



## Registration Form for WFC Scientific Committee

### **Personal Info.**

Name: Qi Zhixiang

Title: Professor

Affiliation: Nanjing University of Science and Technology



### **Research Interest**

Metal Material Casting Technology

Direction solidification

High temperature alloys and Intermetallics

### **Main Achievements (<200 words)**

The applicant works on research of foundry technology and TiAl intermetallics. Main breakthroughs have been made in new materials, new mechanisms and new components: (1) The new PST TiAl single crystal material has been pioneered, and the room-temperature brittleness and low-temperature bearing capacity of TiAl alloy have been overcome. (2) The new strengthening and toughening mechanism of PST TiAl single crystal was revealed, and three kinds of twin/stacking fault strange phenomena were found. (3) It has achieved a leapfrog breakthrough from materials to components, the aeroengine blades passed the key service performance assessment. The above theoretical achievements were published in the authoritative journals of metal materials such as Nature Materials, Acta Materials, JMST, Corrosion Science, etc. The applicant has won the first prize of the National Defense Science and Technology Progress Award, the first prize of the Jiangsu Provincial Science and Technology Award.