

Glen Joseph Fernandes

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Education

03/2004 - 12/2008 **B.E. Software Engineering**, *University of Sydney*, Sydney.

Experience

03/2014 - 03/2015 **Senior Software Engineer**, *Intel*, Washington.

Design and implementation of SDKs for serialization and networking on mobile platforms.

11/2012 - present **Contributor**, *Boost C++ Libraries*.

Author of the Align library. Contributor and maintainer of Smart Pointer and Core libraries.

Contributor to many other Boost libraries.

02/2009 - 02/2014 **Software Development Engineer II**, *Microsoft*, Washington.

Developed the Bond C++ serialization library and code generator. Developed the XAP C++ SDK for network service applications.

12/2007 - 02/2008 **Software Engineer Internship**, *Microsoft*, Washington.

Developed the QuickLinks C++ network service application.

11/2006 - 11/2007 **C++ Developer**, *EarthByte*, Sydney.

Developed the GPlates C++ desktop application for interactive visualization of plate tectonics.

C++ Standard

P0653R2 **Utility to convert a pointer to a raw pointer.**

Author of proposal. Adopted in C++20. Implemented in Boost, GCC, and LLVM.

P0674R1 **Extending make_shared to support arrays.**

Author of proposal. Adopted in C++20. Implemented in Boost.

P1020R1 **Smart pointer creation with default initialization.**

Author of proposal. Adopted in C++20. Implemented in Boost.

P1357R1 **Traits for [un]bounded arrays.**

Author of proposal. Adopted in C++20. Implemented in Boost.

LWG3008 **make_shared (sub)object destruction semantics are not specified.**

Author of report and proposed resolution. Adopted in C++20.

LWG3007 **allocate_shared should rebind allocator to cv-unqualified value_type for construction.**

Author of report and proposed resolution. Adopted in C++20.

LWG2226 **wstring_convert methods do not take allocator instance.**

Author of report and proposed resolution. Resolved by C++17.

C++ Contributions

boost.align C++ library that provides facilities for control, inspection, and diagnosis of memory alignment.

boost.smart_ptr allocate_shared and make_shared for arrays for C++03. Design of C++17 shared_ptr for arrays.

boost.core Conditionally constexpr addressof for C++11. pointer_traits and to_address for C++03.

boost.mp11 O(1) mp_starts_with metafunction for C++11.

gcc.libstdc++ C++20 to_address in GCC 8. Optimized copy algorithms for trivially copyable types in GCC 9.

llvm.libc++ C++20 to_address in Clang 6.

Patents

US8990242 Enhanced query suggestions in autosuggest with corresponding relevant data.