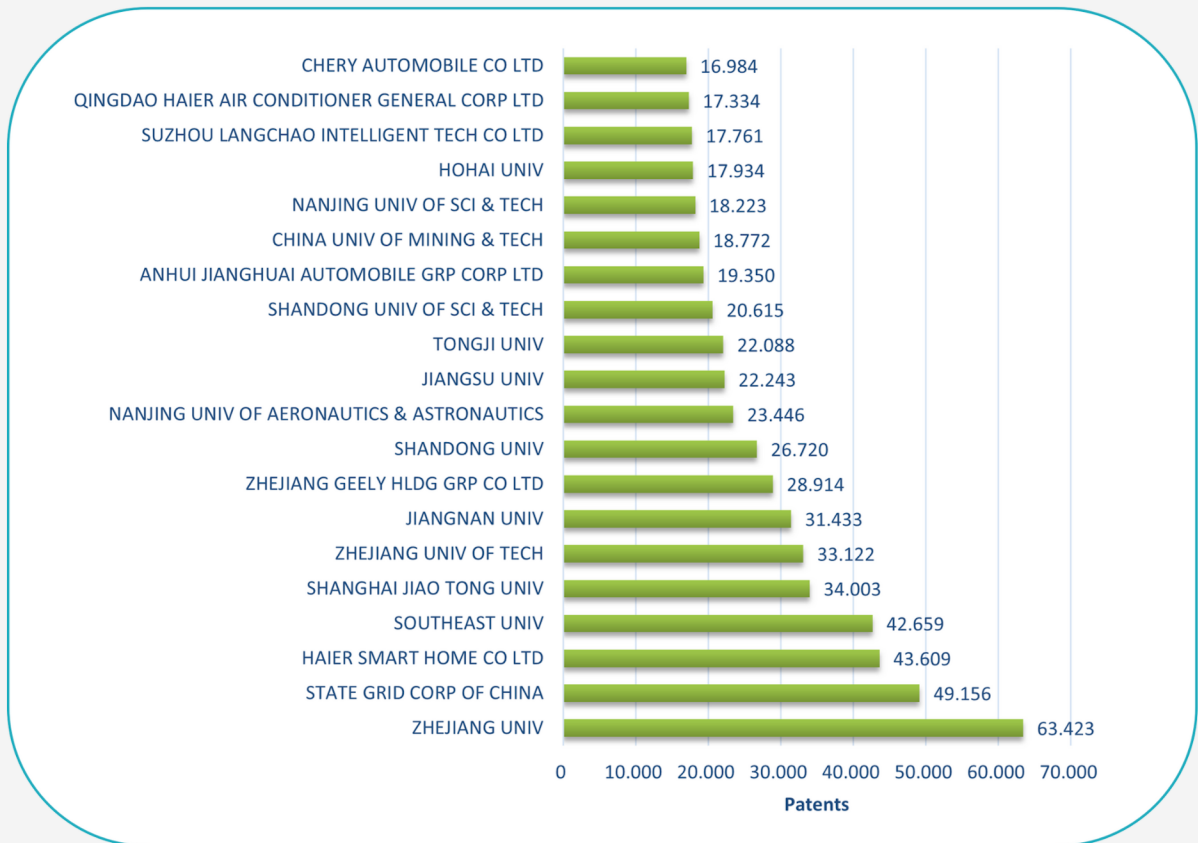
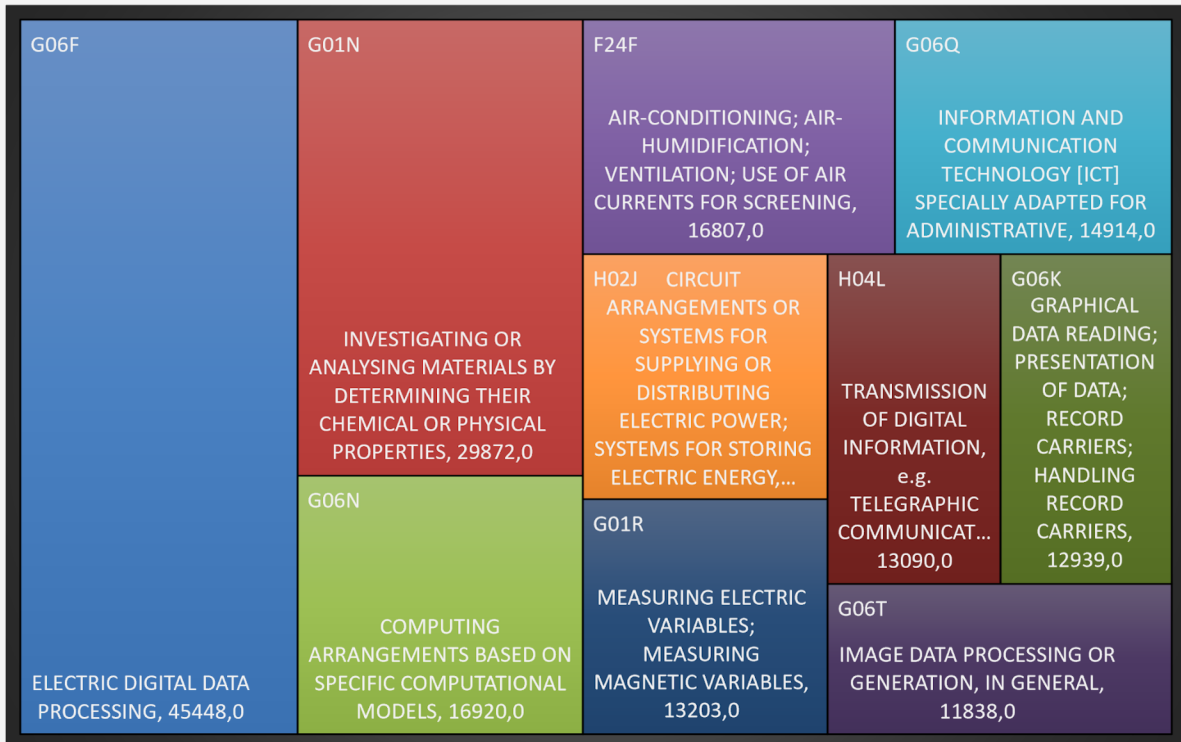


Figure 8 The top 10 standardized current assignees of East China

From a technical perspective, the technical field that involves the most patents is digital data processing (G06F), as shown in [Figure 9](#).

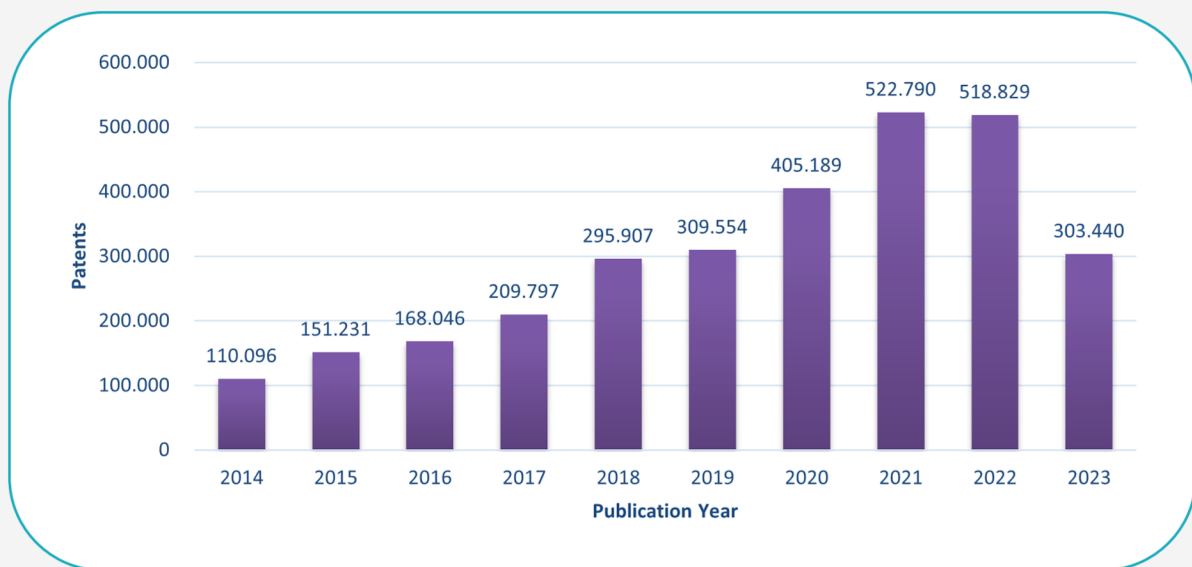


**Figure 9** The top 10 IPC classification numbers of major applicants in East China



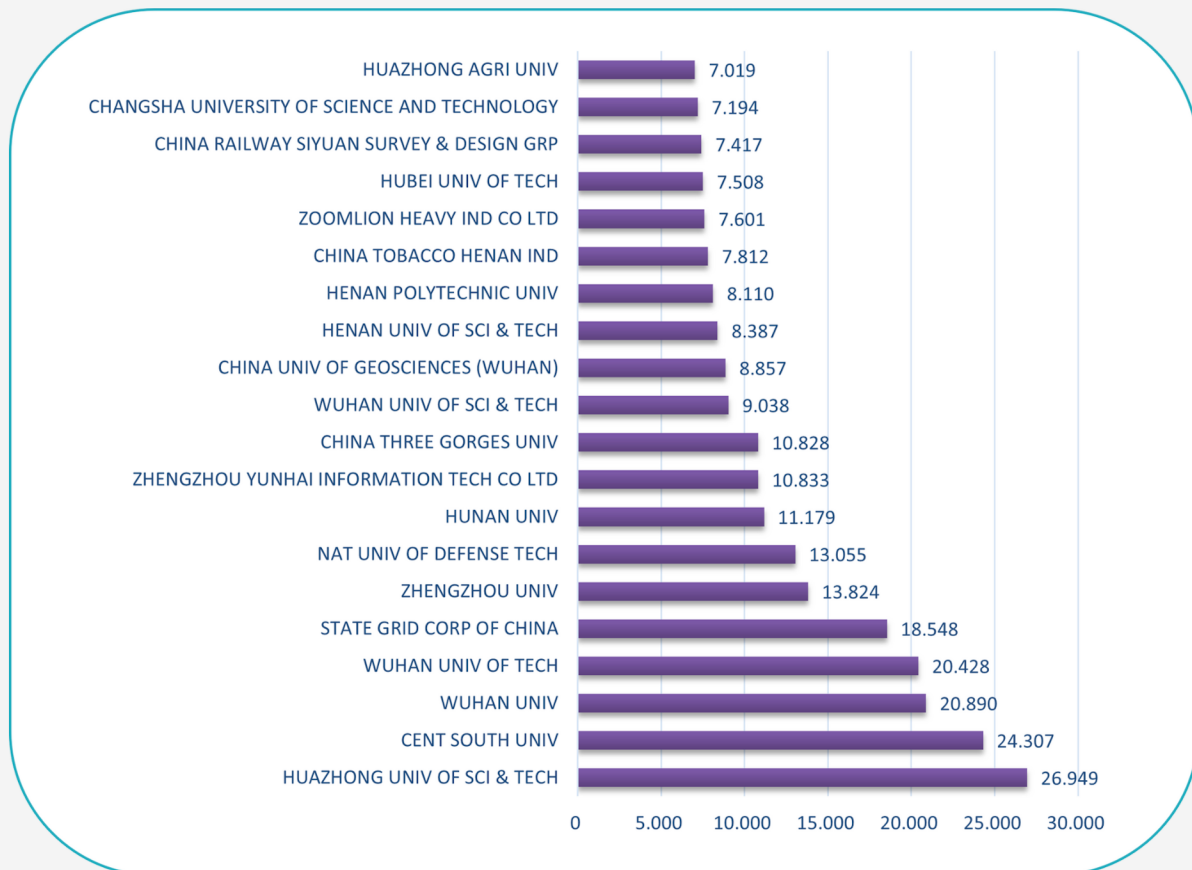
# Part 4: Central China

The Central China includes Henan Province, Hubei Province, and Hunan Province, and its patent application volume in the past decade is shown in [Figure 10](#). It can be seen that the annual volume of patent applications in Central China continued to increase from 2014 to 2021, and there was a certain decline in 2022.



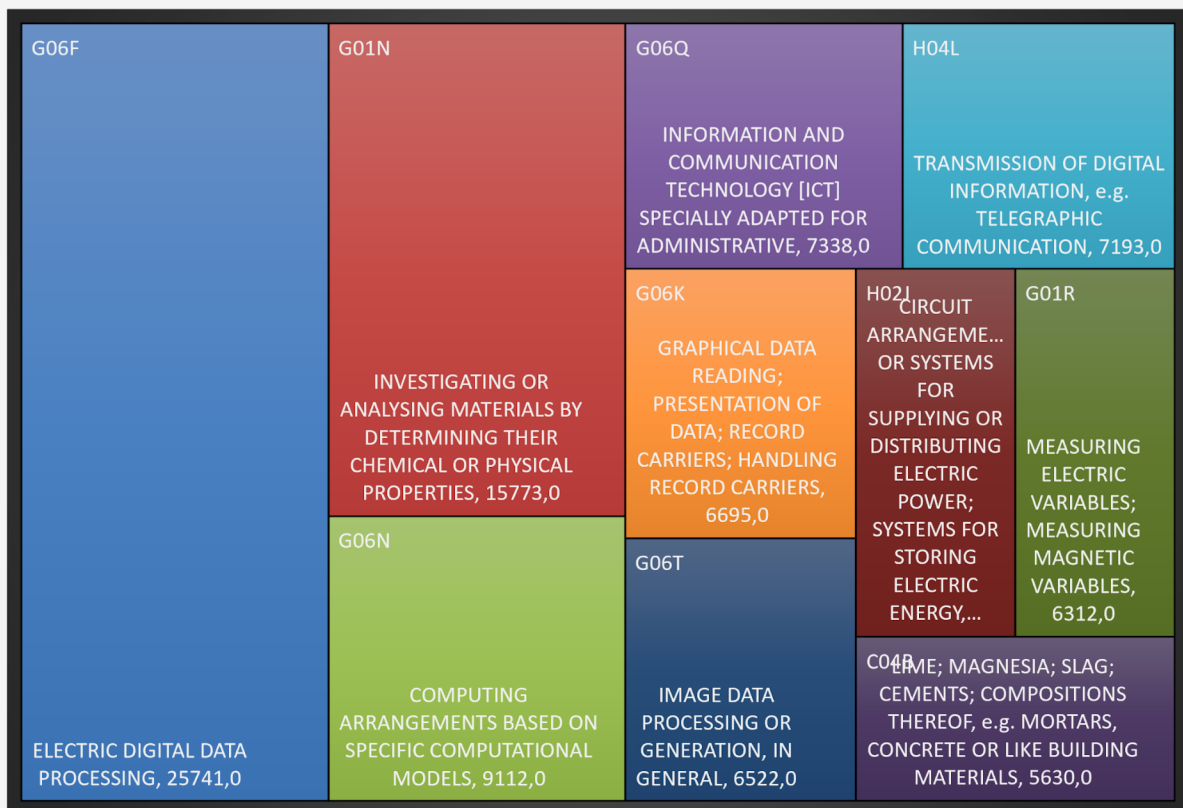
**Figure 10 Patent publication trend of Central China**

The majority of applicants in Central China who apply for patents are universities, and among the top 20 applicants in terms of application volume, 15 are universities, as shown in [Figure 11](#).



**Figure 11** The top 10 standardized current assignees of Central China

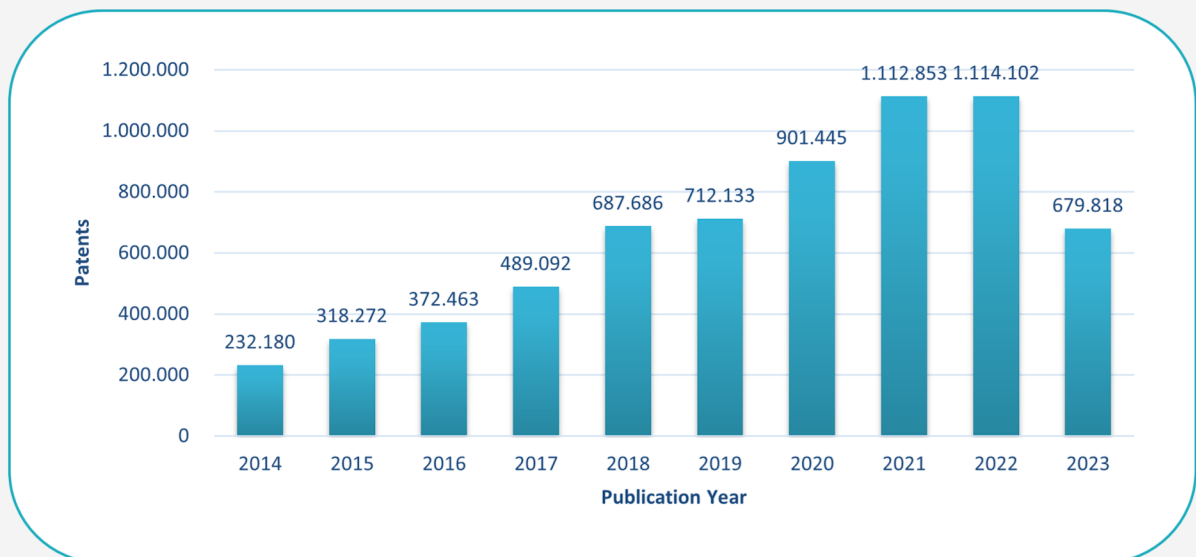
From a technical perspective, the technical field where the main applicant has the most patents is digital data processing (G06F), as shown in [Figure 12](#).



**Figure 12** The top 10 IPC classification numbers of major applicants in Central China

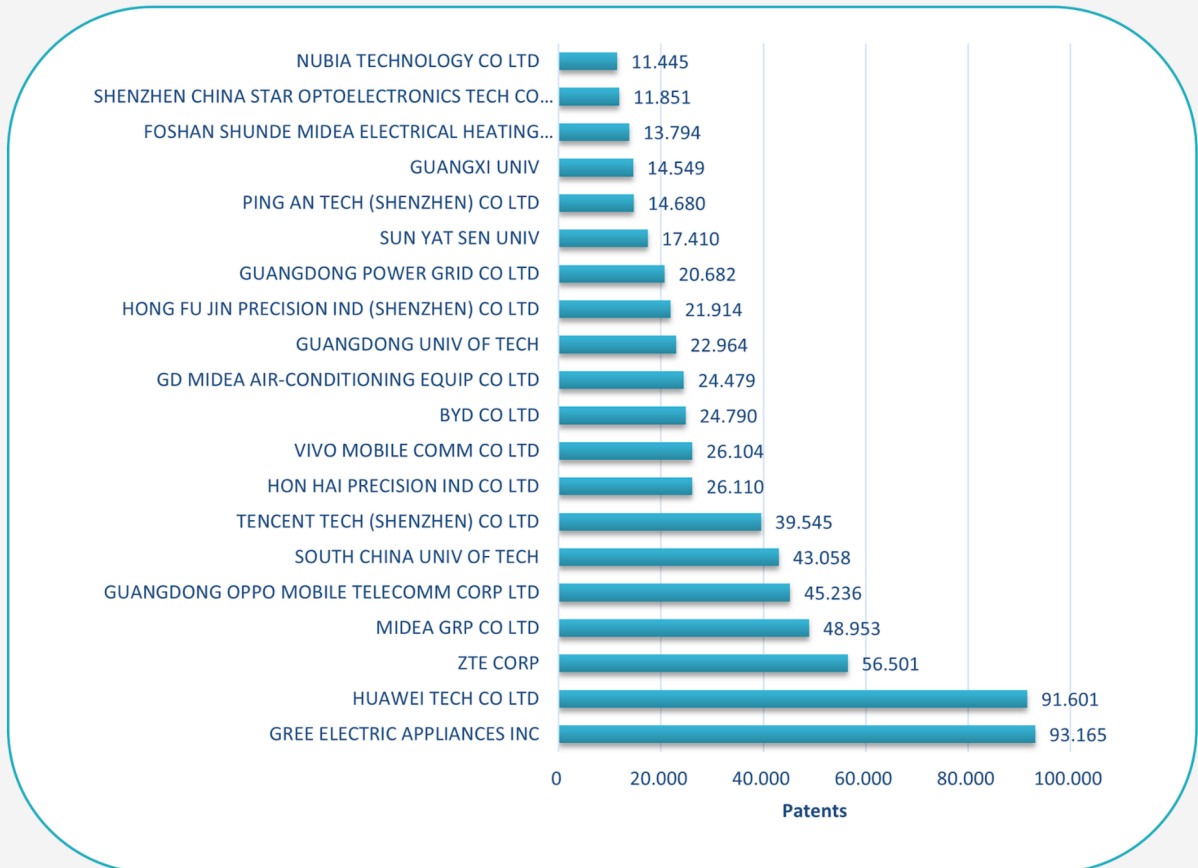
# Part 5: South China

The South China region includes Guangdong Province, Guangxi Zhuang Autonomous Region, and Hainan Province. In the past 10 years, the volume of patents applied for in South China has maintained a rapid growth trend (with a slight decrease in 2022), as shown in [Figure 13](#).



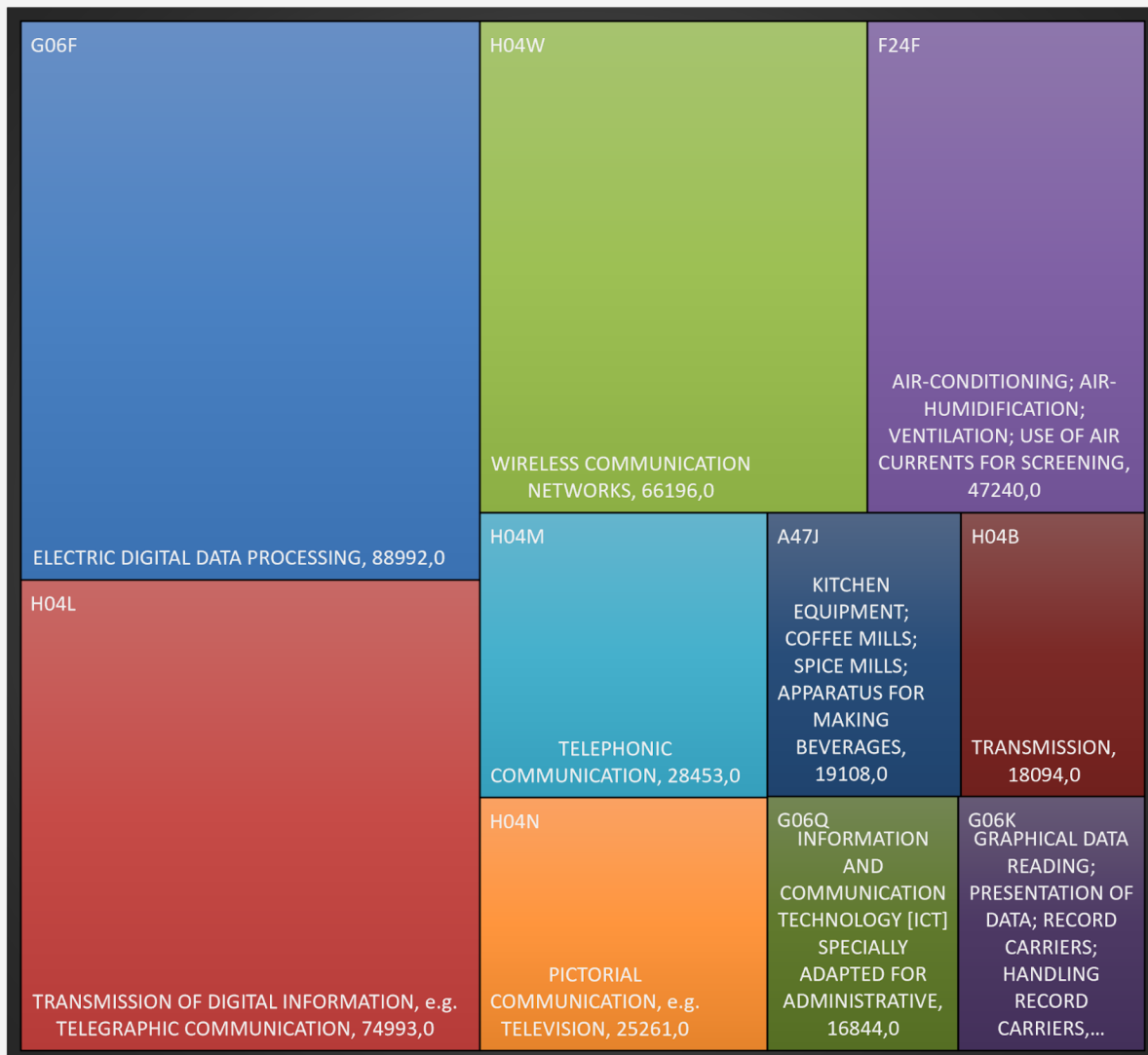
**Figure 13 Patent publication trend of South China**

The patent applicants in South China are mainly enterprises, with Gree Electric Appliances and Huawei applying for the most patents, as shown in [Figure 14](#).



**Figure 14** The top 10 standardized current assignees of South China

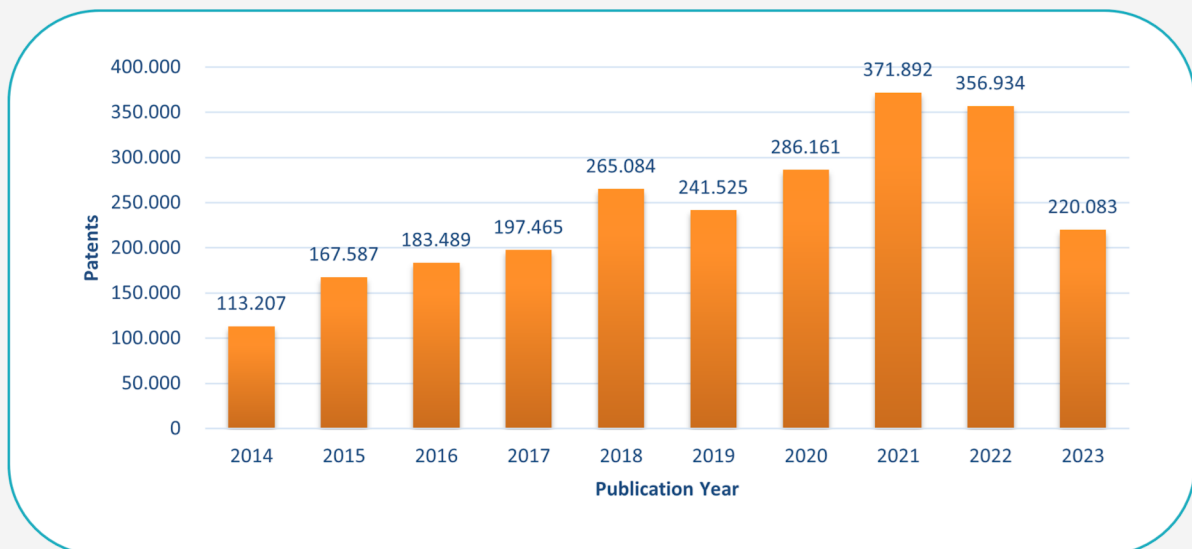
Furthermore, the patents of the main applicants in South China mainly focus on electronic digital data processing (G06F) and digital information transmission (H04L), as shown in [Figure 15](#).



**Figure 15** The top 10 IPC classification numbers of major applicants in South China

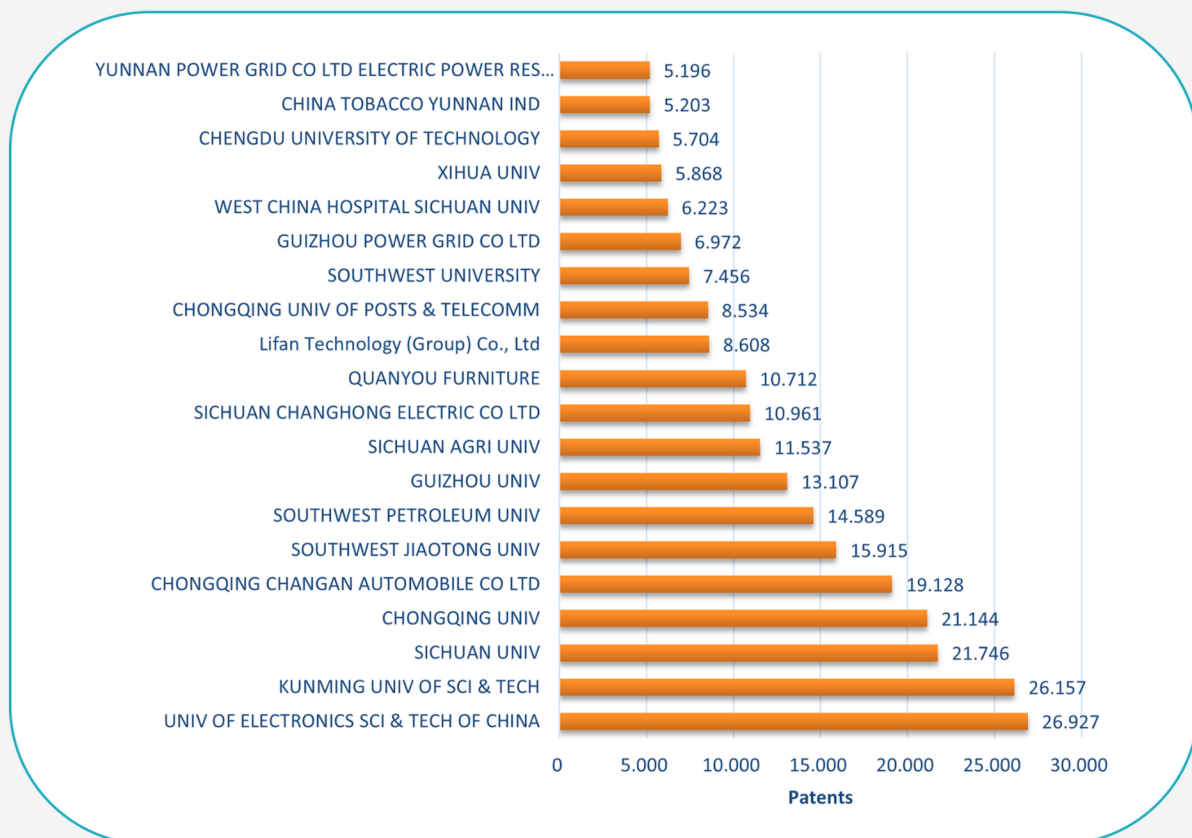
# Part 6: Southwest China

The Southwest China includes Chongqing, Sichuan Province, Guizhou Province, Yunnan Province, and Tibet Autonomous Region. In the past decade, the volume of patent applications in the Southwest China has been fluctuating and increasing, as shown in [Figure 16](#).



**Figure 16 Patent publication trend of Southwest China**

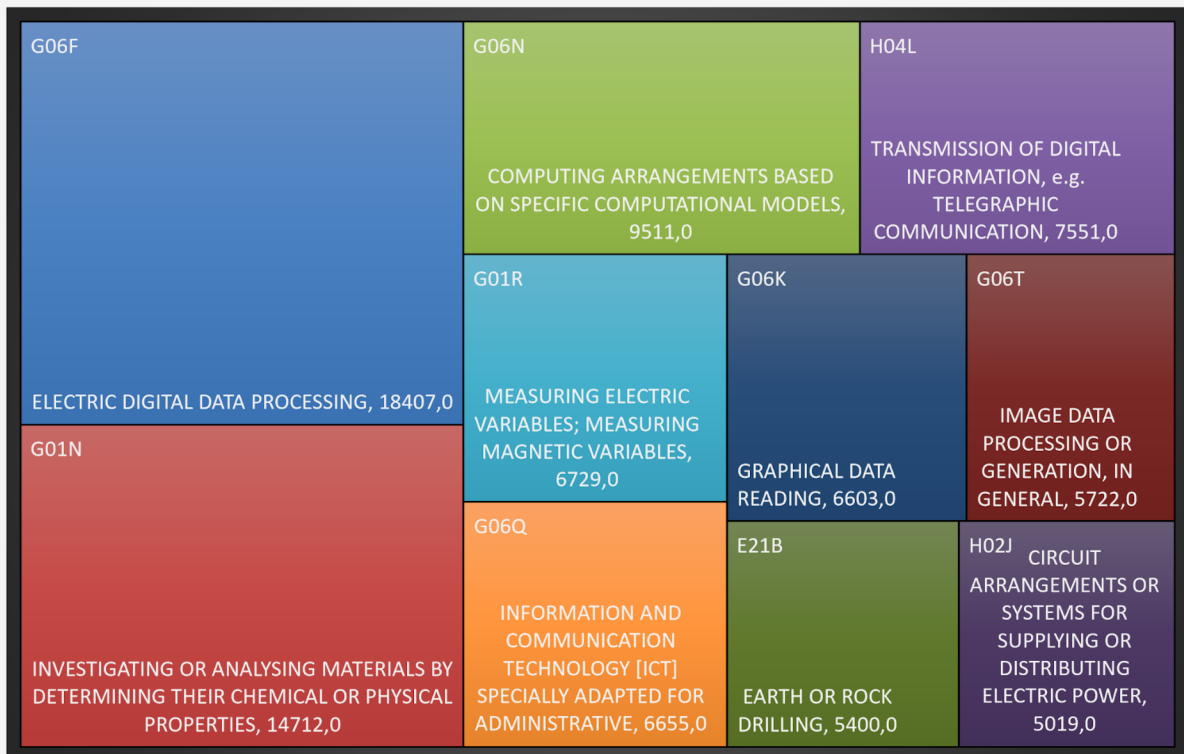
The majority of applicants in central China who apply for patents are universities, and among the top 20 applicants in terms of application volume, 15 are universities, as shown in [Figure 17](#).



**Figure 17** The top 10 standardized current assignees of Southwest China



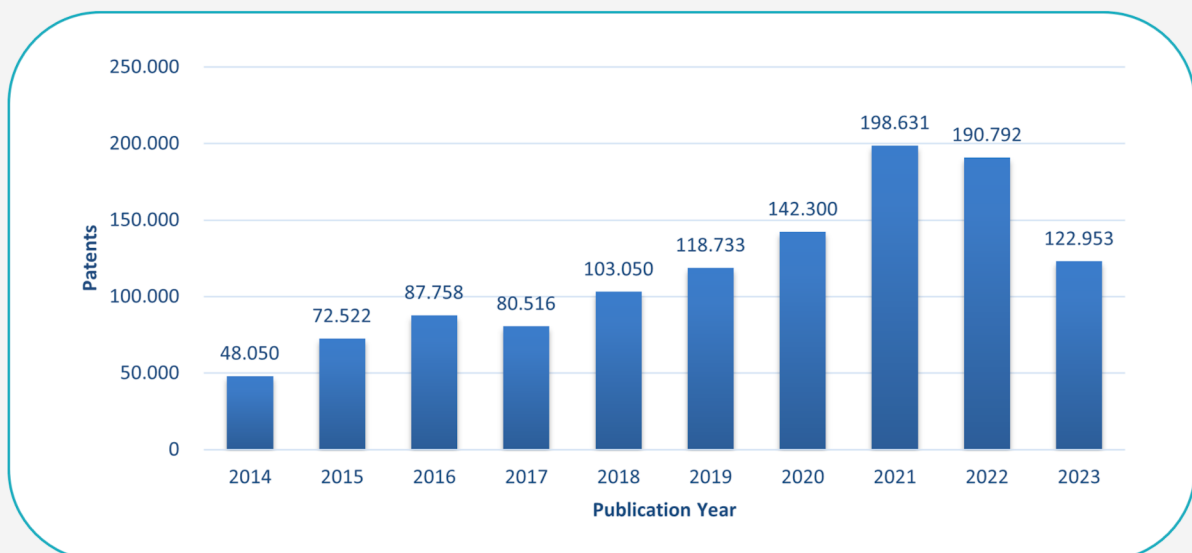
From technical perspective, the main areas of interest for applicants in the Southwest China are electrical digital data processing (G06F) and material measurement and analysis (G01N), as shown in [Figure 18](#).



**Figure 18** The top 10 IPC classification numbers of major applicants in Southwest China

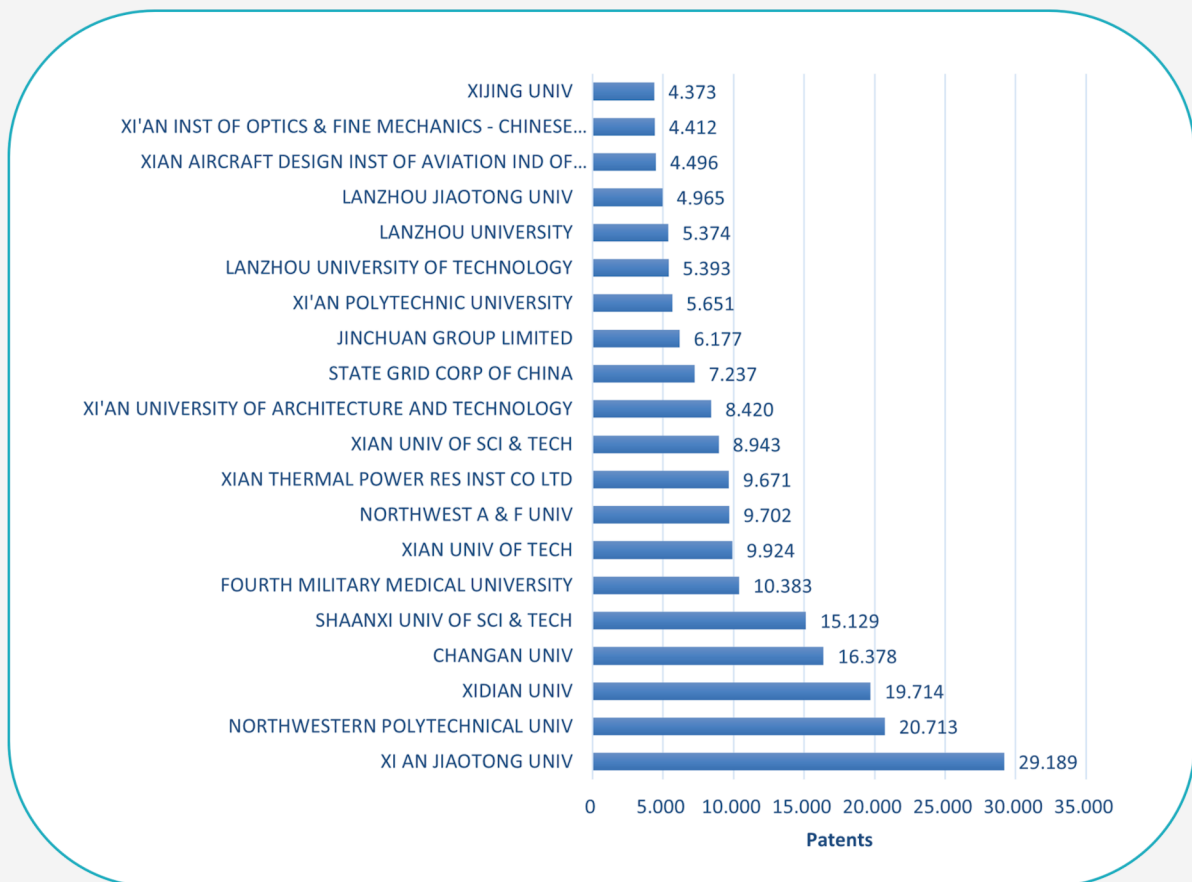
# Part 7: Northwest China

The Northwest China includes Shaanxi Province, Gansu Province, Qinghai Province, Ningxia Hui Autonomous Region, and Xinjiang Uygur Autonomous Region, and its patent applications in the past decade are shown in [Figure 19](#). Compared to other regions, the Northwest region has the lowest volume of patent applications.



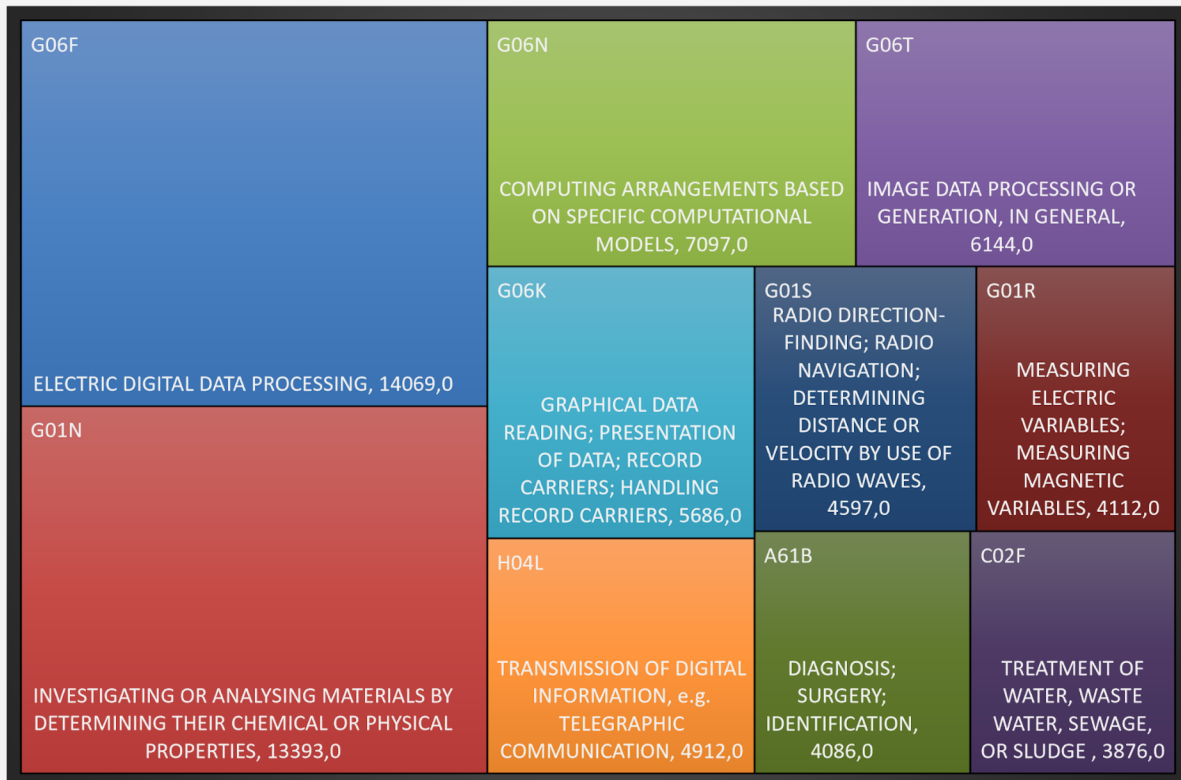
**Figure 19 Patent publication trend of Northwest China**

The majority of applicants in Northwest China who apply for patents are universities, and among the top 20 applicants in terms of application volume, 15 are universities, as shown in [Figure 20](#).



**Figure 20** The top 10 standardized current assignees of Northwest China

From technical perspective, the main areas of interest for applicants in the Northwest China are electrical digital data processing (G06F) and material measurement and analysis (G01N), as shown in [Figure 21](#).



**Figure 21** The top 10 IPC classification numbers of major applicants in Northwest China

# Conclusion

From the perspective of applicants, there are some similarities and differences in different regions of China. The volume of patents applied by applicants in East China and South China is significantly higher than that in other regions, while patent applications in Southwest China, Northwest China, and Northeast China are correspondingly lower; In the four regions of East China, Central China, Southwest China, and Northwest China, university applicants play an important role, while the main applicants in South China are companies; In addition, electrical digital data processing (G06F) and material measurement and analysis (G01N) are the technical areas that all major applicants in the seven regions focus on.

Note: All numbers used and statements made in this report are indicative and for information purposes only. No warranty or liability is given nor accepted for anything published in this report.

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