

# Progress in Standardization for Welding and Additive Manufacturing

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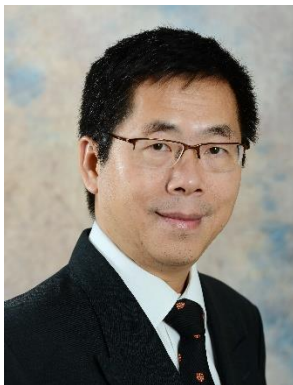
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For any manufacturing processes, standards are required to ensure the product quality and to improve the productivity and safety. As the market for additive manufacturing (AM) is expanding rapidly, there is the clear need for standardization concerning AM's processes, terms and definitions, test procedures, quality parameters, and safety. A few initiatives have been established in recent years by national and regional standardization bodies, notably the German VDI working group, the ASTM F42 committee on Additive Manufacturing, CEN/TC 438 "Additive Manufacturing" and SASAM. In 2011, International Organization for Standardization (ISO) created a new Technical Committee (ISO/TC 261) to develop international standards for "Additive Manufacturing". All the major standardization initiatives are reviewed in the talk. It is noted that the progress is generally very slow, for example, ISO/TC 261 has so far published 6 standards only. In contrast, ISO/TC 44 has published 310 standards concerning welding and allied processes. The speaker draws his experience as Liaison Officer to ISO/TC 261 and Chairman of Singapore's National Mirror Committee to ISO/TC 44 and suggests that many ISO/TC 44 standards can be adapted for AM applications, since additive manufacturing is essentially welding and joining processes.

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地点：新主楼 B506

## 报告人简介：



周伟，于 1985 年毕业于清华大学机械系，1987 年赴剑桥大学材料科学和冶金系学习，1991 年获颁剑桥大学博士学位，并受聘为德国弗琅荷费材料力学研究所客座研究员一年。1992 年至今在新加坡南洋理工大学任教，并于 2008 年初受聘为终身教授。多年来从事广泛的科研工作，多次作为首席科学家承担先进电子封装技术、超轻镁合金研发、纳米制造以及增材制造技术等科研项目，先后培养了二十余名博士后和博士研究生。周伟同世界各地的许多著名大学和研究院保持良好的合作关系，于 2002 年 3 月至 12 月任哈佛大学访问学者，2013 年 12 月至 2014 年 6 月任剑桥大学丘吉尔学院访问院士。周伟在国际杂志上发表及国际会议上宣读的论文有两百多篇，其中有 140 余篇被 SCI 收录并被引用了约 3000 次（最高单篇引用达 400 次，H-index = 26）。