

| Sex | Category | Where | Event | Time | Wind | Name | Relay Team | Born | Venue | Date | Note |
|-------|----------|---------|---------------|----------|------|---|----------------|----------|-----------------------|-----------|-------|
| Men | Senior | Outdoor | 100m | 10.17 | 0.1 | Israel Olatunde | | 29.05.02 | Munich, GER | 16.08.22 | |
| Men | Senior | Outdoor | 200m | 20.30 | 0.1 | Paul Hession | | 27.01.83 | Santry | 21.07.07 | |
| Men | Senior | Outdoor | 300m | 32.47 | | Paul Hession | | 27.01.83 | Ostrava, CZE | 12.06.08 | |
| Men | Senior | Outdoor | 400m | 44.77 | | David Gillick | | 09.07.83 | Madrid, ESP | 04.07.09 | |
| Men | Senior | Outdoor | 600m | 1:15.71 | | Mark English | | 18.03.93 | Amsterdam, NED | 05.09.15 | |
| Men | Senior | Outdoor | 800m | 1:44.53 | | Mark English | | 18.03.93 | Madrid, ESP | 21.06.24 | TBC |
| Men | Senior | Outdoor | 1000m | 2:16.40 | | Luke McCann | | 12.03.98 | Monte Carlo, MON | 10.08.22 | |
| Men | Senior | Outdoor | 1500m | 3:30.42 | | Andrew Coscoran | | 18.06.96 | Chorzów, POL | 16.07.23 | |
| Men | Senior | Outdoor | Mile | 3:49.77 | | Ray Flynn | | 22.01.57 | Oslo, NOR | 07.07.82 | |
| Men | Senior | Outdoor | 2000m | 4:55.06 | | Marcus O'Sullivan | | 22.12.61 | Nice, FRA | 10.07.96 | |
| Men | Senior | Outdoor | 3000m | 7:30.36 | | Mark Carroll | | 15.01.72 | Monte Carlo, MON | 04.08.99 | |
| Men | Senior | Outdoor | 5000m | 13:01.40 | | Brian Fay | | 09.11.98 | Heusden, BEL | 15.07.23 | |
| Men | Senior | Outdoor | 10000m | 27:39.55 | | Alistair Cragg | | 13.06.80 | Palo Alto, USA | 29.04.07 | |
| Men | Senior | Outdoor | Marathon | 2:09.15 | | John Treacy | | 04.06.57 | Boston, USA | 18.04.88 | aided |
| Men | Senior | Outdoor | Marathon | 2:09.49 | | Stephen Scullion | | 09.11.88 | London, ENG | 04.10.20 | |
| Men | Senior | Outdoor | 110m H | 13.3 | 0.6 | Peter Coghlan | | 27.03.75 | Hechtel, BEL | 07.08.99 | |
| Men | Senior | Outdoor | 400m H | 47.97 | | Thomas Barr | | 24.07.92 | Rio de Janeiro, BRA | 18.08.16 | |
| Men | Senior | Outdoor | 3000m S/c | 8:24.09 | | Brendan Quinn | | 26.07.60 | Brussels, BEL | 30.08.85 | |
| Men | Senior | Outdoor | High Jump | 2.30m | | Adrian O'Dwyer | | 01.12.83 | Algiers, ALG | 24.06.04 | |
| Men | Senior | Outdoor | Long Jump | 8.07m | 1.4 | Ciaran McDonagh | | 20.05.76 | La Chau-de-Fonds, SUI | 21.08.05 | |
| Men | Senior | Outdoor | Triple Jump | 15.89m | | Colm Cronin | | 14.06.57 | Copenhagen, DEN | 26.06.77 | |
| Men | Senior | Outdoor | Pole Vault | 5.36m | | Brian McGovern | | 12.09.90 | Tempe, USA | 23.03.13 | |
| Men | Senior | Outdoor | Shot | 20.93m | | Eric Favors | | 16.11.96 | Fleetwood, USA | 27.04.24 | TBC |
| Men | Senior | Outdoor | Discus | 67.89m | | Nick Sweeney | | 26.03.68 | Helsingborg, SWE | 04.09.98 | |
| Men | Senior | Outdoor | Hammer | 77.80m | | Declan Hegarty | | 12.10.60 | Walnut, USA | 28.04.85 | |
| Men | Senior | Outdoor | Javelin | 82.75m | | Terry McHugh | | 22.08.63 | London, ENG | 05.08.00 | |
| Men | Senior | Outdoor | 56lbs Dist. | 9.16m | | John Menton | | 07.05.70 | Santry | 02.07.98 | |
| Men | Senior | Outdoor | 56lbs Height | 4.93m | | Gerry O'Connell | | - | Tullamore | 19.07.86 | |
| Men | Senior | Outdoor | 4x100m | 39.26 | | John McAdorey, Gary Ryan, Tom Comyns, Paul Brizzel | National Team | n/a | Sydney, AUS | 29.09.00 | |
| Men | Senior | Outdoor | 4x100m (Club) | 40.50 | | Conor Morey, Colin Doyle, Scott Gibson, James Ezeonu | Leevale A.C. | n/a | Tullamore | 13.08.23 | |
| Mixed | Senior | Outdoor | 4x400m | 3:09.72 | | Christopher O'Donnell, Rhasidat Adeleke, Thomas Barr, Sharlene Mawdsley | National Team | n/a | Rome, ITA | 07.06.24 | TBC |
| Men | Senior | Outdoor | 4x400m | 3:01.26 | | Brian Gregan, Brian Murphy, Thomas Barr, Mark English | National Team | n/a | Beijing, CHN | 29.08.15 | |
| Mixed | Senior | Outdoor | 4x400m (Club) | 3:34.65 | | Darragh Masterson, Loclairn Harris, Aisling Stratford, Laura Kelly | Ratoath A.C. | n/a | Rieti, ITA | 16.09.23 | |
| Men | Senior | Outdoor | 4x400m (Club) | 3:10.59 | | Jason Harvey, Eoin Mulhall, Steven Colvert, Richard Morrissey | Crusaders A.C. | n/a | Morton Stadium | 08.07.12 | |
| Men | Senior | Outdoor | 3000m Walk | 11:11.94 | | Robert Heffernan | | 28.02.78 | Cork | 02.07.13 | |
| Men | Senior | Outdoor | 5000m Walk | 18:59.37 | | Robert Heffernan | | 28.02.78 | Barcelona, ESP | 30.06.07 | |
| Men | Senior | Outdoor | 10,000m Walk | 38:27.57 | | Robert Heffernan | | 28.02.78 | Santry | 21.07.08 | |
| Men | Senior | Outdoor | 10k Walk Rd. | 39.15 | | Robert Heffernan | | 28.02.78 | La Coruña, ESP | 17.09.11 | |
| Men | Senior | Outdoor | 20,000m Walk | 1:23.51 | | Bobby O'Leary | | 19.06.67 | Santry | 14.07.91 | |
| Men | Senior | Outdoor | 20k Walk Rd. | 1:19.22 | | Robert Heffernan | | 28.02.78 | Cheboksary, RUS | 10.05.08 | |
| Men | Senior | Outdoor | 30k Walk Rd. | 2:07.48 | | Robert Heffernan | | 28.02.78 | Cork | 30.01.11 | |
| Men | Senior | Outdoor | 50k Walk | 3:37.54 | | Robert Heffernan | | 28.02.78 | London, ENG | 11.08.12 | |
| Men | Senior | Outdoor | Decathlon | 7,882pts | | Carlos O'Connell | | 21.06.63 | Emmitsburg, USA | 4/5.06.88 | |
| Men | Senior | Outdoor | 1 Hour | 19:625m | | John Treacy | | 04.06.57 | Monte Carlo, MON | 19.09.87 | |