Name	DLMF Symbol	DLMF Domain	MATLAB Function	MATLAB Domain
Airy Functions	$Ai(z)$	$z \in \mathbb{C}$	airy([0,]z[,0])	$z \in \mathbb{C}$
	$Ai'(z)$	$z \in \mathbb{C}$	airy(1,z[,0])	$z \in \mathbb{C}$
	$Bi(z)$	$z \in \mathbb{C}$	airy(2,z[,0])	$z \in \mathbb{C}$
	$Bi'(z)$		airy(3,z[,0])	$z \in \mathbb{C}$
	$\exp((2/3)z^{3/2})Ai(z)$	$z \in \mathbb{C}$	airy(0,z,1)	$z \in \mathbb{C}$
	$\exp((2/3)z^{3/2})Ai'(z)$	$z \in \mathbb{C}$	airy(1,z,1)	$z \in \mathbb{C}$
	$\exp(-\|(2/3)z^{3/2}\|)Bi(z)$	$z \in \mathbb{C}$	airy(2,z,1)	$z \in \mathbb{C}$
	$\exp(-\|(2/3)z^{3/2}\|)Bi'(z)$		airy(3,z,1)	$z \in \mathbb{C}$
Bessel function of third kind (Hankel function)	$H_\nu^{(1)}(z)$	$\nu \in \mathbb{C},\ z \in \mathbb{C}$	besselh(nu,1,z)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$H_\nu^{(2)}(z)$	$\nu \in \mathbb{C},\ z \in \mathbb{C}$	besselh(nu,2,z)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$\exp(-iz)H_\nu^{(1)}(z),$	$\nu \in \mathbb{C},\ z \in \mathbb{C}$	besselh(nu,1,z,1)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$\exp(iz)H_\nu^{(2)}(z)$	$\nu \in \mathbb{C},\ z \in \mathbb{C}$	besselh(nu,2,z,1)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
Modified Bessel function of first kind	$I_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	besseli(nu,z[,0])	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$\exp(-\|\Re z\|)I_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	besseli(nu,z,1)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
Bessel function of first kind	$J_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	besselj(nu,z[,0])	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$\exp(-\|\Re z\|)J_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	besselj(nu,z,1)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
Modified Bessel function of second kind	$K_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	besselk(nu,z[,0])	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$\exp(z)K_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	besselk(nu,z,1)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
Bessel function of second kind	$Y_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	bessely(nu,z[,0])	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
	$\exp(-\|\Re z\|)Y_\nu(z)$	$\nu \in \mathbb{C}, z \in \mathbb{C}$	bessely(nu,z,1)	$\nu \in \mathbb{R},\ z \in \mathbb{C}$
Beta function	$B(a,b)$	$a,b \in \mathbb{C}$	beta(a,b)	$a,b \in \mathbb{R}_{\geq 0}$
Incomplete beta function	$B_x(a,b)$	$a,b,x \in \mathbb{C}$	betainc(x,a,b)	$a,b \in \mathbb{R}_{\geq 0},\ x \in [0,1]$
Inverse incomplete beta function			betaincinv(y,z,w)	$Y \in [0,1],\ X,Z \in \mathbb{R}$
Logarithm of beta function			betaln(z,w)	$z,w \in \mathbb{R}_{\geq 0}$
Jacobi elliptic functions		$z \in \mathbb{C},\ k \in [0,1]$	ellipj(z,k)	$z \in \mathbb{R},\ k \in [0,1]$
Complete elliptic integrals of first and second kind			ellipke(M)	$M \in [0,1]$
Error function	$\mathrm{erf}(z)$	$z \in \mathbb{C}$	erf(z)	$z \in \mathbb{R}$
Complementary error function	$\mathrm{erfc}(z)$	$z \in \mathbb{C}$	erfc(z)	$z \in \mathbb{R}$
Inverse complementary error function	$\mathrm{erfc}^{-1}(z)$	$z \in \mathbb{C}$	erfcinv(z)	$z \in \mathbb{R}$
Scaled complementary error function	$\exp(x^2)\mathrm{erf}(z)$	$z \in \mathbb{C}$	erfcx(z)	$z \in \mathbb{R}$
Inverse error function	$\mathrm{erf}^{-1}(z)$	$z \in \mathbb{C}$	erfinv(z)	$z \in \mathbb{R}$
Exponential integral	$E_1(z)$	$z \in \mathbb{C}$	expint(z)	$z \in \mathbb{C}$
Gamma function	$\Gamma(z)$	$z \in \mathbb{C}$	gamma(z)	$z \in \mathbb{R}$
Incomplete gamma function	$\Gamma(a,z)$	$z \in \mathbb{C}, a \in \mathbb{C}$	gammainc(z,a)	$z \in \mathbb{R}, a \in \mathbb{R}_{\geq 0}$
Inverse incomplete gamma function			gammaincinv	$z \in [0,1], a \in \mathbb{R}_{\geq 0}$
Logarithm of gamma function			gammaln(z)	$z \in \mathbb{R}$
Associated Legendre functions	$P_\nu^\mu(x)$	$x,\nu,\mu \in \mathbb{C}$	legendre(n,x)	$n \in \mathbb{N}_{\geq 0},\ x \in [-1,1]$
	Schmidt scaled	$x,\nu,\mu \in \mathbb{C}$	legendre(n,x,'sch')	$n \in \mathbb{N}_{\geq 0},\ x \in [-1,1]$
	Normalized	$x,\nu,\mu \in \mathbb{C}$	legendre(n,x,'norm')	$n \in \mathbb{N}_{\geq 0},\ x \in [-1,1]$
Psi (polygamma) function	$\psi(z)$	$z \in \mathbb{C}$	psi(z)	$x \in \mathbb{R}_{\geq 0}$

Notes. DLMF is dlmf.nist.gov (print version NIST Library of Mathematical Functions, 2010).